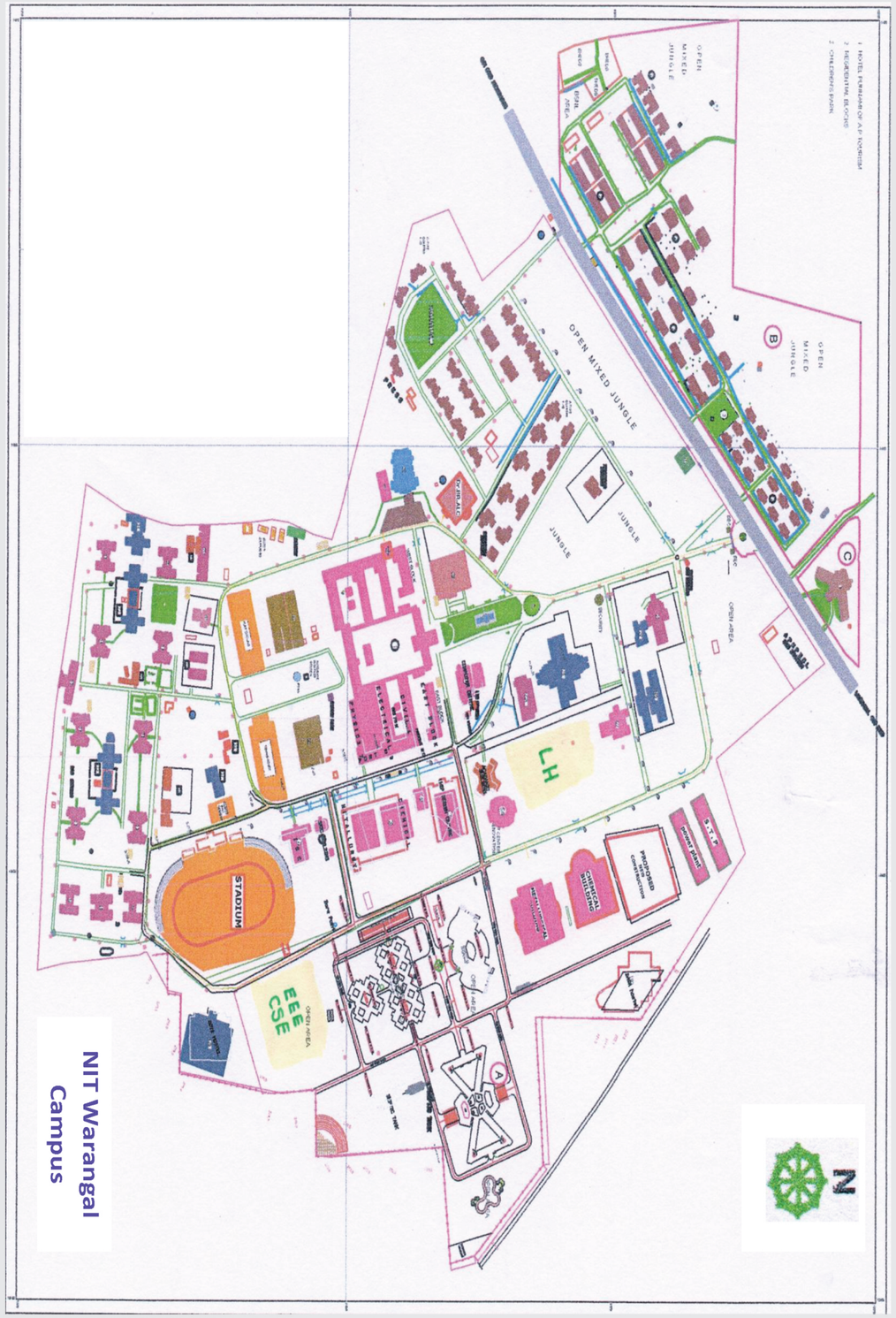


NIT Warangal Campus

ACADEMIC REPORT 2018-2019

NIT WARANGAL

राष्ट्रीय प्रौद्योगिकी संस्थान वारंगल

National Institute of Technology Warangal

ACADEMIC REPORT

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL 2018-2019

INDEX

BOARD OF GOVERNORS

Prof. N. V. Ramana Rao
Chairperson I/c, Board of Governors
&
Director, NIT Warangal

Shri Madan Mohan
Additional Director General (HE)
MHRD., Government of India

Ms. Darshana M Dabral
Jt. Secretary & Financial Advisor
Dept. of Higher Education
MHRD, Government of India

Prof. U.B.Desai
Director,
IIT Hyderabad

Prof. Ravi Kumar Puli
Member Secretary,
Telangana State Council of Science & Technology,
(TSCOST)

Prof. Ramchandriah
Department of Chemistry
NIT Warangal

Shri V. N. Kameswara Rao
Associate Professor
Dept. of Civil Engineering
NIT Warangal

Shri S. Goverdhan Rao
Secretary, BoG & Registrar
NIT Warangal

FOREWORD

The institute is in its 60th year of its establishment and the Diamond Jubilee Celebrations are going on. The year-long celebrations were launched by the Hon'ble Vice President of India, Shri M Venkaiah Naidu on 8th October,2018. A series of activities spanning this period include international and national conferences, workshops, lectures by eminent personalities, and establishment of new laboratories mark the Diamond Jubilee celebrations.

True to its reputation, the institute remains as one of the top Centrally Funded Technical Institutions in the country and continues to be among the top institutes in teaching and learning activities. The institute has been steadily progressing upwards in teaching, learning, research, innovation and outreach activities.

The number of Ph.D. degrees awarded continues to show an increasing trend and during the academic year 2018-2019, 136 candidates completed their Ph.D. degrees.

NITW also continues to be among the top institutes in the country to achieve maximum number of academic mobility by students and faculty to Europe under the Heritage and Erasmus Mundus Schemes. I had an opportunity to visit Portugal to attend the General Assembly of the Heritage during May, 2019 and this visit resulted in the institute being given the opportunity to host the meeting of the Steering and Executive Committee of the Heritage Networkduring 2019-2020.

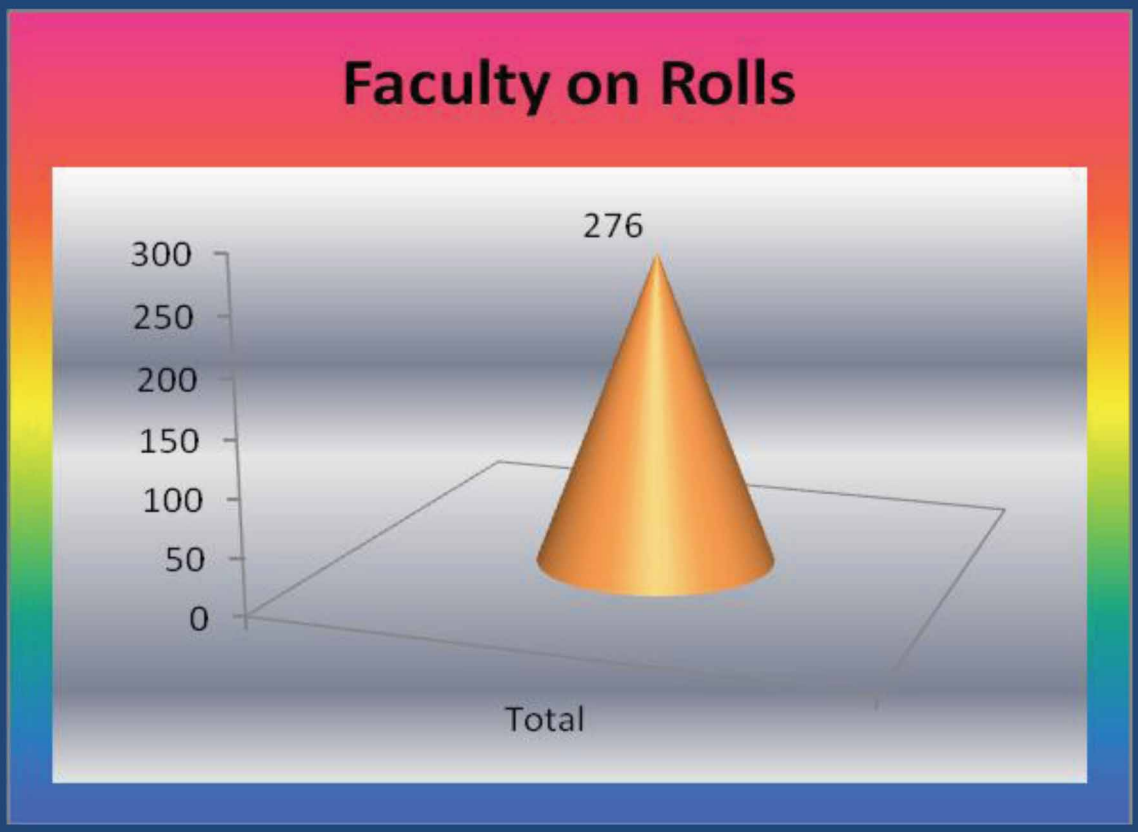
The institute hosted the India-Taiwan Presidents/Directors and Vice Chancellors meet during June, 2019. I was also elected as one of the Executive Committee member of the network.

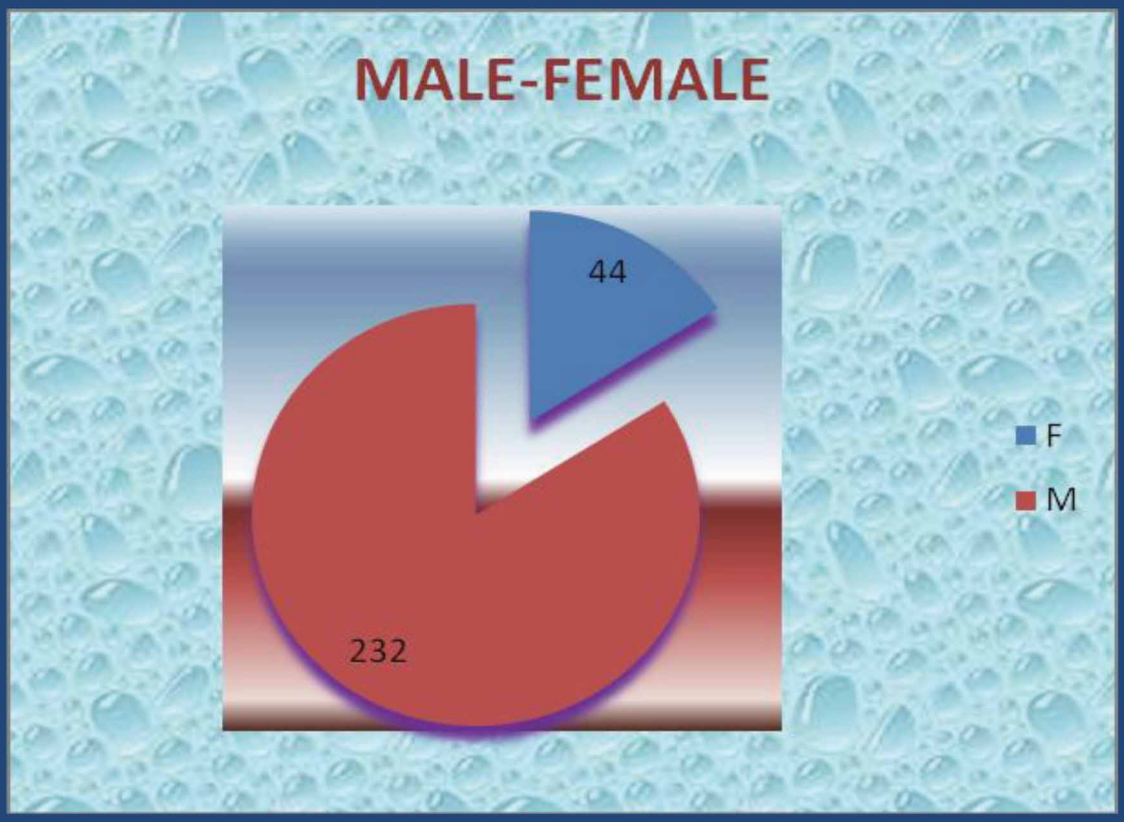
During this year, new infrastructure has been added to the campus. New buildings to house the Departments of Chemical Engineering and Biotechnology, Metallurgical and Materials Engineering, Physics and Chemistry Departments, state-of-art Seminar Halls Complex, and the Dr. B R Ambedkar Learning Centre were added. The greening initiative of the campus continues to go forward. The campus also has been recognized as the campus with the best green cover.

The Academic Report 2018-2019 presents the achievements of the institute, details of the academic and research activities, training and placement activities and various other developments taking place in the institute.

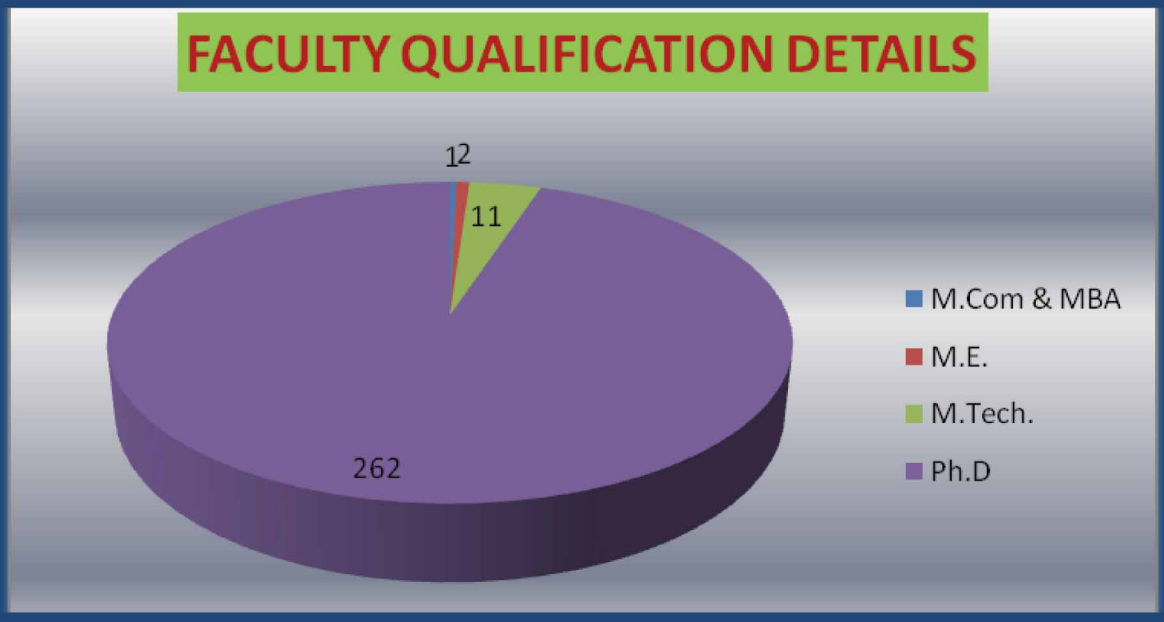
I place on record my deep sense of appreciation to all those involved in the preparation of this Academic Report. I also take this opportunity to thank the members of the faculty, non-teaching staff and the students of the institute who relentlessly work for the betterment of the institute.

Prof N V Ramana Rao

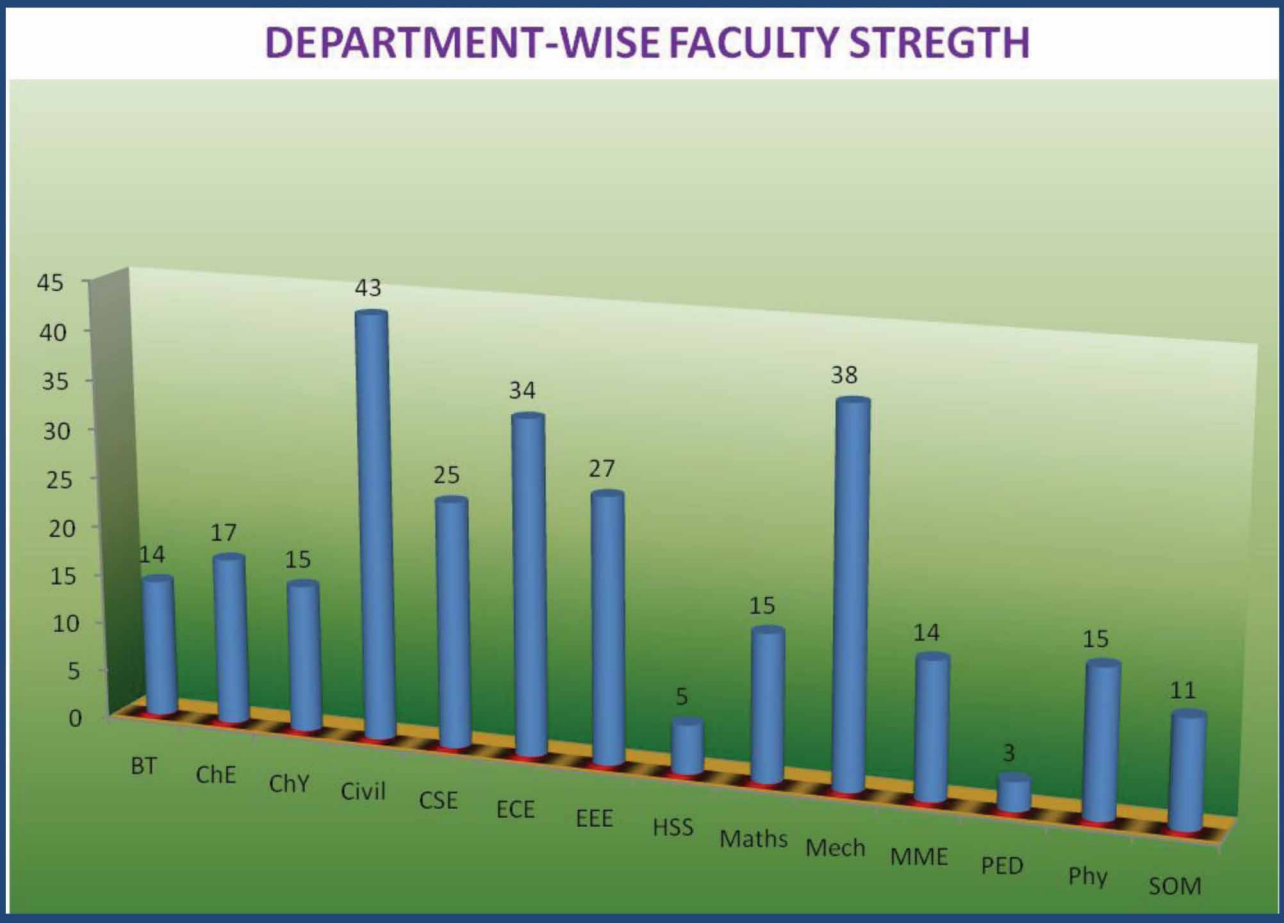

Faculty on Rolls
276
300
250
200
150
100
50
0
Total


MALE-FEMALE
44
232
F
M

FACULTY QUALIFICATION DETAILS

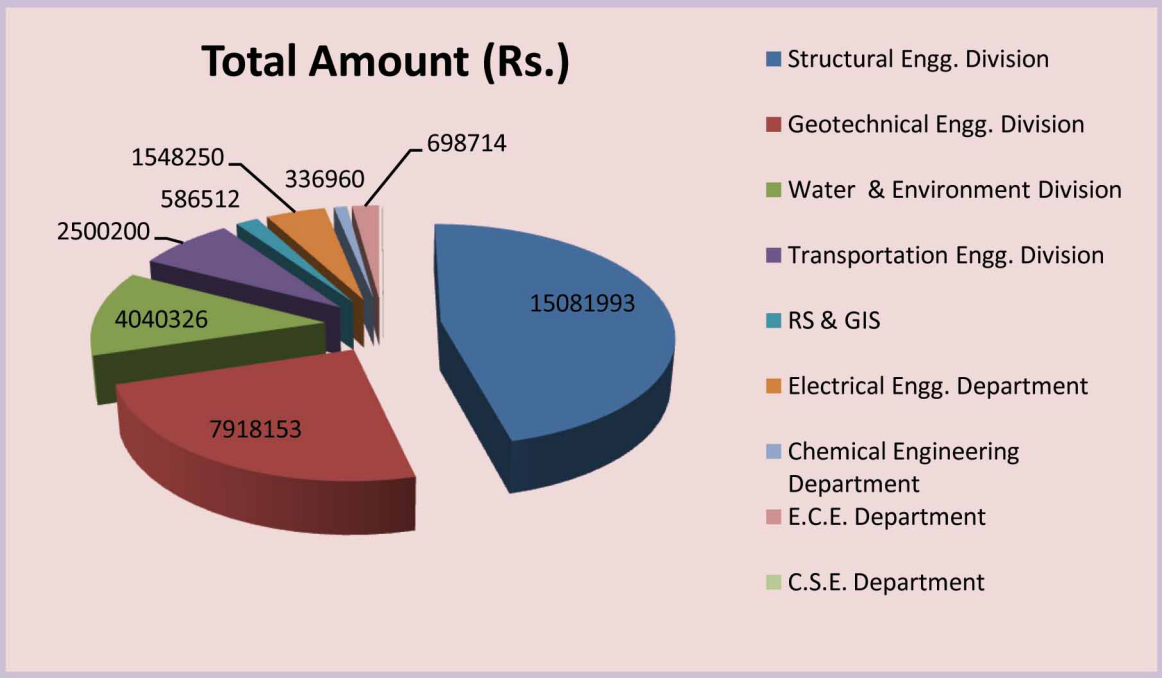


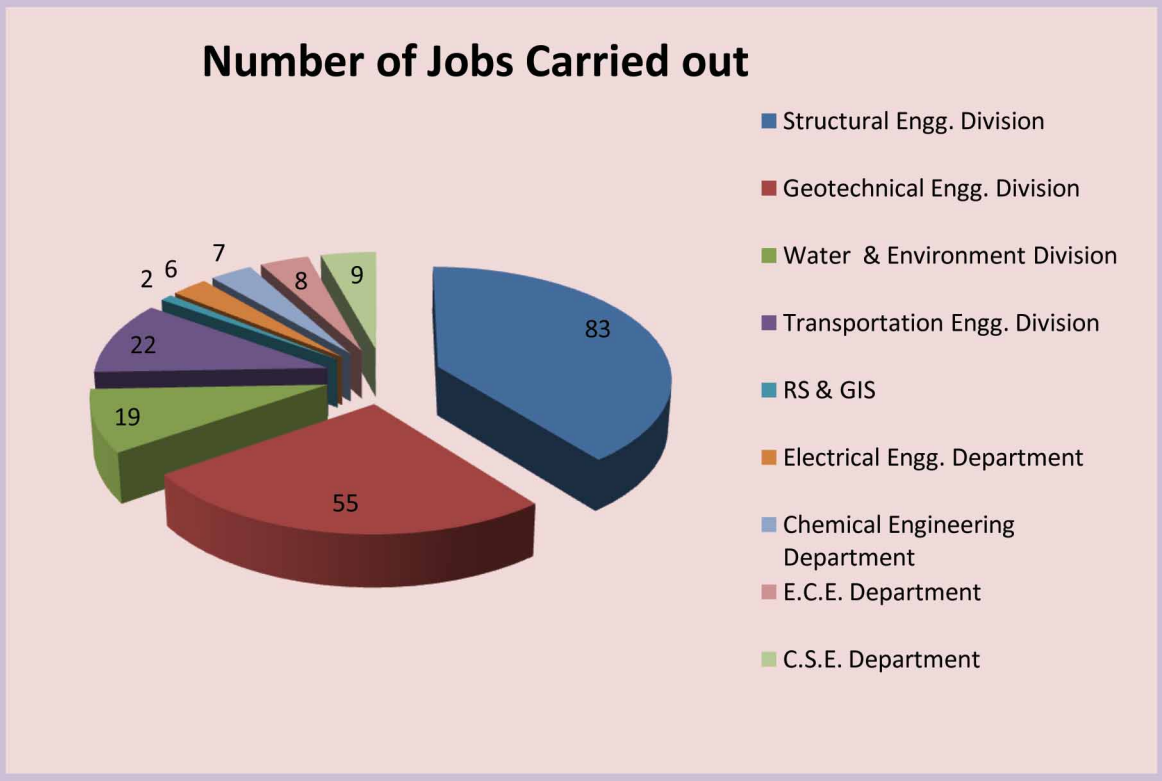
DEPARTMENT-WISE FACULTY STREGTH



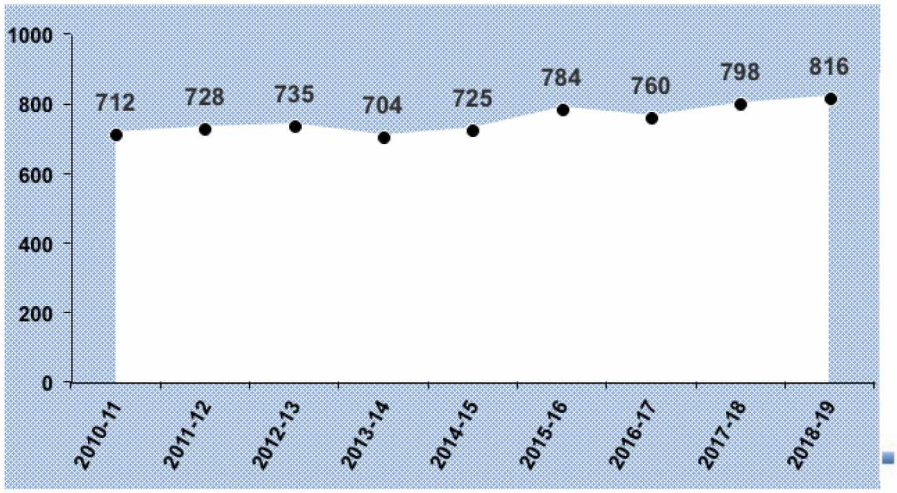
SPONSORED RESEARCH & INDUSTRIAL CONSULTANCY

Annual revenue through Consultancy (During the Period: April-2018 – March-2019)

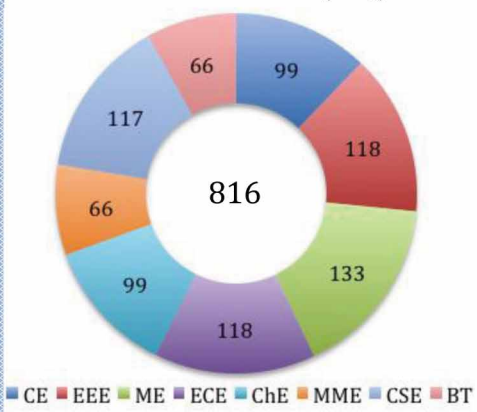




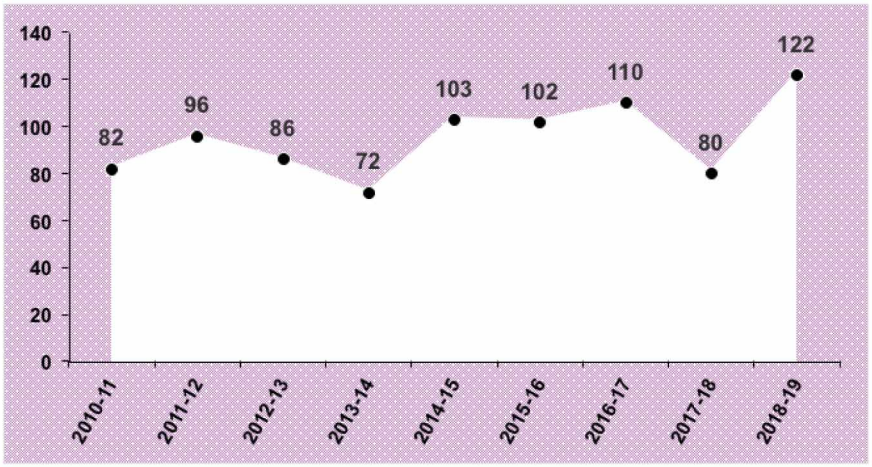
Total number of B.Tech students admitted in each academic year



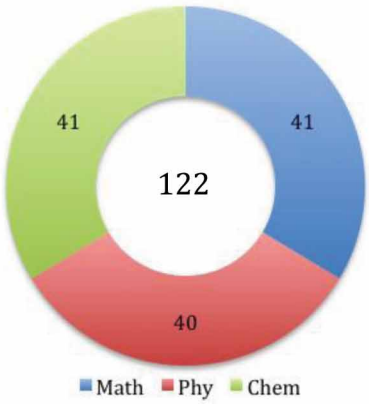
Department wise Distribution of B.Tech Students (18-19)



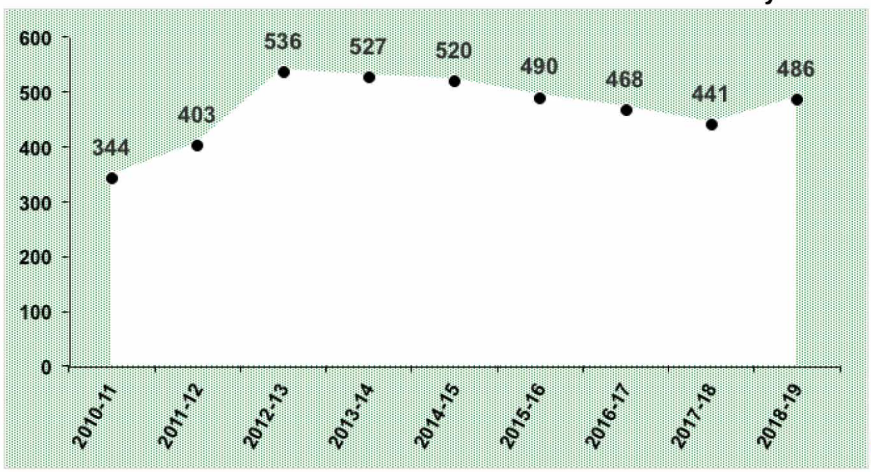
Total number of M.Sc students admitted in each academic year



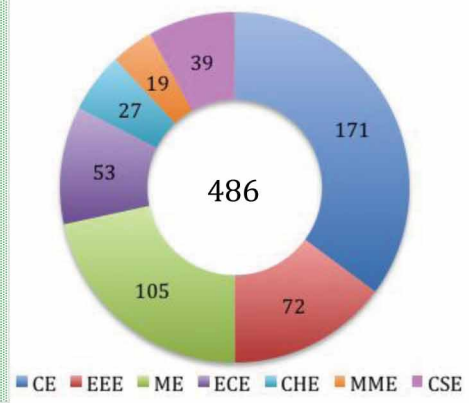
Department wise Distribution of M.Sc Students (18-19)



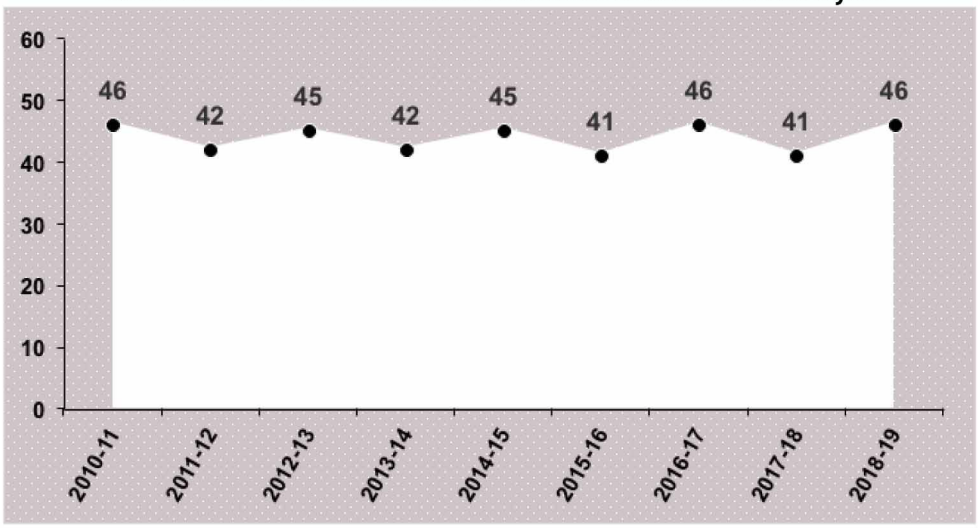
Total number of M.Tech students admitted in each academic year



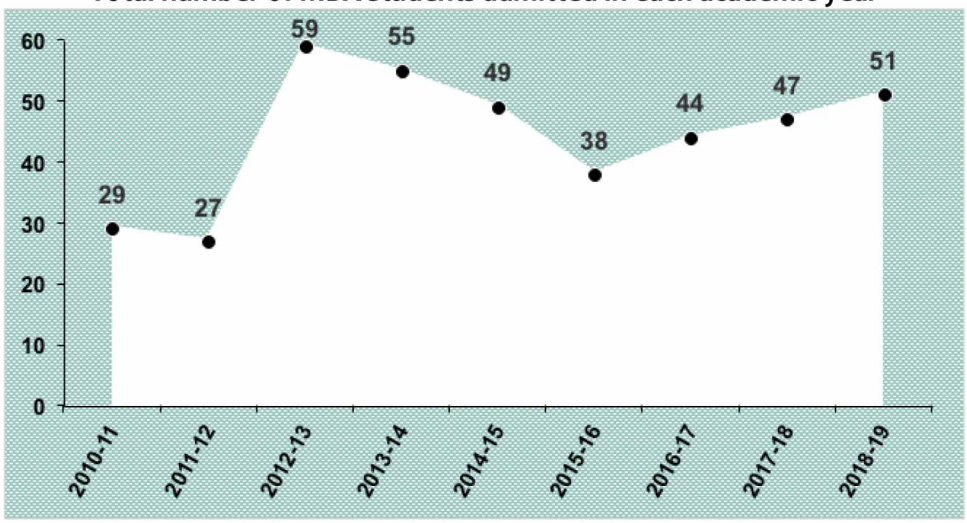
Department wise Distribution of M.Tech Students (18-19)



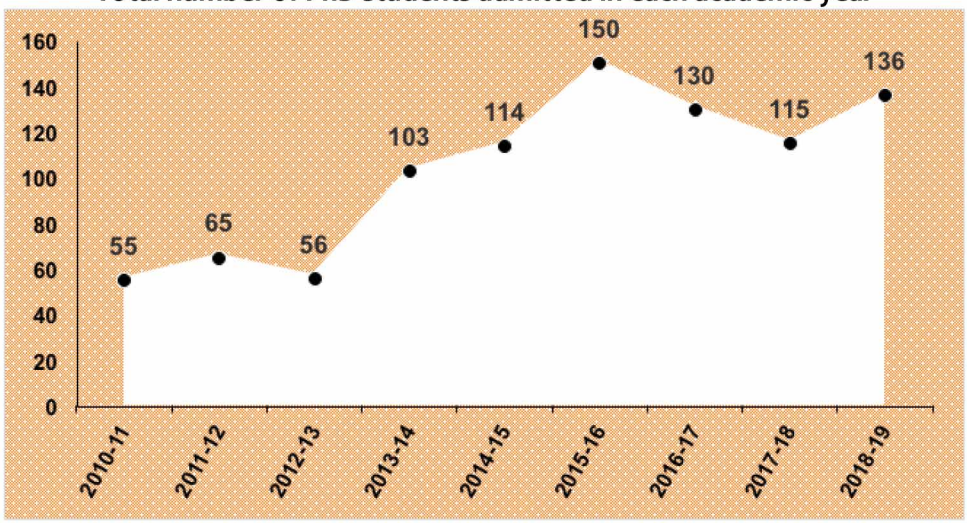
Total number of MCA students admitted in each academic year



Total number of MBA students admitted in each academic year



Total number of PhD students admitted in each academic year



INTERNATIONAL AND ALUMNI ACTIVITIES

Distinguished Lecture Series of Ministry of External Affairs, Government of India:

As a part of the outreach activities of the Ministry of External Affairs, Government of India, NIT Warangal has been sanctioned the Distinguished Lecture Series (DLS) by serving or retired ambassadors. The first lecture under this series was delivered by Ambassador V. P. Haran on the topic "India's Foreign Policy: Challenges Ahead" on 18th March 2019. It was well attended and appreciated and the Ministry of External Affairs have agreed to make the DLS an annual feature at NIT Warangal.

SPARC (Scheme for Promotion of Academic and Research Collaboration):

The major aim of SPARC initiative is to bring the strong research collaboration between Indian research groups with top research group in the leading Universities of the world, in areas that are at the cutting edge of science or with direct social relevance to the mankind, specifically India. The strong joint research should lead to tangible result that should include large number of high quality research publications, solution to key national and international problems, development of niche courses, high quality text books and research monographs, imbibing of best practices from top international academicians and researchers, strong bilateral co-operation, and improved world reputation and ranking of Indian Institutions. Prof K V Jayakumar is the nodal coordinator for SPARC from the institute. The institute also is the nodal coordinator for Taiwan under SPARC.

The institute has been sanctioned 11 projects under SPARC with collaboration from top universities of USA, UK, Taiwan, Singapore, Israel and Canada.

GIAN (Global Initiative for Academic Networks):

GIAN is a flagship program of the Ministry of Human Resource Development to bring some of the reputed academicians, researchers and industrial experts to the Indian institutes to conduct short term programmes of duration one to two weeks with the following objectives:

- To increase the footfalls of reputed international faculty in the Indian academic institutes.
- Provide opportunity to our faculty to learn and share knowledge and teaching skills in cutting edge areas.
- To provide opportunity to our students to seek knowledge and experience from reputed International faculty.
- To create avenue for possible collaborative research with the international faculty
- To increase participation and presence of international students in the academic Institutes.
- Opportunity for the students of different Institutes/Universities to interact and learn subjects in niche areas through collaborative learning process.
- Provide opportunity for the technical persons from Indian Industry to improve understandings and update their knowledge in relevant areas.
- Motivate the best international experts in the world to work on problems related to India.
- Develop high quality course material in niche areas, both through video and print that can be used by a larger body of students and teachers.
- To document and develop new pedagogic methods in emerging topics of national and international interest.

It is to be noted that NIT Warangal has been identified as one of the best performing institutes in the country. During the academic year 2018-2019, 18 courses were organized at the institute and these courses were highly commended.

India-Taiwan Vice-Chancellor/Presidents/Directors Forum:

India-Taiwan Vice-Chancellor/Presidents/Directors Forum was organized during 21-23rd June 2019, in association with Association of Indian Universities. The Taiwan delegation consisting of 26 members was led by Prof. Andy Cheu-An Bi, Director General of Department of International and Cross-Strait Education, Taiwan Ministry of Education. Prof. K. K. Aggarwal, Chairman, National Board of Accreditation was the Chief Guest. About 60 academic administers from across the country attended the meet.

Heritage Network General Assembly:

Director attended the general assembly in Portugal during May 2019 and was elected as an Executive Member of the Heritage Network for a period of four years. During the meet it was also decided that the next Executive and Steering Committee meeting will be hosted by NIT Warangal.

Alumni Activities:

1993 batch alumni had their Silver Jubilee reunion and 1968-70 batch tri-union were held during the academic year. There have been Alumni meet after 30 and 40 years as well.

PLACEMENT REPORT 2018-19

TRAINING AND PLACEMENT SECTION

" National Institute of Technology Warangal is one of the premier engineering schools of India, maintaining an excellent academic record. The institute's Training and Placement Section (TAPS) provides a launch pad for students to make it to the best organisations in the fields of software, core industries, management etc. "

VISION

" To be a centre of excellence that trains and makes potential engineers industry ready by the time they graduate"

MISSION

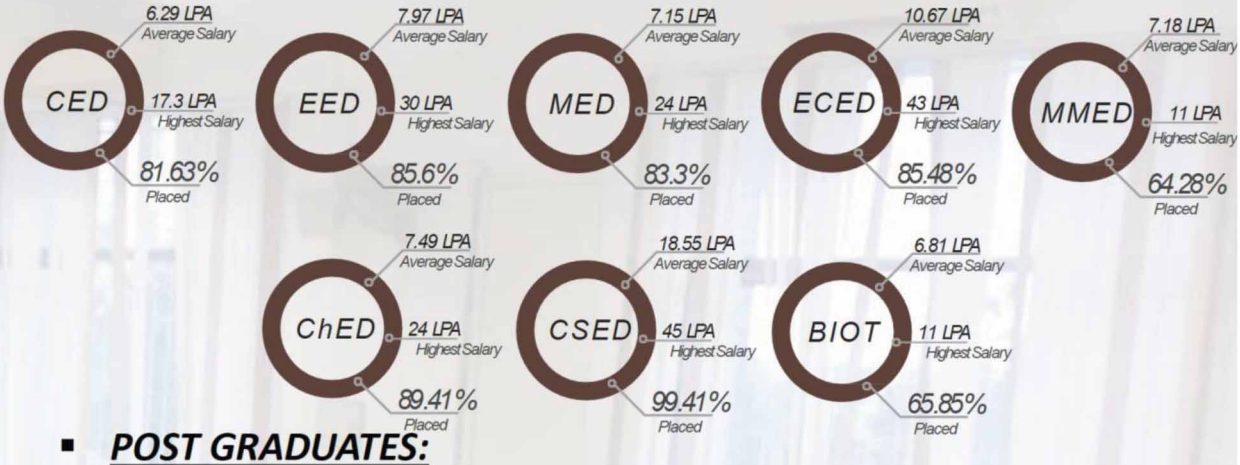
" Train and create opportunities for students for a successful future"

taps@nitw.ac.in

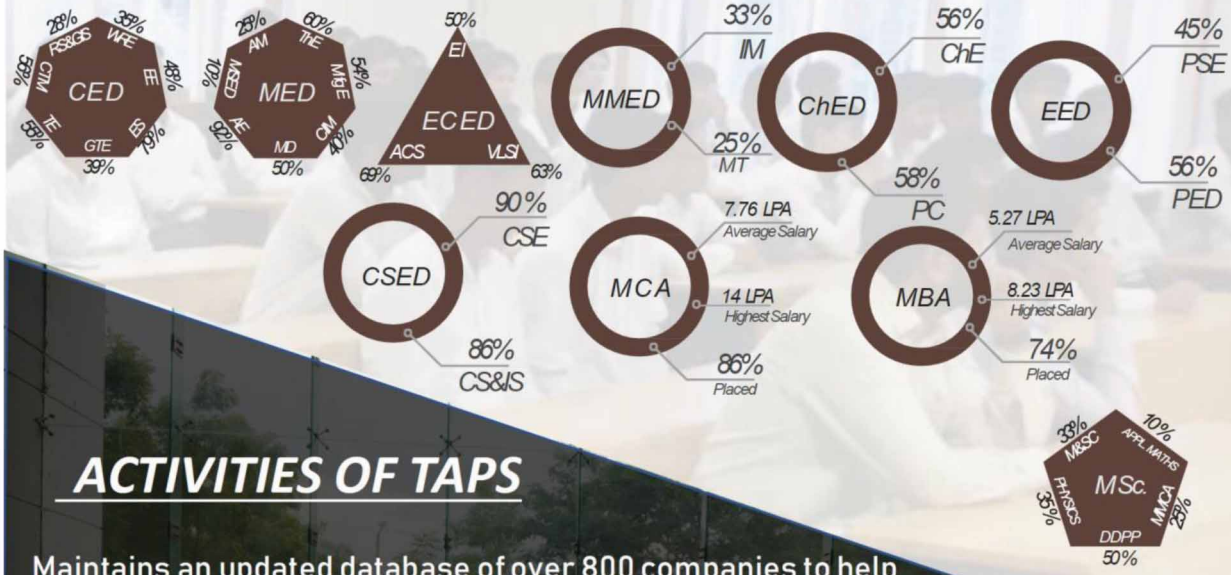
https://www.nitw.ac.in/main/academics/placements/

PLACEMENT STATISTICS

▪ UNDER GRADUATES:



▪ POST GRADUATES:



ACTIVITIES OF TAPS

Maintains an updated database of over 800 companies to help each student weigh their options when choosing a company.

Generates feedback from visiting companies to departments to enable the carrying out of curriculum related changes and feed innovation into the ecosystem.

Nurtures and sustains industry-institute interaction through industrial visits, in-plant training, internships, industry-academia gaps in terms of industry needs and requirements.

Actively organizes and supports Campus Placement Activities to deliver on its commitments in providing gainful employment opportunities to every student.

Enables every student to aspire for and get into a career of their choice through career counselling sessions by TAPS.

MODES OF PLACEMENT

1 CAMPUS INTERVIEWS

1. Employers interested in recruiting NITW students e-mail taps@nitw.ac.in
2. Training and Placement Section (TAPS) sends invitation and CPNF
3. Recruiters fill Campus Placement Notification(CPNF) Form and revert to TAPS
4. Students are notified about recruiter and list of interested students is sent to the recruiter
5. Shortlist of eligible students
6. TAPS allots a mutually convenient date for employer campus visit
7. Preliminary online exam for further stages
8. Officials of potential recruiters visit campus
9. Pre-Placement talk is followed by placement process as per recruiter's requirements
10. Announcement of Results and employer gives the list of selected students to TAPS

2 WINNING COMPETITIONS

Barclays India Hiring Challenge for 2020 Graduates
Hacker Rank Interview Preparation Kit for Campus Placements
Philips Data Science Hackathon
RIVIGO Coding Championship 2019
TCS Global Coding Contest CodeVIta Season VIII
Student Entrepreneur of the Month Challenge
The Asian Entrepreneurship Boot-Camp 2019
Quint Campus@BQ for MBA Students
Google India Women Techmakers Program 2019
Novartis Biotechnology Leadership Camp (Bio Camp)
Google Code Jam's Kick Start Online Program
TESCO Technology Bengaluru Presents Codeathon 2019

OUR STUDENTS GAINFULLY EMPLOYED AT

FACULTY INCHARGE
Dr. Ch. Venkaiah
Mobile No.: 9490165357

FACULTY CO-ORDINATOR
Dr. S. Vidyasagar
Mobile No.: 9490164796

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME PHASE III

About NPIU

National Project Implementation Unit (NPIU) is a unit of Government of India, established in August 1990 for coordination, facilitation, monitoring and to provide guidance to the States/Institutions in all aspects of the World Bank assisted projects. During 1991 to 2007, NPIU implemented three Technician Education Projects of Government of India assisted by the World Bank, which helped to strengthen and upgrade the Technical Education System and benefited 552 Polytechnics in 27 States including UTs of Andaman & Nicobar Island and Pondicherry. These three Projects have been rated as "Highly Satisfactory" on Project Management and implementation, which is the highest rating, provided by the World Bank. Success of three Technical Education Projects encouraged the Govt. of India to seek similar financial assistance from the World Bank for a systemic transformation of the Technical Education system as a whole with special focus on overall Quality Improvement in Engineering Education.

About TEQIP III

On the basis of excellent performance by NIT Warangal in TEQIP-I and TEQIP-II phases, the MHRD through NPIU has sanctioned the TEQIP-III project to NIT Warangal in the year 2017-18 with a budget outlay of Rs.7.0 Crores. This Project will further improve the quality of Post-Graduate teaching, catalyze the R& D activities, promote the Faculty and Staff development and provide academic support for the students. The Project Implementation and Monitoring Committee of TEQIP-III at NITW has prepared a procurement plan and obtained its approval by the NPIU. The plan is now put into operation. A series of Continuing Education Programs, Workshops, Seminars and Conferences spreading across the wide spectrum of Engineering Disciplines are initiated to disseminate the knowledge in the state of art technologies and build professional competency in the students and faculty. NIT Warangal has established twinning arrangements with Chaibasa Engineering College, Chaibasa, Jharkhand State in order to build their capacity and improve the performance. Our Institute has got very good grade based on the Monitoring and Project output Performances.

Faculty Incharge:

Prof. Krishnanand Lanka
Coordinator , TEQIP-III,
Professor, MED.

1. Facilities created by TEQIP:

i.) Environment Management Plan:

A Biogas plant is constructed and executed by NExtEra Energy Resources, Hyderabad as a part of Environment Management Plan. Rain water harvesting pits were cleaned and rejuvenated for the season. Signages were displayed in the institute covering the hostels to create awareness on cleanliness, water and energy conservation.

ii.) E-class room:

The Digital Class Rooms under the Digital Pedagogy Scheme of the MHRD is under implementation

iii.) Swayam Prabha:

Under the Swayam Prabha scheme of the Govt. of India TEQIP-III is providing facilities for the students to take online courses like NPTEL, MOOCS and SWAYAM. The audio and video system procured under TEQIP-III will enable students to utilize the online learning resources and is available in Library premises.

2. Innovation and startups:

i.) Hosted **Smart India Hackathon** (SIH-2019) for the students to offer innovative solutions for problems. The Grand Finale (36 hours non-stop event) took place on 2nd and 3rd March, 2019 at NIT, Warangal. It is one of the 45 nodal centres across the country. 32 student teams (200 students), 60 mentors, Company personnel and judges from across the country have participated in this event.

ii.) M.Tech Students of Electrical Engg., participated in the finals of "**Road Hackathon Challenge**" by Bosch at IIT Guwahati, on 30th – 31st march, 2019.

iii.)**Team Thunderbolt 6.0 Efficycle** Racing Team has represented our college in the Efficycle 2018 SAE-NIS event held at LPU, Jalandhar from 9th – 13th Oct,2018 and secured an all India rank 19 among 81 participating teams.

3. Support for Students (UG, PG, Ph.D) under Research and Development:

i.) About 22 students (UG/PG/Ph.D students) Attended Conferences/ Seminars/ Workshops in other institutes within India.

ii) About 23 students benefited in purchase of Chemicals, Spares and consumables in their student research project.

4. Equity Action Plan (EAP):

i.) Prof. L. Krishnanand and Dr. T. Ramakrishnudu Attended Two day National conference on "Equity: Achievements and Challenges in India" on 15th – 16th March, 2019 at college of Engineering Pune.

ii.) The two –month Campus Recruitment Training (Pre-Placement Training) for the needy including SC and ST students of National Institute of Technology-Warangal, under the Equity Action Plan (EAP) of TEQIP-III was successfully conducted from 13th May, 2019 to 6th July, 2019. Dr. T.Ramakrishnudu and Dr.A.Banerji Babu are the Coordinators of this workshop.

5. NPIU Sponsored ERP Implementation:

NPIU/MHRD in technical collaboration with IIT Kharagpur is developing ERP software – SMILE (Software for Managing Institute of Learning and Education) for NIT Warangal. This project is being sponsored by TEQIP/ NPIU.

6. Twining Activities:

i.) Organized **Faculty Development program** on "Outcome Based Engineering Education and Accreditation" on 15- 18 March, 2019 at **Chaibasa Engineering College**, Jharkhand in collaboration with TLC, NITW.

ii.) **Prof. N. Selvaraj and Dr. G. Nagasrinivasulu** of MED visited Chaibasa to deliver lectures on CNC Machines and IC Engines during (22-25 Feb, 2019).

iii.) **Dr. D. Srinivasa Rao, Dr. T. Vinay Kumar, Dr. A.V. Giridhar**, of EED visited Chaibasa to deliver lectures on various electrical engineering subjects (26 Feb -03 March, 2019).

iv.) **Dr. Gopi Ram, Sri. SKLV Sai Prakash** of ECE visited Chaibasa to deliver lectures on various topics related to ECE specializations during (01-04 March, 2019 and 06-09 March, 2019 respectively)

v.) **Dr. D.V.S.S. Siva Sarma** of EED visited Chaibasa to deliver lectures on HVDC Transmission during (29 March -01 April, 2019).

vi.) **Prof. L. Krishnanand** of MED visited Chaibasa to deliver lectures in FDP on Teaching and Learning methods in Outcome based Engineering Education" during (28 March -31 March, 2019).

vii.) A team consisting of Sri Debabrata Raha, Sri Vikash Srivastva and Sri Bappaditya Jana of **Chaibasa Engineering College**, Jharkhand had visited for vetting their B. Tech programmes (CSE, ECE, and ME) e-SARs ON 03-06-2019.

viii.) Two of the faculty members of **Chaibasa Engineering College**, participated in the International conference on "**BIG DATA**" conducted by CSE Dept. of NITW.

ix.) **Dr. T.P. Tezeswi and Dr. M.V.N. Siva Kumar** of CED visited Chaibasa to deliver lectures on various topics related to civil specializations during (07-09 March, 2019).

x.) **Dr. RBV Subramanyam** of CSED visited Chaibasa to deliver lectures on "Big Data Analytics" during (12-16 March 2019).

5. Activities:

(i.) CEP's/Workshops/Conferences conducted from 01.07.2018 to 30.06.2019 under TEQIP - III

Department Name	Continue Education Program	International Conference	National Conference	Symposium	Workshop	Grand Total
Civil	2		1		1	4
Electrical	2					2
Mechanical	1	1	1			3
Chemical	2	1	1			4
Computer Science	1	1				2
Bio-Tech	2		1			3
Maths	2	1				3
Physics	2	1				3
Chemistry			1			1
Physical Education			1			1
T&P					1	1
Computer Center	1			1		2
Humanities	1					1
CAM	1					1
Grand Total	**17**	**5**	**6**	**1**	**2**	31

(ii.) Induction Program conducted under TEQIP – III from 01.07.2018 to 30.06.2019

Sl.No	No of Days	Type of Program	From Date	To Date	Month	Tittle of the Program	Coordinator
1	13	Induction Program	23.07.2018	04.08.2018	Jul-18	Induction Program for New Entrants of I B.Tech 2018 Batch	Prof. L. Ram Gopal Reddy
2	8	Induction Program	24.06.2019	01.07.2019	Jun-18	Induction Program for Faculty of NIT Warangal	Prof. L. Ram Gopal Reddy

- About 30 teachers trained for Induction Program for Faculty of NIT Warangal

1. Expert Guest lecture by **Dr. Gopala Krishnan Narayana Murthy**, Univ. of Liverpool Mangt. On "Servitization" on 13th Nov, 2019.
2. Expert Guest lecture by **Prof. Rajeshwar Dayal Tyagi** on "Bioconversion of residues (waste) into high value-added products" on 26th Nov,2019.
3. Expert Guest lecture by **Mr. A. Manoharan**, Fr. Sr. Scientist and zonal officer, MoEF on "Case Studies on Environmental Impact Assessment and Environmental Audit in India" on 30th April,2019.

(iii.) Workshops for Non-Teaching Staff and National Conference for women under TEQIP-III from 01.07.2018 to 30.06.2019

Sl.No	No of Days	Type of Program	From Date	To Date	Month	Title of the Program	Coordinator
1	2	Workshop	2.11.2018	3.11.2018	Nov-18	Universal Human Values for Non-Teaching Staff	Dr. M. Sailaja Kumari Dr. S. Shankar Dr. V. Hari Kumar
2	2	Workshop	04.01.2019	05.01.2019	Jan-19	Universal Human Values for Non-Teaching Staff	Dr. S. Shankar
3	2	National Conference	08.03.2019	09.03.2019	Mar-19	Role of Women in Technical Education: Entrepreneurship, Research and Consultancy	Prof. M. Sailaja Kumari Dr. H.P. Rani Dr. K. Padma Dr. K. Madhavi
4	2	Workshop	12.04.2019	13.4.2019	Apr-19	Universal Human Values for Non-Teaching Staff	Dr. S. Shankar

ELECTRONICS & ICT ACADEMY

Electronics & ICT Academy set up at NIT Warangal, by Ministry of Electronics & Information Technology(MeitY) Government of India, is one among the seven academies in India and its project outlay is Rs.25 crore. MeitY has mentioned that ours is the best performing institute in each year for the past 4 years.**Our academy has trained 15,500 participants through 328 Faculty Development Programmes conducted in the states of Telangana, Karnataka, Andhra Pradesh, Goa** and the target is 16000 participants in a span of five years.

E&ICT Academy has been offering Weekend Certificate Program on AI and ML at Hyderabad for industry Professionals and classes for its third batch were commenced recently. Jointly with Edurekha, E&ICT Academy offers a9-month long **Online Interactive Post Graduate Program on Artificial Intelligence & Machine Learning**for the graduates and currently three batches have been started with participants spread over various countries. It has plans to offer Post Graduate Diploma Programs in AI and ML in the next year with the permission from MeitY.

E&ICT Academy is also active in training the faculty in Developing MOOCS, Moodle content, awareness in Outcome based Education and thus promoting ICT tool based education in various branches of Engineering, Science and Arts and so far 30 programs were conducted in this regard. It has its own state-of-art labs and infrastructure. **So far, E&ICT Academy has signed MoUs with 28 institutions and industries.**

Several NKN based programs were conducted so that the lectures are delivered simultaneously in an interactive mode at various locations from North-East to North-West, North to South in India. **E&ICT Academy has supported in organizing two International Conferences on Big Data Analytics and two National conferences so far.**

CENTRAL LIBRARY

Prof. D. S. Kesava Rao
Chairman
Library Advisory Committee

Dr. S.P. Selvi
Associate Dean
(Library)

Dr. K. Veeranjaneyalu
Librarian

Sri. G. Balakrishna Assistant
Librarian

INTRODUCTION:

The Central Library at NIT Warangal established along with the inception of the institute is located adjacent to the administrative block. The library housed with a plinth area of 4000 Sq. Mtrs (Ground + 2 floors) which includes stack rooms (for the textbooks), reading halls (reference section), current journals/periodicals area (print version), newspaper section, video lecture halls, digital library, book banks, and a separate reference area (TEQIP hall). The Central Library supports the regular academic activities of the institute (teaching and research by providing necessary books for the students, faculty and non-faculty of the Institute. It also disseminates information according to the requirement of the users of the institute.

MEMBERSHIP:

Every student (who gets admission in the institute), Faculty members and regular staff (non-faculty, technical and administrative) of the Institute are the members of the Central Library. They are eligible for lending books, use of the digital library facilities.

COLLECTION:

The Central Library has a good collection of old and new books. The total cost of the books amounts to Rs. 10 Crores

- Text Books and reference books: 1,80,286
- Back volumes : 32,288
- Standards (Indian and Foreign) : 7,111
- CD-ROMs 2055 and Video Cassettes : 350
- Dissertations (Ph.D. and M.Tech theses of NITW students)

BOOK BANKS:
Needy students: 9,879
SC/ST Students: 9,637 (including the books from the Department of Social Welfare)

SERVICES:
- Lending of Books
- Reference Service (e-books and journals)
- OPAC (Online Public Access Catalogue
- Digital LibraryBibliography Compilation
- InterLibrary Loan
- Circulation of Library Bulletin

DIGITAL LIBRARY:
The Library has campus LAN connectivity with fiber optic cable (10/100 Mbps) through the computer center and is connected to web server (Dual Xeon) – 50 systems providing network facility are installed for browsing. Many of the computers in the digital library are loaded with MS office and other required software for the students. The Central Library of NIT Warangal is a member in the e-shodhsindhu consortium and subscribes the online journals through the e-shodhsindhu consortium as well as from the institute funds. The details of the journals subscribed by NIT Warangal as are follow

- ASME Transactions
- ASCE Transactions
- Applied Science and Technology Plus (ASTP)-Back files available from the year 2000-2008
- ACM Digital Library
- J-Gate
- Indian Standards 18,000 in e-form availed up to 2009.
- Elsevier Science Direct Online E-Journals (8 Subjects Collection)
- IEEE / IEE Electronic Library
- Taylor & Francis (4 Subject Collection)
- Royal Society of Chemistry (Gold)
- ASTM (Digital Library)
- ASTM Standards
- ACS Publications
- Springer (Science and Engineering)
- Sage Publications (Science and Engineering)
- SciFinder Scholar (Academic unlimited access plan)

VIRTUAL LIBRARY and INSTITUTIONAL REPOSITORY (IR):

The Central Library is in the process of establishing the virtual library (using Xeon Server 3.4 GHz, 1 GHz – Compaq Proliantand 50 Nos. P – IV 512 MB 160 GB HD with TFT Monitors. The conversion of digital archives of research out-put (created by the faculty, M.Sc, M.Tech and Ph.D. students) is under progress. Soon this information will be made available to the students and faculty through LAN within the Institute.

DELNET:

The Central Library NIT Warangal is a member in the Development Library Network, New Delhi (DELNET) which connects all the libraries across the country. By this network, the libraries can share in inter-institute facilities such as lending books, and electronic content. DELNET also providesthe bibliographic search facilities and sharing other technical information between the libraries.

BEST PRACTICES:

The Central Library, NIT Warangal follows the best practices such as
- Circulation of the information brochure to the newly joined students of the students, faculty, and staff

- Circulation of the information related to the research publications by the faculty of the institute
- Conducting user orientation programs to the newly joined faculty and students about the facilities available in the Central Library
- Information display and notifications by the institute and other institutes of the country

OUTREACH PROGRAMMES:

As outreach activity on behalf of the Institute and the Teaching Learning Centre, the Central Library conducts orientation programs to the faculty of the Degree and PG colleges of the Telangana State as well as from the other states. Also, the Central Library allowsusing the electronic content (journals and e-books) to the resident participants of various faculty development programs and GIAN programs conducted by the Institute.

STACK – ROOMS:

- There are three stack rooms (with adequate seating arrangements) in the ground floor of which two rooms are stacked with textbooks and the other with back volumes of Journals.
- The books and back-dated Journals are arranged on the shelves subject-wise according to the Dewey Decimal Classification Scheme.
- The Library follows the Open Access System. All the titles of the books are made available through LAN using Online Public Access Catalog

REFERENCE SECTION:

The section contains reference books such as Encyclopedias, Dictionaries, Directories, Handbooks, Bibliographies, Atlases, Databases from different publishers. The reference section also includes the print version of the dissertations of M.Tech. and Ph.D. theses submitted by NITW students. These are to be referred within the Library premises and not for lending.

TEXTBOOKS:

Multiple copies each of the prescribed textbooks (as per the academic curriculum) and other recommended books are kept in the textbook collection and these are to be referred on the Library premises only.
A separate reading hall (funded by TEQIP-I) for reference and textbooks is provided with a seating capacity of 100 members.

PERIODICALS and MAGAZINE SECTION:

The Library receives about 100journals, magazines out of which 75 are Indians, 25 are received from foreign publishers. All the current periodicals are displayed on the periodical racks in the reading hall with a seating capacity of 100.

LIBSYS:

The Central Library uses the LIBSYS software for the circulation of the books and day to day functioning (housekeeping operations and services such as acquisition entries, serials control, etc.
OPAC (Online Public Access Catalogue) facility has been created for the users to search the bibliographic data of the Library holdings. The faculty members can access OPAC from their respective departments through the campus LAN.

NEWSPAPERS:

The Library has dedicated newspaper section in the reading halls. Library receives 6 daily newspapers in English along with the magazines (India Today, OutLook, etc.) which are useful to the students who are preparing for the competitive exams (UPSC, etc.).

LIBRARY ADVISORY COMMITTEE:

The library advisory committee (LAC) comprises a senior Professor as Chairman, faculty members from each department as members and Librarian as convener. The LAC is the supreme body to monitor the functioning of the library. The LAC is decision making body for the policies, purchases of the library in accord with the Institute administration. It meets from time to time to lay down policies and to review working conditions for the smooth functioning of the Library.

CENTRE FOR INNOVATION AND INCUBATION

Prof L. Anjaneyulu
Prof-in-Charge
Centre for Innovation & Incubation

The **Centre for Innovation and Incubation (CII)**, popularly known as **DrV.A.Sastry Innovation Centre** is a G+2 building, with a floor space of approx. 30,000 sft. The mission of the centre is " to promote innovations leading to new processes, products, designs and technologies in collaboration with industry and thereby facilitate application of knowledge to the society". The following are the objectives of the centre

- ✓ To promote greater industry – academic interaction, by inviting leading industries to set up their research labs at this Centre and carry out their research projects by using the talent on the campus.
- ✓ To encourage the first generation entrepreneurs desirous of R&D partnership with NITW or otherwise to establish their research labs at this Centre.
- ✓ To promote innovation projects of B.Tech, and M.Tech. Students by providing appropriate facilities, infrastructure and financial assistance as per the norms of the Institute.
- ✓ To facilitate the 'on campus interaction' between the scientists of industries and faculty and students of NITW in order to enable orientation of R&D activities of NITW to potential needs of the industry.

NIT,Warangal being a premier technical institution plays a vital role in the process of technology entrepreneurship by offering variety of services through CII in the area of start-up creation, business incubation, easy access to capital and knowledge access to many young potential innovators and entrepreneurs and helping them being groomed to succeed with new and innovative ideas.Moreover, emphasis has also been given by the institute towards entrepreneurial focused education by offering Entrepreneurship Development and Venture Creation as elective courses for developing entrepreneurial competencies. Further, various support mechanisms are also provided in the form of structured mentorship programs, short training to build the confidence in students to convert ideas to innovations and start-up establishment. Incubation facilities are also open to the local start-ups in and around as part of the social responsibility at minimal expenses, thereby contributing significantly in promoting the entrepreneurship culture in institute and within the country.The CII facilitates the following at present.

❖ Start-up Cell	❖ Innovation Garage	❖ Industry R&D Labs
❖ EPICS Projects& TEP	❖ IPR Cell	❖ MoUs (national)

Start ups

Student start-ups are current requirements and provide a great opportunity in market expansion and job creation. Startup Policy of NITW targets to nurture and encourage entrepreneurship among students and young faculty to benefit from GoI's 'Start-up India' and 'Make in India' program.Students are encouraged to participate in idea generation to prototype events and the funding is provided to procure the hardware required through TEQIP-III

Startup name	• Founders/CEO
Flowhrex Technologies	•Abhijeet Kulkarni, Alumni •Amol Raykar, Alumni
aufenbach	•Mohamed Azman, Alumni •Jithu G Panicker, ALumni
Dhoor Davakhana	•Dr M.Satish, ECE Dept
VaSuDha GeoAnalytics	•Dr K.Venkat Reddy, Civil •Ms Sunitha
GBIT Studios	•Aniruddha S J , IV B.Tech
Skylark Labs	•Dr Amarjot Singh, Alumni
Kalam books	•Mr Kalp Shobhana, 3 B.Tech •Mr Anushrest
Ayurdeep Healthcare solutions	•Ms B.Deepthi

Innovation Garage

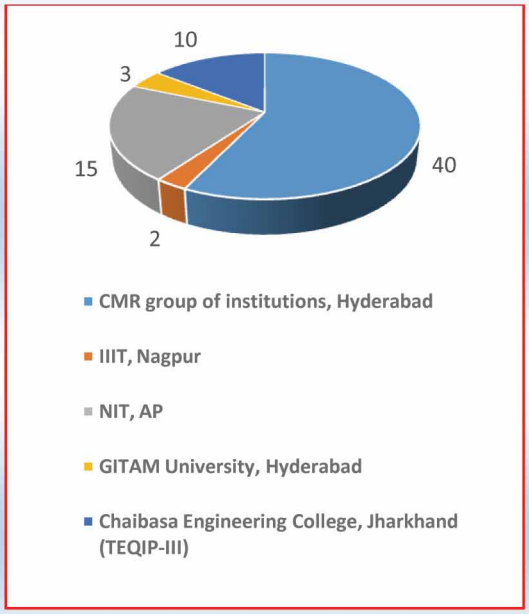
The CII also provides the platform for the students to carry out innovative projects through **innovation Garage (IG).** Innovation garage is a multidisciplinary 24X7 maker's space for the students to work on the innovative projects and develop prototypes. Students are actively engaged in the innovative designs, and Hackathons are being regularly conducted to encourage the innovative potential of students.

List of Events conducted during 2018-19

S.No.	Event	Date(s)	No. of students
1	Introduction Session for First years :Informative Talk	28/07/18	500+
2	First weekend hack : Task completion	4/8/18	30+
3	Open House (I years) Informative Talk	12/08/18	300
4	Arduino Workshop	19/08/18	200
5	Introduction to PyTorch : Interactive session	01/09/18	100
6	Game Dev Workshop	02/09/18	250
7	Talk by ServiceNow Director	11/09/18	75
8	Telangana startup yatra (Boot-camp)	22/09/18	150+
9	Talk by DrAmarjoth Singh	3/10/18	40+
10	Makeathon 10 (INK Makeathon)	6-7/10/18	300+
11	Meet with batch of 2008: Interactive session	28/10/18	50+
12	Introduction to Machine Learning : Interactive session	04/11/18	150
13	Representation at Makerfair Hyderabad	10/11/18	30+
14	Representation at The Things Conference, Hyderabad	10/11/18	10
15	ServiceNow Workshop	05/01/19	150
16	LVPEI MIT's workshop	17/01/19	50
17	Session on Social Entrepreneurship	18/01/19	150
18	iGEM	30/01/19	150
19	Girls in innovation Interactive session	31/01/19	100
20	Dr RL Umashankar, 1964-69 Alumni (Exseedspace) visit to IG : Interactive session	7/2/19	50
21	Smart India Hackathon Competition	2-3/3/19	300
22	Ideathon event	10/3/19	150
23	Makerwave : Hackathon	19-21/04/19	200

Summer Internships

70 students of 2nd and 3rd year B.Tech have done their Summer Internship during May-June 2019 with an average stay of 20 days depending on the students academic schedules. The program is called**"Integrated Summer Internship programme"**which consisted of lectures on Computer Networks, IoT, Web programming, Machine Learning, motivation and also a mini project to be submitted at the end of internship. No fee was charged for the internship and all the students were given the certificates. The following are the details of the students.



Sports car Design Teams at CII

Inter-disciplinary Student teams are working from CII to show case their designs and working models at National level design competitions

Team Ronin Racing (Electric formula one car)

Team Spardhak (BAJA Vehicle)

Team Thunderbolt (Efficycle)

Team MechXhausters (Formula Vehicle)

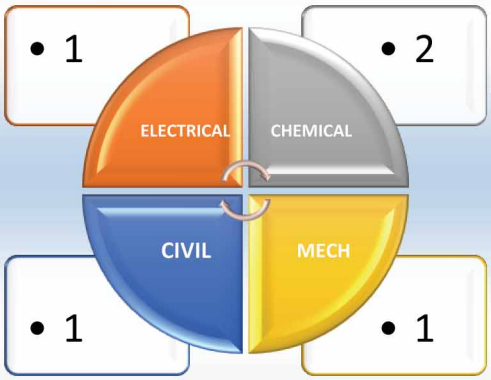
Team Mechaholics (Quad Bike)

Team Tejas (Electric G-Kart)

Team Go-Kart

IPR Cell

Patents filed during 2018-19



List of Patents granted during 2018-19

1. SYSTEM FOR PREPARATION OF NANO ORGANIC PIGMENT DISPERSION USING CAVITATION REACTORS (PATENT No. 306507 dt 29-1-2019)
   Inventors (Chemical Engg.)

   1. BHARAT APPARAO BHANVASE
   2.SONAWANE SHIRISH HARI

List of IPR Workshops conducted during 2018-19

1. One day national workshop on **"Role of IPR in Innovation Management for Academia - Industry Collaboration "** has been conducted on 17-11-2018 in collaboration with NRDC, New Delhi. About 200 participants attended the workshop that includes Faculty and Research Scholars.

Memorandum of Understanding (MoUs) (National Partnerships) – 2018-19

Academic institutions /universities	**3**
Industries	**12**

Govt depts./Agencies	4
Total	18

Engineering Projects in Community Service (EPICS) : 2018-19

A 4 creditoptional elective course offered to the students in their **III** year to enable them an experiential learning by working on community based projects.

No. of Students registered for EPICS 2018-19 :70

S.No	Event	Date	Students
1	EPICS Orientation session (ideathon)	2/2/19	150
2	EPICS discussions (2018 batch, 3-2,4-1)	16/2/19	70

Technology Entrepreneurship Program

Technology Entrepreneurship program (TEP)is a one year virtual certification program for II B.Tech students in collaboration with Indian School of Business (ISB), Hyderabad.

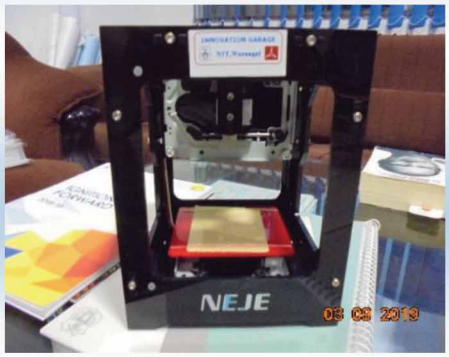
No. of Students registered for TEP 2018 : 15

Industry R&D Labs

Sky-eIT Solutions PvtLtd : Conducts SalesForce Certified programmes, offers live projects and inducts students into internal and consulting projects as employees.

Equipment available at CII

3D Printers



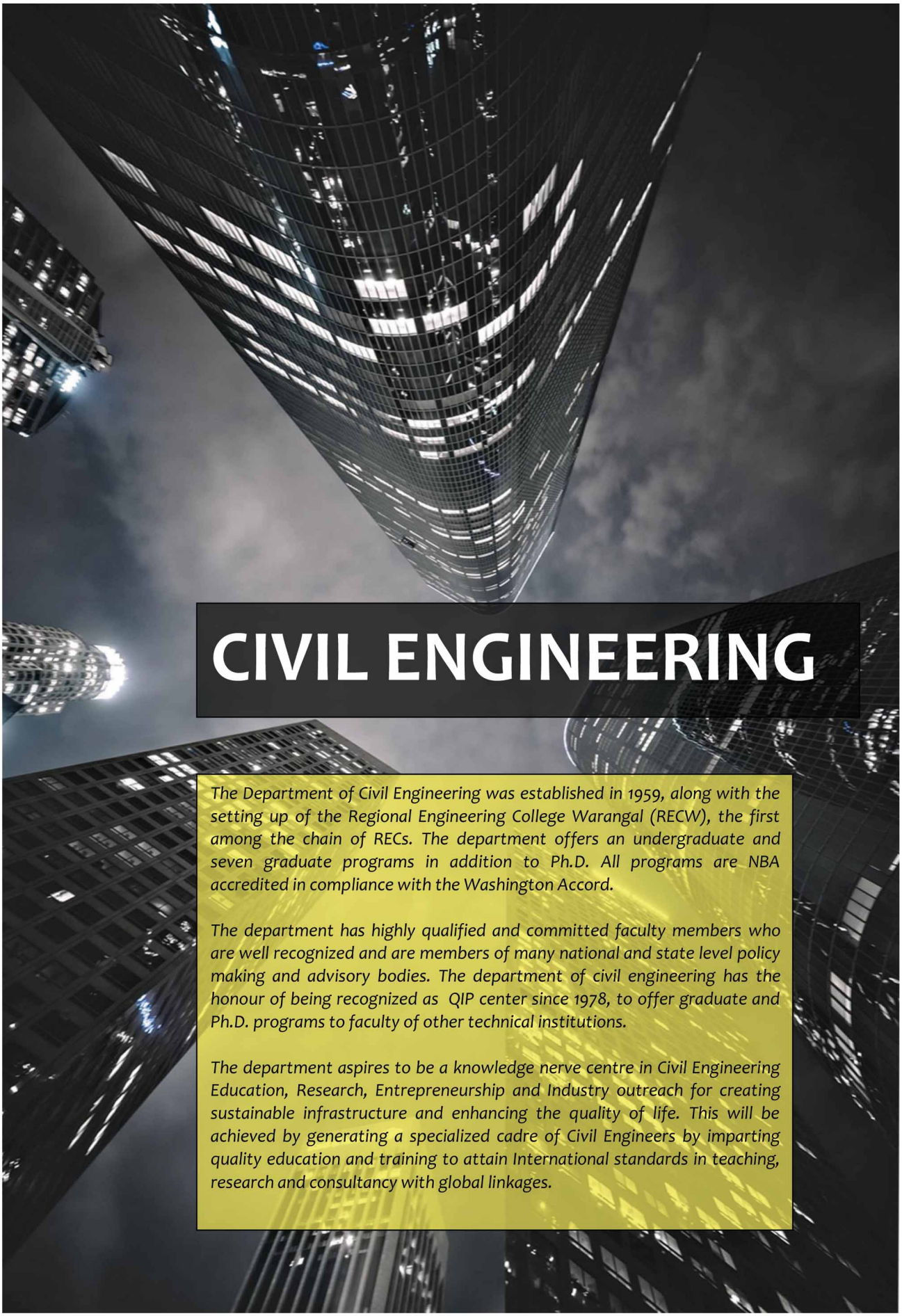
Laser Engraver

REPUBLIC DAY CELEBRATIONS 2019

SIXTEENTH CONVOCATION

NEW INFRASTRUCTURE

INAUGURATION OF DIAMOND JUBILEE CELEBRATIONS



CIVIL ENGINEERING

The Department of Civil Engineering was established in 1959, along with the setting up of the Regional Engineering College Warangal (RECW), the first among the chain of RECs. The department offers an undergraduate and seven graduate programs in addition to Ph.D. All programs are NBA accredited in compliance with the Washington Accord.

The department has highly qualified and committed faculty members who are well recognized and are members of many national and state level policy making and advisory bodies. The department of civil engineering has the honour of being recognized as QIP center since 1978, to offer graduate and Ph.D. programs to faculty of other technical institutions.

The department aspires to be a knowledge nerve centre in Civil Engineering Education, Research, Entrepreneurship and Industry outreach for creating sustainable infrastructure and enhancing the quality of life. This will be achieved by generating a specialized cadre of Civil Engineers by imparting quality education and training to attain International standards in teaching, research and consultancy with global linkages.

FACULTY

Dr. M. Chandrasekhar

Professor and Head

Areas of Interest

Water Quality Mgmt, Waste Treatment, Solid Waste Mgmt, Air Pollution, EIA

Dr. K.V.Jayakumar

Professor (HAG)

Areas of Interest

Hydrology & Water Resources , Urban Water Mgmt, Irrigation Engg, Wetland Hydrology Environmental Mgmt, Environmental Flow

Dr. N.V.Umamahesh

Professor (HAG)

Areas of Interest

Water Resources Systems, Hydrologic Modeling, Modeling Impact of Climate Change, Urban Floods

Dr. C.S.R.K.Prasad

Professor (HAG)

Areas of Interest

Transportation Engg., Travel Demand, Urban & Regional Planning, Land Use Planning, Public Transport, Highway Network Design

Dr. C.B.Kameswara Rao

Professor

Areas of Interest

Engineering Structures, Ferrocement, Fiber reinforced concrete, Sustainable Concrete, Torsion of RC members, Rehabilitation and retrofitting of structures

Dr. P. Anandraj

Professor

Areas of Interest

Systems Analysis, Fuzzy Systems, Multi Criteria Decision Making, Hydrology and Fluid Mechanics

Dr. D. Ramaseshu

Professor

Areas of Interest

New concretes, Repair & Health monitoring of structures

Dr. G. Rajesh Kumar

Professor

Areas of Interest

New concretes, Repair & Health monitoring of structures

Dr. Deva Pratap

Professor

Areas of Interest

Engineering Geology, Remote Sensing

Dr. P. Ratish Kumar

Professor

Areas of Interest

Concrete Making Materials, Sustainable Construction, Earthquake Engg, Health Monitoring of Strs, Repair & Rehabilitation of bldgs, Concrete Microstructure

Dr. T.D.Gunneswara Rao

Professor

Areas of Interest

Fracture mechanics of Concrete structures, Fiber Reinforced Concrete, Sustainable construction

Dr. E.Venkata Rathnam

Professor

Areas of Interest

Hydraulic Transients, Groundwater Hydrology, Reservoir Sedimentation, Irrigation Engineering

Dr. V. Ramanamurthy

Professor

Areas of Interest

Expansive soils, Reinforced Earth, Utilization of waste materials like fly ash

Sri. V.N.Kameswara Rao

Associate Professor

Areas of Interest

Fluid Mechanics & Hydraulic Machines, Hydrologic Systems Modelling, Transport Phenomena, Energy for Climate Modelling, Ground Water Modelling

Sri. M. Sudhakar

Associate Professor

Areas of Interest

Steel fiber reinforced concrete

FACULTY

Dr. P. Hari Krishna

Associate Professor

Areas of Interest

A study on use of granular anchor piles resting on expansive soils

Dr. M. Heera Lal

Associate Professor

Areas of Interest

Recycled aggregates in pavements and Geo Environmental Engineering

Dr. Venkata Reddy

Associate Professor

Areas of Interest

Water shed modeling, climate change impact studies, application of geospatial technologies in water resources, rural and urban systems.

Dr. P. Hari Prasad

Associate Professor

Areas of Interest

Geoenvironmental Engineering

Dr. Venkaiah Chowdary

Associate Professor

Areas of Interest

Characterization of bituminous binders and bituminous mixtures, pavement evaluation, quantification of transportation noise

Dr.P.Venkateswara Rao

Associate Professor

Areas of Interest

Solid waste management, water and wastewater treatment

Dr.S.Venkateswara Rao

Associate Professor

Areas of Interest

Self compacting concrete, special concretes and nano materials in concrete and mortar

Dr. Arif Ali Baig

Associate Professor

Areas of Interest

Geoenvironmental engineering

Dr. T.P. Tezeswi

Assistant Professor

Areas of Interest

Multi-scale behavior of composite materials & structural response to shock and high strain rate loading, multi hazard vulnerability assessment

Dr. S. Shankar

Assistant Professor

Areas of Interest

Low Volume Roads

Dr. M. Shashi

Assistant Professor

Areas of Interest

Advanced Surveying, Digital Photogrammetry , UAV

Dr. Ajey Kumar Patel

Assistant Professor

Areas of Interest

CFD, Environmental Hydraulics

Dr. D. Ravi Prasad

Assistant Professor

Areas of Interest

Structural Health Monitoring, hybrid fiber reinforced engineered cementatious composites, sustainable construction materials

Dr. M.V.N. Siva Kumar

Assistant Professor

Areas of Interest

Computational Mechanics, Fracture mechanics of metal and concrete structures, Finite element and reliability applications to nuclear reactor components

Dr. K.V.R. Ravi Shankar

Assistant Professor

Areas of Interest

Crowd & pedestrian behavioral analysis & modeling, road safety analysis, Capacity analysis of highways

FACULTY

Dr. G.Kalyan Kumar

Assistant Professor

Areas of Interest

Seismic Hazard Assessment, Laterally loaded piles, Geotechnical Engineering

Dr. K.Gopikrishna

Assistant Professor

Areas of Interest

Multi-hazard Performance assessment of structures, Wavelet Finite element methods for dynamic problems, Seismic fragility Analysis

Dr.ArpanMehar

Assistant Professor

Areas of Interest

Traffic engineering, Highway capacity and Geometrical design

Dr. Y. Navatha

Assistant Professor

Areas of Interest

Remote Sensing, Photogrammetry, Rural and urban planning facilities

Dr. P. Sridhar

Assistant Professor

Areas of Interest

Water/wastewater treatment, life cycle analysis, Modelling of water/wastewater treatment, Solid waste management, Biodiesel, Bioplastic

Dr. G. VenkataRamana

Assistant Professor

Areas of Interest

Strength and durability studies of Multi Blended Concretes Containing Fly ash and Silica Fume

Dr. Ambica S

Assistant Professor

Areas of Interest

Sustainable water and wastewater treatment, Clean technologies, Industrial waste management, Pollutant transport, Waste to wealth

Dr. S. AnithaPriyadharshani

Assistant Professor

Areas of Interest

FRP Composites, Stiffened plates and Finite Element Analysis

Dr. B. Kavitha

Assistant Professor

Areas of Interest

Engineering Seismology

Dr. Aneetha V

Assistant Professor

Areas of Interest

BIM/RIM, Lean Construction

Dr. ChinthalaSumanth

Assistant Professor

Areas of Interest

Air Pollution, Indoor Air Quality, Sustainable Development

Dr. Umesh B.

Assistant Professor

Areas of Interest

Computational Mechanics

CIVIL ENGINEERING

Publications (in peer reviewed journals)

Vishal, U., and **Chowdary V**, Moisture conditioning process for large-sized prismatic straight beam specimens of bituminous concrete, International Journal of Engineering and Advanced Technology, 2018, 8(2C), 117-122.

Ramana G.V, Pathak S, Dev H (2018), Shear Strength Parameters of Granite Rock Mass: A Case Study. Geotechnical Characterisation and Geoenvironmental Engineering, Lecture Notes in Civil Engineering, vol 16. (pp. 273-280) Springer, Singapore.(https://doi.org/10.1007/978-981-13-0899-4_34)."

PoojariYugendar**and K.V.R. Ravishankar** (2018), Crowd behavioural analysis at a mass gathering event, Journal of KONBiN, 46, 5-20. (Scopus, Impact factor: 0.26, https://doi.org/10.2478/jok-2018-0020).

Abhigna, D., Ramees, M., and **Ravishankar, K. V. R.** (2018), Effect of gap acceptance behavior of the right turning vehicles on the major road stream for uncontrolled intersections under mixed traffic conditions, International Journal of Engineering-Transactions-C:Aspects, Vol. 31, Number 6, 870-876. (Scopus, Impact Factor: 0.56).

Naga Sowjanya, P., Venkata Reddy, K and **Shashi, M**. Intra and Inter Annual Stream flow variations of a Watershed under changing climate, ISH Journal of Hydraulic Engineering, 2018, https://doi.org/10.1080/09715010.2018.1473057.

Rangari V A, Gonugunta R., **Umamahesh N V**, Patel A.K., Bhat, C.M. 1D-2D Modeling of Urban Floods and Risk Map Generation for the Part of Hyderabad City, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-5, 2018.

Abhigna, D., Govinda, L., and **Ravi Shankar, K. V. R. (2018)**, Simulation of delay variation at uncontrolled intersections for mixed traffic conditions, International Journal of Transportation Engineering and Traffic System. 4(1), pp 01-10.

P. Shirisha, K. Venkata Reddy, **Deva Pratap**. Application of Adaptive Grey Method for rainfall forecasting in a watershed, ISH Journal of Hydraulic Engineering, 2018 DOI:10.1080/09715010.2018.1550688.

M.Sriramchand and **P.Rathish Kumar**, Performance and Microstructure characteristics of self-curing self-compacting concrete, Advances in Cement Research, Volume 30, Issue 10, Noc 2018, ICE Publishing, Thomas Telford, UK.

K.Praveen, **S.V.Rao** and **P.Rathish Kumar**, Hybrid Effects of Stirrup Ratio and Steel Fibers on Shear Behaviour of Self-Compacting Concrete, Archives of Civil Engineering 64.1 (2018): 145-169..

P.S.N.Giri, M.Sriram, G.Rajesh Kumar, **P.Rathish Kumar**, Flexural behaviour of tie-confined self-curing self-compacting concrete, Magazine of Concrete Research ICE Publishing, Thomas Telford, UK, Volume 70 Issue 23, December, 2018, pp. 1232-1242.

Harshal Patil, **Ajey Kumar Patel**, Harish J. Pant and A. Venu Vinod, CFD simulation model for mixing tank using multiple reference frame (MRF) impeller rotation, ISH Journal of Hydraulic Engineering,2018.https://doi.org/10.1080/09715010.2018.1535921.

Rubeena K K., **Hari Prasad Reddy P.**, Laiju A R., Nidheesh P.V. (2018), Iron Impregnated Biochars as Heterogeneous Fenton Catalyst for the Degradation of Acid Red 1 Dye, Journal of Environmental Management, Vol. 226, 320-328.

Jaya Krishna Jammula, Rajesh Bera, **Ravishankar K.V.R. (2018),** Travel Time Prediction Modelling in Mixed Traffic Conditions. International Journal for Traffic and Transport Engineering, Vol. 8, Issue 1, 135-147. (http://dx.doi.org/10.7708/ijtte.2018.8(1).10; Impact Factor: 1.15).

Sai Nitesh, S.V.Rao and **P.Rathish Kumar**, Analysis of the thickness of Steel rebars cover in concrete effect on Torsional behaviour of steel fibres reinforced with recycled aggregate self compacting concrete, Cement WapnoBeton, July-August 2018 (4) pp 259-276.

S.Rakesh and **P.Rathish Kumar.** Pull-out Behaviour of Recycled Aggregate based Self Compacting Concrete. Computers & Concrete, Vol. 21, No. 3, pp. 249-259, March, 2018.

Radhika. K and **Dr.D. Ravi Prasad.** "Study on static and dynamic properties of polypropylene fiber reinforced concrete", International Journal of Mechanical and Production Engineering Research and Development, special issue,pp:85-91, 2018.

S.Rakesh and **P.Rathish Kumar**, A study on the parameters influencing flexural bond stress in reinforced concrete. Structures, ElsevierVolume 16, November 2018, Pages 198-207.

S.Rakesh and **P.Rathish Kumar**, A study on the parameters influencing flexural bond stress in reinforced concrete. Structures, ElsevierVolume 16, November 2018, Pages 198-207.

Mubashirhussain, S., and **Chowdary, V**. Establishing a correlation between absolute viscosity and apparent viscosity for a viscosity grade unmodified bitumen used for road construction in India, International Journal for Traffic and Transport Engineering, 2019, 9(1), 8-21.

Kamineni, A., Duda, S.K., **Chowdary, V.**, and Prasad, C.S.R.K. Modelling of noise pollution due to heterogeneous highway traffic in India, Transport and Telecommunication, 2019, 20(1), 22-39.

Kumar, T.A., Sandeep, I.J.S., Nivitha, M.R., **Chowdary, V.**, and Krishnan, J.M. Quantification of aging compounds in Evotherm-modified warm-mix asphalt binder using Fourier transform infrared spectroscopy, Arabian Journal of Science and Engineering, 2019, https://doi.org/10.1007/s13369-019-03965-w.

Mubashirhussain, S., and **Chowdary, V**. Influence of short-term ageing and long-term ageing on the thermal equilibrium time for two different viscosity grades of bitumen used for road construction, International

CIVIL ENGINEERING

Journal for Traffic and Transport Engineering, 2019, 9(2), 198-209.

Pathak S, **Ramana G.V**, (2019), A First Order Quantification of Effects of Uncertainties in Hydro-fracturing Parameters on Tunnel Ovalization Estimates. Geotechnical and Geological Engineering", 2019, (pp.1-16), (https://doi.org/10.1007/s10706-019-00824-1)."

PoojariYugendar and **K.V.R. Ravishankar** (2019), The effect of physical factors on crowd walking behavior at religious gatherings. Quality and Quantity, International Journal of Methodology, Published Online first.(Scopus, https://doi.org/10.1007/s11135-019-00911-8).

PoojariYugendar and **K.V.R. Ravishankar** (2019), Neuro-Fuzzy based crowd speed analysis at mass gathering events. Vol. 13, No. 3, 446-458, Jordan Journal of Civil Engineering. (Scopus).

PoojariYugendar and **K.V.R. Ravishankar** (2019), Multi-regime modelling for large congregation. Institution of Civil Engineers (ICE: Transport), Ahead of Print, Published Online: October 30, 2018. (SCI, Online First, https://doi.org/10.1680/jtran.18.00077).

Jaya Krishna Jammula and **KVR Ravishankar** (2019), An Innovative Method of Travel Time Data Collection Using Mobile GPS Application, International Journal of Transportation Engineering and Traffic System, 5(1), 42-50.

Yugendar P. and **K.V.R. Ravishankar** (2019), Analysis of crowd flow parameters using Artificial Neural Network. The Journal of Transport and Telecommunication, Vol. 19(4). (Scopus, Impact Factor: 0.86).

Lakshmi Sruthi P., **Hari Prasad Reddy P.** and Rama Vara Prasad CH. (2019), Physico-chemical characterization of alkali-contaminated tropical kaolinitic clays. International Journal of Geotechnical Engineering, DOI: 10.1080/19386362.2019.1638045, ISSN: 1938-6362 (Print) 1939-7879 (Online).

B Murali Krishna, **TPTezeswi, P Rathish Kumar , K Gopikrishna , MVN SivaKumar**, **M Shashi**, QR code as speckle pattern for reinforced concrete beams using digital image correlation. Structural Monitoring and Maintenance Volume 6, Number 1, March 2019, pages 67-84 (ESCI & SCOPUS).

Harsha Praneeth Pavani, **T.P.Tezeswi** and Ashish Kumar Agarwal, Characterization Of Meso And Micro Scale Porosity In Portland Cement At Elevated Temperatures. Magazine of Concrete Research, 1-25, https://doi.org/10.1680/jmacr.18.00321 (IF: 2.026).

Harsha Praneeth Pavani, **T.P.Tezeswi** and Ashish Kumar Agarwal, Thermal Behavior of PPC and OPC-53 When Exposed to Extreme Temperatures. Advances in Cement Research, https://doi.org/10.1680/jadcr.18.00066(IF: 1.355) .

Harsha Praneeth Pavani, **T. P. Tezeswi**, Ashish Kumar Agrawal, Estimation of porosity and pore distribution in hydrated Portland cement at elevated temperatures using synchrotron microtomography. Journal of Advanced Concrete Technology Vol. 17, 34-45, January 2019 (IF: 1.336) .

Sri Lakshmi Sesha Vani Jayanthi, **Venkata Reddy Keesara**, Observed and simulated climate variability and trends in a semi-arid region. Spatial Information Research, 2019, https://doi.org/10.1007/s41324-019-00278-w.

Arif Ali BaigMoghal, Vydehi K V, MoulaliBaigMoghal, Rayan Almatrudi, Abdullah Almajed and Mosleh Ali Al-Shamrani (2019), Effect of Calcium Based Derivatives on the Consolidation, Strength and Lime Leachability Behavior of Expansive Soil. ASCE Journal of Materials in Civil Engineering. https://doi.org/10.1061/(ASCE)MT.1943-5533.0003088.

Arif Ali BaigMoghal, Syed Abu Sayeed Mohammed and Mosleh Ali Al-Shamrani (2019), State-of-the-Art Review on Strontium Toxicokinetics, Mechanistic Response, Alterations and Regulations. International Journal of Geomate. https://doi.org/10.21660/2019.53.71462.

Arif Ali BaigMoghal, Syed Abu Sayeed Mohammed, Abdullah Almajed and Mosleh Ali Al-Shamrani (2019), Desorption of Heavy Metals from Lime-Stabilized Arid-Soils Using Different Extractants. International Journal of Civil Engineering. https://doi.org/10.1007/s40999-019-00453-y.

Arif Ali BaigMoghal, Munwar B Basha and Mohammed Ashfaq (2019), Probabilistic Study on the Geotechnical Behavior of Fiber Reinforced Soils. Frontiers in Geotechnical Engineering, Springer, pp. 345 367. https://link.springer.com/chapter/10.1007%2F978-981-13-5871-5_17.

Bhaskar C. S. Chittoori, Tasria Rahman, Malcolm Burbank and **Arif Ali BaigMoghal** (2019), Shallow Stabilization Method for Expansive Soil Treatment Using Microbial Induced Calcite Precipitation. ASCE Geotechnical Special Publication No. 309. https://ascelibrary.org/doi/10.1061/9780784482117.025.

Jew Das, **Umamahesh VNanduri**, Assessment and evaluation of potential climate change impact on monsoon flows using machine over Wainganga River Basin, India. Hydrologic Sciences Journal, 63:7, 1020-1046.

Jew Das, Aleen Treesa, **N V Umamahesh**, Modelling Impacts of Climate Change on River Basin: Analysis of Uncertainity using REA & Possibilistic Approach. Water Resources Management, 32(15), 4833-4852.

Le ThiHoaBinh, **N V Umamahesh**, E V Rathnam, Vu Hai Son, Modeling Nonstationary Extreme Water Levels Considering Local Covariates in Ho Chi Minh City, Vietnam. ASCE Journal of Hydrologic Engineering, DOI: 10.1061/(ASCE)HE.1943-5584.0001697.

Le ThiHoaBinh, **N V Umamahesh**, E Venkata Rathnam, High Resolution Flood Hazard Mapping based on Nonstationary Frequency Analysis: Case Study of Ho Chi Minh City, Vietnam. Hydrologic Sciences Journal, 64:3, 318-335.

Le ThiHoaBinh, V. Agilan, **N V Umamahesh**, E V. Rathnam, Modelling Spatial Variation of Extreme Precipitation over Ho Chi Minh City under Nonstationary Condition, Acta Geophysica, DOI 10.1007/s11600-019-00295-1.

CIVIL ENGINEERING

Harinder, D. and **Shankar**, S. Experimental study on coir mats to enhance the weak subgrade soil for Low-Volume Roads. 1. International Journal of Traffic and Transportation Engineering, 8(1), 125 – 134.

Harinder, D., and **Shankar**, S. Performance evaluation of coir mats over the weak subgrade soil for low-volume roads by wheel tracking test. ", International Journal of Geoscience, Engineering Environmental and Technology, Vol 03, No 01.

Pradeep Kumar., **Shankar**, S., Suraj MS., P.K Garg., and M. Parida, Evaluation of Pavement Surface Condition Using Artificial Neural Networks". International Journal of Pavements, Maintenance and Rehabilitation of Pavements ISSN 1676-2797.

Srikanth koniki and **D Ravi Prasad**. Influence of hybrid fibres on strength and stress-strain behaviour of concrete under uni-axial stresses". Construction and Building Materials 207 (2019) pp: 238–248.

V.V. Praveen Kumar and **D Ravi Prasad**, "Influence of supplementary cementitious materials on strength and durability characteristics of concrete". Advances in concrete construction (2019) Vol-7 pp. 75-85.

V.V Praveen and **D. Ravi Prasad**, .,"Investigation on moment - curvature relationship of quaternary blended reinforced cement concrete". Cement WapnoBeton, vol.5,pp:347- 357,2018.

Srikanth Konikiand **D. Ravi Prasad**, "A Study on Mechanical Properties of Concrete Reinforced with Hybrid Fibers at a Low Fiber Volume Fractions". International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-2S.

Radhika Sridhar, **D. Ravi Prasad**, "Experimental and numerical study on damage evaluation of hybrid fiber reinforced concrete". Asian journal of civil engineering, Springer, Vol. 20(5), pp. 745-758.

Pallavi, G. and **Mehar Arpan**, Analysis of side friction on urban arterials. Transport and Telecommunication, 2018, Volume 19, no. 1, 21–30.

Pallavi, G. and **Mehar Arpan**, Influence of Side Friction and Roadway Width on Capacity of Multilane Urban Divided Roads. Suranaree Journal of Science and Technology, Accepted (in press).

Rakesh Kadaverugu, Asheesh Sharma, **Chandrasekhar M**, Rajesh B, High Resolution Urban Air Quality Modeling by Coupling CFD and Mesoscale Models: a Review. Asia-Pacific Journal of Atmospheric Sciences https://doi.org/10.1007/s13143-019-00110-3, Korean Meteorological Society, Springer Publications.

M Chandra Sekhar, Ch Bhasker, K Rakesh, Co-firing Municipal Solid Waste with Coal – A case study on Warangal city, India. Nature Environment and Pollution Technology (p-ISSN 0972-6268; e-ISSN 2395-3454).

A.Suchith Reddy, **P.Rathish Kumar and P.Anand Raj**, Preference based multi-criteria framework fordeveloping a Sustainable Material PerformanceIndex (SMPI). International Journal of Sustainable Engineering, Taylor and Francis, ISSN 1939-7038, pp. 1-14.

A.Suchith Reddy**, P.Rathish Kumar and P.Anand Raj**, Developing a Material Sustainable Performance Score (MSPS) to select an alternative Cementitious Material. Cement WapnoBeton, Vol.1, Issue 1, pp. 68-76.

Sai Nitesh, **S.V.Rao and P.Rathish Kumar**, An Experimental Investigation on Torsional behaviour of recycled aggregate based steel fibre reinforced Self compacting concrete. Journal of Building Engineering, Elsevier, Vol 22, March 2019 pp 242-251.

K.Praveen, **S.V.Rao and P.Rathish Kumar**, Influence of Recycled Aggregate on Shear Behaviour of Steel Fibrous SCC. Journal of Materials and Engineering Structures(JMES), Aug Vol 5, No 2 pp:185-205.

Sudheer Kumar Y, **Hari Krishna P**, Srinivas K, Influence of organic ligands on migration of heavy metals through compacted clay liner. Journal of Geoscience, Engineering Environment and Technology, Vol 3(2); pp:107-115.

Sudheer Kumar Y**, Hari Krishna P**, Srinivas K, A Study on Influence of Real Municipal Solid Waste Leachate on Properties of Soils in Warangal, India. Journal of Geoscience, Engineering Environment and Technology, Vol 3(1); pp: 25-29.

Sudheer Kumar Y, **Hari Krishna P**, Srinivas K, A Study on the Influence of Heavy Metals on Crack Intensity Factor and Hydraulic Conductivity of Locally Available Soils. Indian Geotechnical Journal, Springer, (doi.org/10.1007/s40098-018-0313-7).

Sudheer Kumar Y., Subhashini A**., Hari Krishna P**, A Study on Influence of pH and Organic Chemical on the Retention Capacity of Red Earth. Geotechnical Characterisation and Geo-environmental Engineering. vol 16. Springer. (doi.org/10.1007/978-981-13-0899-4_23).

Venkata Koteswara Rao, P; **Padavala Hari Krishna**; **Hari Prasad Chennarapu**, Experimental Investigation of Axially Loaded Group of Piles with and without Building Frame: A parametric Study. Journal of Innovative Infrastructure Solutions; Vol. 4:36; https://doi.org/10.1007/s41062-019-0222-3.

Venkata Koteswara Rao, P; **Padavala Hari Krishna**; **Hari Prasad C**, Experimental and Numerical Investigation of Pile group with and without Building Frame subjected to Axial Load. Indian Geotechnical Journal; https://doi.org/10.1007/s40098-019-00383-5

Kalyana Rama J S, **Sivakumar M V N**, Sai KubairK ,Vasan A, Influence of plastic viscosity of the mix on properties of Self Compacting Concrete with River sand and Crushed Rock Fines.Computers and Concrete, Vol.23, No.1, PP.37-47.

Subbarao Yarramsetty, M. Sayed Rohullah, **M V N Sivakumar**, **Anand Raj P**, An investigation on energy consumption in residential building with different orientation: a BIM approach.Asian Journal of Civil Engineering, https://doi.org/10.1007/s42107-019-00189-z

Swarna Swetha Kolaventi , **TP Tezeswi, M V N Siva Kumar**, An assessment of construction waste management in India: A statistical approach. Waste Management & Research, 1–16, http:// /doi/10.1177/0734242X19867754.

CIVIL ENGINEERING

K. Devarajan., and **Patel, A. K**. CFD Modelling of Circular Baffled Aeration Tanks, Urbanization Challenges in Emerging Economies, U.P. Singh, B.R. Chahar, H.R.P. Yadav, and S.K. Vij, eds., American Society of Civil Engineers, pp. 47–58. https://doi.org/10.1061/9780784482025

Khandeliya, S., Mubashirhussain, S., and **Chowdary, V.** Influence of fibres and fillers on the performance of stone matrix asphalt. Journal of Transportation Systems, 2018, 3(3), 20-37.

Khan, M.M and **Kumar, G.K.** Statistical completeness analysis of seismic data. Journal of the Geological Society of India, 2018, 91,749-753.

Khan, M.M and **Kumar, G.K.** Comparing Seismicity Parameters for Different Seismic Zones in Warangal. Disaster Advances, 2019, 12(6), 15-25.

Khan, M.M, Teja M. and **Kumar, G.K.** Sensitivity analysis of focal depth in seismic hazard assessment. Disaster Advances, 2019, 12(7), 1-7.

Teja M., Khan, M.M. and **Kumar, G.K.** Axial and Lateral Loading Behaviour of Pervious Concrete Pile. Indian Geotechnical Journal, 2019, Accepted.

Ramana G.V, Pathak, Shashank, Hari Dev. (2018). Role of Probabilistic Interpretation in Recommendations of Rock Mass Parameters. International Society for Rock Mechanics (India) Journal, Vol.7, No.1, 2018, ISSN: 2277-131X (Print), ISSN: 2277-1328 (online), Pg. 11-20.

Vinay Ashok Rangari, V. Sridhar, **N.V. Umamahesh, Ajey Kumar Patel.** Flood Plain Mapping and Management of Urban Catchment using HEC-RAS: A Case Study of Hyderabad City. Journal of Institution of Engineers India Series A, https://doi.org/10.1007/s40030-018-0345-0.

S.Chakravarthi, and **Shankar S**. Effect of age on Reclaimed Asphalt Pavement Mixes. Journal of the Indian Roads Congress, July, 46 (7), 25-37.

M.V.Krishna Rao, **P.Rathish Kumar**, T.S. Sekhar. Performance of Fly Ash Based Geopolymer Concrete under Ambient and Oven Curing Conditions. Indian Concrete Journal, March 2019, pp 21-28.

Publications (in peer reviewed conferences)

Sumanth Chinthala (2018). Modeling adsorption and desorption of volatile organic compounds: A Case Study of ECOSEE. 3rd International Conference on Air Quality Management (IICAQM-2018), IIT Chennai, Conducted at 6th and 7th December, 2018.

Praveen Oggu**, K. Gopikrishna**(2018). Sensitivity Analysis for uncertainty estimation in the seismic performance of reinforced concrete frame structures. 11th Structural Engineering convention (SEC 2018), December 19th -21st ,2018, JadhavpurUniversity,Kolkata, India.

Sonam T., **Hari Prasad Reddy P. (2018).** Removal of Arsenic by adsorption using Neem Leaves (Azadirachta Indica). Third International Conference on Sustainable Energy and Environmental Challenges (3rd SEEC), IIT Roorkee, India, December 18 –21.

Haseeb Hasainar **,Ramana G.V**, (2019). Probabilistic approach of estimating variation in the deformability characteristics of rock mass. International Conference on Geotechnics for High Speed Corridors

LalamGovinda, Dodappaneni Abhigna, Parvathy M Nair, and **K.V.R. Ravi Shankar** (2019). Comparative Study of Pedestrian Crossing Behaviour at Uncontrolled Intersection and Midblock Locations. 15thWorld Conference on Transport Research, 26-31 May 2019 |Mumbai, India, paper id: 418.

Ramireddy Sushmitha and **K.V.R. Ravi Shankar** (2019). Analysis and Estimation of Saturation Flow at Signalized Intersections in Mixed Traffic Conditions. 15th World Conference on Transport Research, 26-31 May 2019 | Mumbai, India, paper id: 424.

Poojari Yugendar and **K.V.R. Ravishankar** (2019). Experimental Study on Crowd Flow Behaviour through Bottlenecks. 98thTRB Annual Meeting, January 13-17, 2019, Washington, D.C., USA, Manuscript number: 19-02469R1, Presentation Number: 19-02469.

D Sirish, M Shashi. UAV in development of 3D Model Heritage Monument:A Case Study of Kota Gullu, Warangal, India. 1st International Conference on Unmanned Aerial System in Geomatics, Greater Noida Extension Centre, Indian Institute of Technology Roorkee, India,06-07 April 2019.

K Kumar, M Shashi. UAV in Construction Site Monitoring and Concrete Strength Estimation. 1st International Conference on Unmanned Aerial System in Geomatics, Greater Noida Extension Centre, Indian Institute of Technology Roorkee, India,06-07 April 2019.

V S Charitha, M Shashi. Slope stability analysis for mine hazard assessment using UAV. 1st International Conference on Unmanned Aerial System in Geomatics, Greater Noida Extension Centre, Indian Institute of Technology Roorkee, India,06-07 April 2019.

Ayyappa Reddy A, M. Shashi. Traffic Signaling Design in Urban Areas Using Hadoop Application. International Conference on Sustainable Innovations in Civil & Mechanical Engineering, Kottayam, May 16-17, 2019.

SirishDasari, M. Shashi. UAV based preparation of mosaic of Heritage structure. International Conference on Sustainable Innovations in Civil & Mechanical Engineering, Kottayam, May 16-17, 2019.

Vasantha Vijaya Kumar, **Keesara Venkata Reddy**, Comparative Study On Crop Type Classification Using Svm On Uav Imagery, 1st International Conference On Unmanned Aerial System In Geomatics, Greater Noida Extension Centre, Indian Institute Of Technology Roorkee, India,06-07 April 2019

Shobhit Kumar, **K. Venkata Reddy**, BIM And GIS Enabled Carriage Cost Analysis, Foss4g Asia 2018, 2nd - 5th December 2018 At Mortuwa In Srilanka

P Padmini, **Deva Pratap**, Girish Pujar, **Venkata Reddy K**, Mgnrega Based Microlevel Watershed Planning And Analysis Using Swat Model, Foss4g Asia 2018, 2nd - 5th December 2018 At Mortuwa In Srilanka

CIVIL ENGINEERING

Bheemlal, **K. Venkata Reddy, Y. Navatha,** Spatio-Temporal Vulnerability Of Habitats Using Geospatial Methods, Afita/Wcca 2018 Conference, Research Frontiers In Precession Agriculture,October 24-26, 2018, Iitb, Mumbai

Sravanthi Alamandala, R. L. N. Sai Prasad, **P. Rathish Kumar,** And M. Ravi Kumar, Damage Detection In Bridge-Weigh-In-Motion Structures Using Fiber Bragg Grating Sensors. In Laser Science, Optical Society Of America, 2018 16–20 September 2018 Washington, Dc United States

Hari Dev, G.V. Ramana & U.S. Vidyarthi. Complications in evaluation of bearing capacity for naturally and artificially compacted gravel-boulder strata. IGC-18 ,held on 13-15 Dec 2018 Bengaluru..

Lakshmi Sruthi P., **and Hari Prasad Reddy P. (2018).** Micro level Exploration of KOH Contaminated Kaolinitic Clays under Different Experimental Conditions. Indian Geotechnical Conference (IGC2018), IISc Bangalore, India, December 13-15, TH-12-003.

Rishabh D., Anurag G., **Hari Prasad Reddy P. (2019).** E-Waste Indian Scenario at a Glance. National Environmental Conference (NEC-2019), IIT Bombay, India, 31st Jan.-2nd Feb.

Lakshmi Sruthi P., **Hari Prasad Reddy P. (2019).** Effect of KOH Concentration on Micro Level Characteristics of Kaolinitic Clays. Indian Conference on Geotechnical and Geo-Environmental Engineering (ICGGE-2019), MNNIT Allahabad, Prayagraj, India, March 01-02, Paper No. 62.

Aravind T., **Hari Prasad Reddy P. (2019).** Assessment of Chromium Concentration in Soils and Its Removal by Bioremediation. Indian Conference on Geotechnical and Geo-Environmental Engineering (ICGGE-2019), MNNIT Allahabad, Prayagraj, India, March 01-02, Paper No. 95.

B.Murali Krishna, **T.P.Tezeswi**. Digital image correlation based performance assessment of structural components. Proceedings of the 11th Structural Engineering Convention - 2018 Jadavpur University, Kolkata, India, December 19th-21st (2018);Paper No. 20180411, SHM Page no (44-50).

B.Murali Krishna, V. Guru Prathap Reddy, **T.P.Tezeswi**. A holistic modelling approach to deterioration of RC beams. Advances in Sustainable Construction Materials (ASCM 2019)NIT Warangal, India, March 15th -16th , (2019); Paper No. ASCM_026.

Swarna Swetha K**, T.P.Tezeswi, MVN Sivakumar**. A Review on Construction Waste Management in India: Situation and Guidelines for further study. Advances in Sustainable Construction Materials (ASCM 2019) NIT Warangal, India, March 15th -16th , (2019); Paper No. ASCM_026.

Arif Ali BaigMoghal, Probabilistic Study on the Geotechnical Behaviour of Fiber Reinforced Soils, Indian Institute of Science Bangalore, 13-15 Dec 2018.

Ashok S and **M Chandra sekhar**. state of art review on future effects in climate change with respective soil properties. Indian Conference on Geotechnical and Geo-Environmental Engineering (ICGGE-2019), MNNIT Allahabad, Prayagraj, India, March 01-02, Paper No. 95.

Funded Research Projects 2018-19

(Completed Projects)

Prof. C.S.R.K. Prasad, Dr. D.S.N.V. Amar Kumar, Dr. Venkaiah Chowdary, and **V. Ramana Murthy,** Rural Road Pavement Performance Study, National Rural Road Development Agency, Ministry of Rural Development, 23.05.2006, Rs. 10.00 Lakhs.

Dr. C.S.R.K. Prasad, Dr. Venkaiah Chowdary, and Dr. D.S.N.V. Amar Kumar, Sealing of Gravel Roads, National Rural Road Development Agency, Ministry of Rural Development, 27.05.2009, Rs. 19.50 Lakhs.

Dr.Venkaiah Chowdary, Effect of Aging on the Mechanical Response of Asphalt Binders, Department of Science and Technology, 20.05.2013, Rs. 20.90 Lakhs.

Dr.S.Shankar, Performance Evaluation of Emulsified Asphalt and Cement Treated Bases, Department of Science and Technology, Rs. 30.49 Lakhs.

Dr.S.Shankar and **Dr. Venkaiah Chowdary**, Preparation of State of the Art Report on "SoAR-15: Development of Deterioration Models for Pavements and Bridges, " sponsored by Ministry of Road Transport and highways (MoRTH), 21.03.2017, Rs. 8.00 Lakhs.

Dr. Venkaiah Chowdary and **Dr.S.Shankar**, SoAR-14: Establishing Correlation between Various Distress Types and International Roughness Index (IRI)/ Deflection for Roads and Bridges, " sponsored by Ministry of Road Transport and highways (MoRTH), 21.03.2017, Rs. 6.50 Lakhs.

Dr. Venkaiah Chowdary and **Dr.S.Shankar**, Shear boc compactor, " sponsored by Ministry of Road Transport and highways (MoRTH), 21.03.2017, Rs. 40.00 Lakhs.

Prof. N V Umamahesh & **Dr. Ajey Kumar Patel,** Integrated Urban Flood Modelling in India: Technology Driven Solutions, Information Technology Research Academy, Digital India Corporation, MEITY, 20.09.2013, Rs. 73.70 Lakhs.

(Ongoing Projects)

Dr. G. Kalyan Kumar, Seismic response analysis of ash dykes and ground modification for improved performance of evaluation of ash dykes in long-term, IIT Madras, 12-07-2017, Rs. 5.00 Lakhs.

Dr.T.P.Tezeswi, Prof. P Rathish Kumar , Dr. K Gopikrishna , Dr. MVN SivaKumar, Dr. M Shashi, A simple and robust non-contact method for rapid structural health monitoring of critical infrastructure using Digital Image Correlation, MHRD-IMPRINT, 29-11-2016, Rs. 38.50 Lakhs.

Dr.T.P.Tezeswi, Modeling and Experimental Characterization of Functionally Graded Materials Subjected to Extreme Loading Conditions., DRDO- AR & DB, 21-07-2017, Rs. 33.77 Lakhs.

Prof. N V Umamahesh & Dr. K Venkata Reddy, Short and Medium Range Flood Forecasting System for Godavari River Basin using Ensemble Weather Forecast, IITM,

Pune, Ministry of Earth Sciences, 27.7.2018, Rs. 53.94 Lakhs.

Dr.T.P.Tezeswi & Prof. C.B. Kameswara Rao, Non-destructive damage detection and damage quantification in composite (HAP) panel, SERB – IMPRINT, 26-03-2019, Rs.132.70 Lakhs.

K. Venkata Reddy, Prof. N.V. Umamahesh, Dr. M. Shashi, Prof. Deva Pratap,A Decision Support System for Climate Change Adaptation of Chain Tank Systems of Semi-Arid Region, DST (Under Extramural Support), EMR/2017/004691 and 15-May-2018, 35.6 Lakhs

K. Venkata Reddy, Prof. N.V. Umamahesh, Prof. Deva Pratap and Dr. M. Shashi, Brazil Project Coordinator: Suzana Maria Gico Lima Montenegro, Civil Engineering Department, Universidade Federal De Pernambuco-UFPE, South Africa Coordinator: Bloodless Dzwairo, Department of Civil Engineering, Pietermaritzburg Campus, Institute for Water and Waster Water Technology, Durban University of Technology *IWMM- BIS "Integrated Water Management Model for BIS Countries Under Climate Change Scenarios Coordinated BRICS project with Brazil and South Africa sanctioned under PilotCall 2,* DST/IMRCD/BRICS/PilotCall2/IWMM-BIS/2018(G) date 20.03.2018, Rs. **39 Lakhs, *DST-International Multilateral Regional Cooperation Division***

K. Venkata Reddy, Prof. N.V. Umamahesh, Prof. Deva Pratap and Dr. Y. Navatha International PI: Prof. Raghavan Srinivasan, Texas A&M University, USA,International Co-PI: Dr. Venkata Ramana Sridhar, Virginia Polytechnic Institute(Virginia Tech), *Real Time Forecasting Floods Using SWAT Model,* ***MHRD, SPARC Programme, SPARC/2018-2019/P270/SL dated 15.03.2019, Rs. 81.76Lakhs***

Patents

Prof. C.B.Kameswara Rao, Prof D.Ramaseshu, Dr.T.P.Tezeswi. Helical interlock system for rapid erection of pre-cast members. No. 201841039017 (Filed).

Dr.T.P.Tezeswi, Prof. P.Ratish Kumar, Dr.K. Gopi krishna, Dr.M.Shashi, Dr. MVN Sivakumar, Mr.B.Muralikrishna. QR Code based speckle pattern for use in DIC. No. 201841047593 (Filed).

Awards / Recognitions/ Achievements

Prof P.Rathish Kumar, Selected as Member, Evaluation Committee of Japanese Government MEXT Research Scholarships for 2018 and 2019,

Prof P.Rathish Kumar, Nominated as Convenor for revision of all parts of the Indian Standard Code IS 2542-1978 including tests for Gypsum, Plaster, Concrete and Mortars.

Prof P.Rathish Kumar, Nominated as Member for the Revision of Indian Standard Code IS 712:1984 i.e. Specification for building limes (third revision).

Prof P.Rathish Kumar, Nominated as research advisory council member of the nccbm for the year 2018-19

Prof P.Rathish Kumar, Nominated as Member of CED-4 i.e. Lime and Gypsum Products of the Bureau of Indian Standards.

Talks Given in National / International Conferences

Dr. P. Hari Krishna, FORENSIC geotechnical aspects of kakatiya monuments, Warangal, VR Siddartha College of engineering Vijayawada, 17.11.2018.

Dr. G. Kalyan Kumar, Recent Advances in Geotechnical Engineering, Anurag Group of Institutions, Hyderabad, 10.07.2019.

Dr. Arpan Mehar, Simulation analysis of intersection under mixed traffic conditions, Holy Mary Institute of Technology & Science, 21-22 December 2018.

Dr.T.P.Tezeswi, Structural Fire Resistance Of Concrete – Research Perspectives, Gayatri Vidyaparishad College of Engineering & Technology, Visakhapatnam, 14.03.2019.

Dr. K.V.R. Ravi Shankar, Pedestrian Safety Considerations in Indian Traffic Conditions, VNR VignanaJyothi Institute of Engineering & Technology, Hyderabad, National Conference on Transportation Research Efforts for Ecological

Dr. K.V.R. Ravi Shankar,Sustainability (TREES-2018), 28-29 Sep. 2018.

Dr. G. Kalyan Kumar, Seismic hazard analysis and ground motion studies, Secab Institute of Engineering and Technology, 22.02.2019.

Dr. G. Kalyan Kumar, Recent Advances in Geotechnical Engineering, Anurag Group of Institutions, Hyderabad, 10.07.2019.

Vasantha Vijaya Kumar, Keesara Venkata Reddy, Comparative Study On Crop Type Classification Using Svm On Uav Imagery, 1st Intnl. Conference On Unmanned Aerial System In Geomatics, Indian Institute Of Technology Roorkee, India,06-07 April 2019.

Sravanthi Alamandala, R. L. N. Sai Prasad, P. Rathish Kumar, And M. Ravi Kumar , Damage Detection In Bridge-Weigh-In-Motion Structures Using Fiber Bragg Grating Sensors. In Laser Science, Optical Society Of America, 2018 16–20 September 2018 Washington, Dc United States.

Research Guidance (Completed)

D. Abhigna, **Dr. K.V.R. Ravi Shankar,** Gap Acceptance Behavior and Capacity Analysis of Urban Uncontrolled Intersections in Mixed Traffic Conditions.

Poojari Yugendar, **Dr. K.V.R. Ravi Shankar,**Micro and Macroscopic Analysis of Crowd Behavior and Evacuation Planning.

S. Eswar, **Dr. K.V.R. Ravi Shankar,** Pedestrian Behaviour Modeling on Level Changing Facilities Inside Railway Stations.

HarshaPraneeth, **Dr.T.P.Tezeswi,** Micro-structure based multi-scale thermo-mechanical Characterization of Portland cement.

D.Hariender. **Dr.S.Shankar,** Performance evaluation of coir geotextiles as interface over poor subgrade for low volume roads.

CIVIL ENGINEERING

V V Praveen Kumar. **Dr.D.Ravi Prasad**. study on strength and durability characteristics of lime sludge based blended cement.

Srikanth Koniki. **Dr.D.Ravi Prasad**. Study on influence of metallic and non-metallic fibers on strength and strain - strain behaviour of hybrid fiber reinforced concrete.

S. Srikanth. **Dr. Arpan mehar**. Modelling of traffic flow behavior and simulation of traffic under mixed traffic conditions.

Le ThiHoaBinh, **Prof. N V Umamahesh**& E Venkata Rathnam. Modelling Extreme Events under Nonstationary Condition in Ho Chi Minh City, Vietnam (submitted thesis in June, 2019).

P Naga Sowjanya, **Dr. K. Venkata Reddy**&Dr.M.Shashi. Climate change impacts on water resources of a river basin using the integrated framework of Climate Change models with Hydrological models.

Y. Sudheer Kumar, **Dr. P. Hari Krishna**, Evaluation of Locally available clayey soils for their suitability as clay liners.

S.Rakesh, **Prof P. Rathish Kumar**, Studies on the Bond Behaviour of Recycled Aggregate based Self Compacting Concrete.

International Visits

Prof. CSRK Prasad, Oxford University, England, 13th-22nd Feb 2019

Prof D.RamaSeshu, NTU, Singapore, 18th -23rd Feb 2019.

Prof. Deva Pratap, University of Moratuwa, Srilanka, December 2-4,2019

Dr.K. Venkat Reddy, University of Moratuwa, Srilanka, December 2-4,2019

Dr.S.Shankar, Aristotle University Greece, 10th -17 June 2019.

Dr.Chinthala Sumanth, Chang en University Chins, June 30- July 7 2019.

Dr.M.Shashi, Teaching Staff Mobility under ERASMUS scheme to University of Santiago De Compostela, Spain, 26.11.2018 to 30.11.2018

Dr.M.Shashi, Visiting Faculty, Asian Institute of Technology, Thailand, 22.08.2019 to 15.12.2019

Summer/Winter Schools, Seminars / Short – Term Courses

Dr. K.V.R. Ravi Shankar and Prof. CSRK Prasad, Training Program on "Road Safety Engineering Measures", NIT Warangal, 27-31 August 2018, Sponsored by Asian Institute of Transport Development and MoRTH, Government of India, Dr. K.V.R. Ravi Shankar and Prof. CSRK Prasad, R&B Engineers and Panchayat Raj Engineers, 27-08-2018 to 31-08-2018.

Prof. T.D. Gunneswara Rao &Dr. K. Gopikrishna, "Application of principles of Reliability and risk analysis to various sub disciplines of Civil Engineering", 31/12/2018 to 04/01/2019.

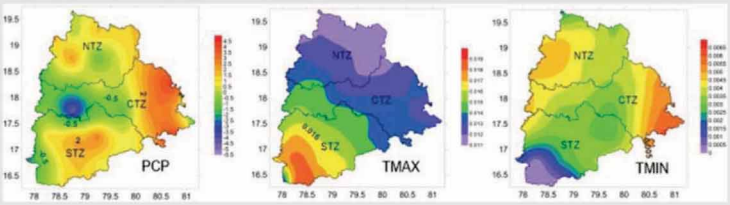
Prof. C.B.Kameswara Rao, Dr.T.P. Tezeswi, Dr.K.Gopikrishna, Dr.M.V.N. Sivakumar, 3-day workshop on " Bio-inspired Materials by Design: Issues & Challenges", TEQIP-III, 19-11-2018 to 21-11-2018.

Dr.PV Rao, Prof. M Chandra Sekhar, Five Day Course on Water Supply Systems, TLC, 20/5/19 to 25/5/19.

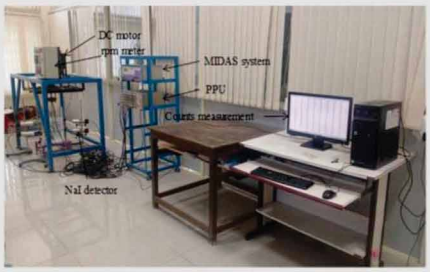
Prof. M Chandra Sekhar, GIAN Course on Environmental impacts of hazardous metals and remediation techniques, GIAN, 18/11/18 to 23/11/18.

Dr. Ambica, Prof. M Chandra Sekhar, Five Day Course on Clean Tech and Sustainable Development , TEQIP-III, 24/12/18 to 28/12/18.

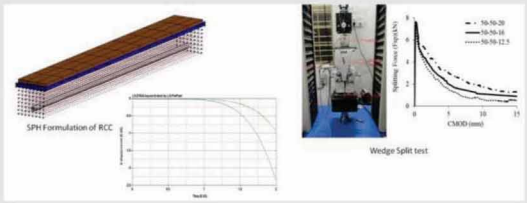
RESEARCH HIGHLIGHTS

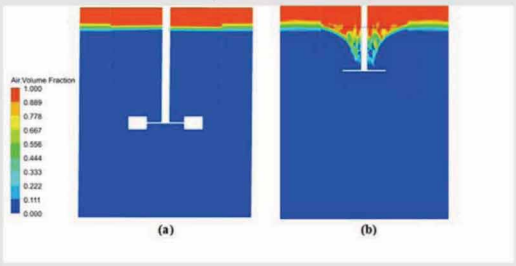


Sen's slope for PCP, TMAX and TMIN for IMD data (1951-2013)

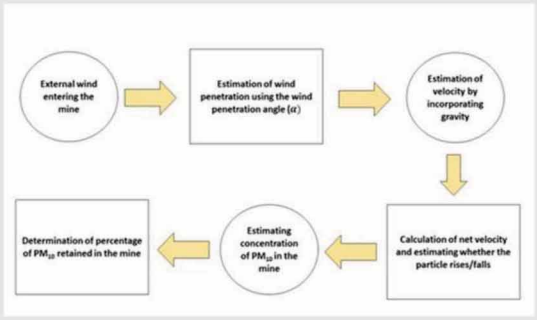


Experimental RPT setup for RT stirred tank

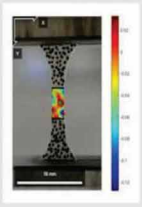


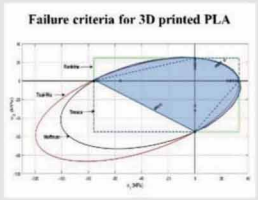


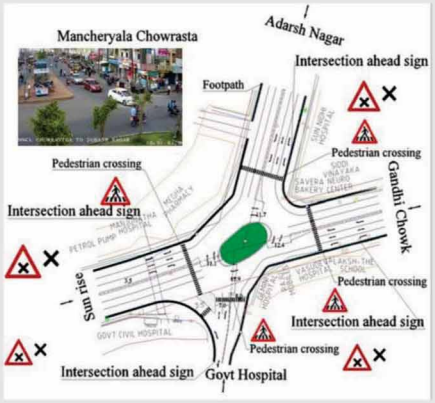
Contours of air volume fraction obtained with various submergence levels:
(a) At one third height of the tank,
(b) At mid-height of the tank, (c) Near top of the tank

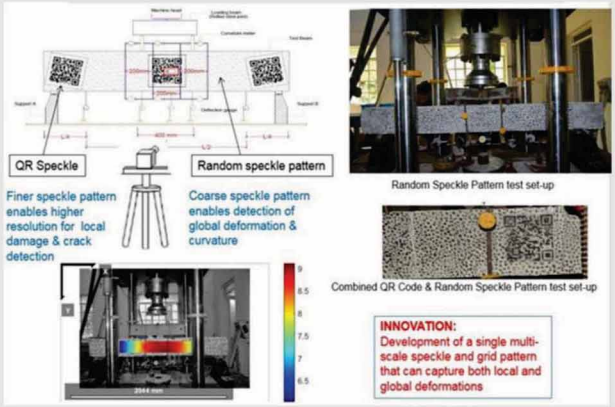


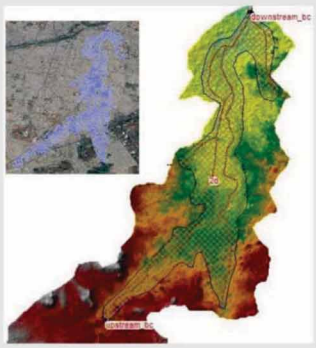
Numerical Simulation of PM10 Dispersion in open pit mines



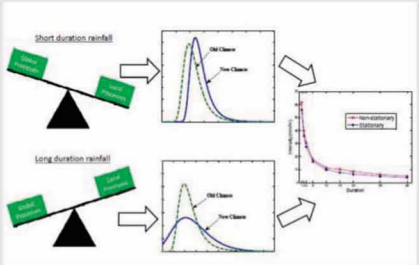




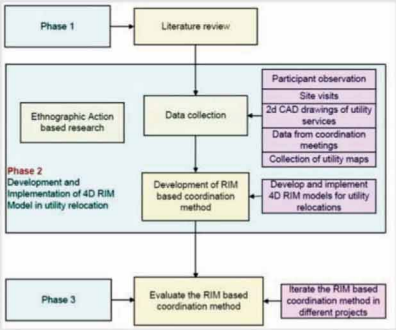




Terrain Modal (Generated from 30m Cartosat DEM).



contributions on Urban Floods



DEVELOPMENT OF A ROAD INFORMATION MODELING (RIM) BASED COORDINATION METHOD FOR UTILITY RELOCATIONS

Electrical Engineering

The Department of Electrical Engineering is one of the oldest departments of National Institute of Technology (formerly Regional Engineering College), Warangal (NITW). Established as one of the major departments of the institute, since inception in 1959, the Department of Electrical Engineering has been actively engaged in teaching and research in diverse fields of Electrical Engineering. With excellent faculty, the department offers Undergraduate program (B.Tech) in Electrical and Electronics Engineering, Postgraduate degrees (M.Tech) in Power Electronics & Drives and Power Systems Engineering and Ph.D programs in all the areas of electrical engineering. All the three programs have been accredited for full term of accreditation in three accreditations in 1987, 2004 and 2014-15 by NBA as per Washington Accord. Department is strong with all faculty members holding PhD degrees and having expertise in various fields. Currently there are 27 faculty, whose broad areas of expertise include State Estimation and Real Time Control of Power Systems, Applications of ANN and Fuzzy Logic in Power Systems, Power System Deregulation, Power System Transients, EMTP applications in Power Systems, Relay coordination, Application of Power Electronics for Power Quality Improvement and Industrial Drives, DSP controller Drives, Simulation of Power Electronic Converters and Drive systems and Control of Special Machines. The department has state of the art infrastructure in frontier areas of research in the domains of Power Systems and Power Electronics & Drives.

FACULTY

Dr. S Srinivasa Rao
Professor & Head
Research areas: Power Converters, Electric Drives; Renewable Energy Systems.

Dr. M Sydulu
Professor (HAG)
Research areas: Power Systems-Real-Time Control of Power Systems, ANN, Fuzzy Logic, GA Applications to Power System.

Dr. D M Vinod Kumar
Professor (HAG)
Research areas: Power Systems-AI Applications, Stability, Security, Deregulation, Restructuring, Multi-Objective Evolutionary Algorithms

Dr. D V S S Siva Sarma
Professor (HAG)
Research areas: Power Systems-Protection, Condition Monitoring of Electrical Equipment, Switching Transients.

Dr. N Subrahmanyam
Professor
Research areas: Power Systems-Distribution System Studies; Automation; Renewable Energy.

Dr. B K Murthy
Professor
Research areas: Wind and Wave Energy; Doubly fed Induction Machines, Electric drive.

Dr. N Vishwanathan
Professor
Research areas: Switched Mode Power Supplies, Induction Heating, Electric Drives

Dr. V T Somasekhar
Professor
Research areas: Power Electronics, AC Drives and Renewable Energy Systems

Professor
Dr. M SailajaKumari
Research areas: Power Systems-ANN, Evolutionary Algorithms, Deregulation, Transmission Pricing.

Dr. N V Srikanth
Associate Professor
Research areas: Power Systems Stability and Control, HVDC and FACTS, AI Techniques, Real-time Control.

Dr. ChVenkaiah
Associate Professor
Research areas: Power Systems-AI Techniques, Deregulation, Restructuring; Financing, Power Procurement and Exchange.

Dr. B L Narasimharaju
Associate Professor
Research areas: Power Electronics-LED Lighting Systems; SRM drives, Grid Integration of Solar Energy.

Dr. S P Selvi
Assistant Professor
Research areas: Power Electronics LED Lighting, Induction Heating, High Frequency Soft-Switched Inverters.

Dr. P Suresh Babu
Assistant Professor
Research areas: Power Systems-Protection, Filtering Algorithms, Protection Schemes, Relay Coordination, PMU & WAMS.

Dr. A Kirubakaran
Assistant Professor
Research areas: Power Electronic Converters, Multilevel Inverters, Power Quality RES &Distributed Generation.

Dr. B Nagu
Assistant Professor
Research areas: Power Systems Stability, HVDC and AI Techniques, SPV Systems and Smart Grid Technologies.

Dr. G Siva Kumar
Assistant Professor
Research areas: Power Electronics Application to Power System and Renewable System.

Dr. D Sreenivasarao
Assistant Professor
Research areas: Power Quality, Custom Power Devices, FACTS, Multilevel Inverters, Improved Power Quality Converters.

Dr. A V Giridhar
Assistant Professor
Research areas: High Voltage Engineering, Condition Monitoring of Power Equipments

Dr. M Udaya Bhasker
Assistant Professor
Research areas: Bi-directional DC-DC converters, Energy Storage System, Digital Controls

Dr. Y Chandrasekhar
Assistant Professor
Research areas: Power Systems-RES, Micro grids, Fast EV Charging Stations, Block chain Technologies to Smart Grid.

Dr. T Vinay Kumar
Assistant Professor
Research areas: Power Electronics Drives and Multi-Level Inverters

Dr. P Srinivasan
Assistant Professor
Research areas: Power Electronics, AC Drives, Electric Vehicles, RES.

Dr. ChRamulu
Assistant Professor
Research areas: Power Electronics, Open-end Winding Induction Motor Drives, RES.

Dr. I Satish Kumar
Assistant Professor
Research areas: Power Systems-Restructuring, Economic Dispatch, AGC, LFC,Micro Grids.

Dr. Altaf Q H Badar
Assistant Professor
Research areas: Power Systems-Artificial Intelligence

Dr. D Swati
Assistant Professor
Research areas: Power Electronics-, Multilevel Inverters, Electric Drives

ELECTRICAL ENGINEERING

Books and Book Chapters

Saptarshi Roy, P. Suresh Babu, and N. V. Phanendra Babu, "Optimal Combined Over current and Distance Relays Coordination using TLBO Algorithm," *Advances in Intelligent Systems and Computing book series* (AISC, volume 816) Springer (ISSN 2194-5357).

Dr. I Satish Kumar, Optimal multilevel threshold selection for brain MR image segmentation: An optimization approach, LAMBERT, Academic Publishing, Germany, ISBN: 978-613-9-97046-9, March 2019.

Publications (in peer reviewed journals)

Sachidananda Prasad and D.M. Vinod Kumar, "Robust Meter Placement for Active Distribution State Estimation using New Multi-Objective Optimization Model," *IET Science, Measurement and Technology*, vol. 12, No. 8, pp. 1047 - 1057, August, 2018.

Kiran Babu B, Sydulu M, "New Hybrid Multiverse Optimization Approach for Optimal Accommodation of DGs in Power Distribution Networks", *IET Gener. Transm. Distrib.*, 2019, vol. 13 Iss. 13, pp. 2673-2685. DOI: 10.1049/iet-gtd.2018.5763.

Kiran Babu B, Sydulu M, "A solution to multi-objective optimal accommodation of distributed generation problem of power distribution networks: An analytical approach", *Int Trans Electr Energ Syst*. 2019;e12093. https://doi.org/10.1002/ 2050-7038.12093.

Anil Kumar Bonala, S Srinivasa Rao, and Vishnu Prasad Muddineni, "Selective Finite-states Model Predictive Control of Grid Interfaced Three-level Neutral Point Clamped Photovoltaic Inverter for Inherent Capacitor Voltage Balancing," *IET Power Electronics*, vol. 11, no. 13, pp. 2072-2080, Nov. 2018.

Anil Kumar Bonala, and S Srinivasa Rao, "Centralized Model-Predictive Decoupled Active–Reactive Power Control for Three-Level Neutral Point Clamped Photovoltaic Inverter with Preference Selective Index-Based Objective Prioritization," *IET Power Electronics*, vol. 12, no. 4, 2019.

Narasimharaju.B.L, Ramanjaneya Reddy U, Raveendra Dogga, "Design and Analysis of Voltage Clamped Bidirectional DC-DC Converter for Energy Storage Applications," *IET Journal of Engineering*, vol. 2018, No. 7, pp. 367-374, July 2018.

Ramanjaneya Reddy, Udumula, Narasimharaju B L, Asif Md, "Voltage Mode Control DCM HSD-CIB PFC Converter for HB-LED Lighting Applications" *Journal of Power Technologies*, vol. 98, No.4, pp.305–313, 2018.

Kasi Ramakrishnareddy Ch, S. Porpandiselvi, Neti. Vishwanathan: 'A Three-leg Resonant Converter for Two Output LED Lighting Application with Independent Control', *International Journal of Circuit Theory and Applications*, 2019. https://doi.org/10.1002/cta.2632.

Kasi Ramakrishnareddy Ch, S. Porpandiselvi, Neti. Vishwanathan: 'An Efficient Ripple Free LED Driver with Zero-Voltage Switching for Street Lighting Applications', *European Power Electronics and Drives Journal*, 2019, https://doi.org //10.1080/09398368. 2019.1570745.

Abhilash Tirupathi, A. Kirubakaran and SomasekharVeeramraju Tirumala "A New Structure of Three-Phase Five-Level Inverter with Nested Two-Level Cells," *International Journal of Circuit Theory and Applications*, pp. 1-11, 2019. https://doi.org/10.1002/cta.2648.

Abhilash Tirupathi, A. Kirubakaran and Somasekhar Veeramraju Tirumala, "A New Hybrid Flying Capacitor Based Single Phase Nine-Level Inverter," *International Transactions on Electrical Energy Systems*, e12139, 2019. https://doi.org/10.1002/2050-7038.12139.

Abhilash Tirupathi, A. Kirubakaran and Somasekhar Veeramraju Tirumala, "A Seven-Level VSI with a Front-End Cascaded Three-Level Inverter and Flying Capacitor fed H-bridge," *IEEE Transactions on Industry Applications*, 2019. https://doi.org/ 10.1109/TIA.2019.2933378.

Ramesh Rahul Jammy, A. Kirubakaran, "A New Configuration of Seven-Level Quasi Z-Source-Based Isolated Inverter for Renewable Applications," *International Transactions on Electrical Energy Systems* wiley, vol. 29, no. 5, 2019.

Ramesh Rahul Jammy, A. Kirubakaran and Chinmay Kumar Das, "Operation, Control and Verification of Seven-Level Quasi-Z-Source-Based T-Type Inverter," *Journal of Circuits, Systems and Computers*, https://doi.org/10.1142/S0218126620500231.

Ramesh Rahul Jammy, A. Kirubakaran "Multi string seven-level quasi Z- source based asymmetrical inverter," *Indonesian J. Elec. Eng. & Comp. Sci.*, vol. 15, no. 1, pp. 88-94, 2019.

K Sateesh Kumar, A Kirubakaran and N Subrahmanyam, "An Improved Hybrid- Bridge Transformerless Inverter Topology with Bi-Directional Clamping and Reactive Power Capability," *IEEE Trans. Ind. Appl.*, DOI: 10.1109/TIA.2019.292022.

K Sateesh Kumar, A. Kirubakaran and N. Subrahmanyam, "Single-Phase Two-Stage Seven-Level Power Conditioner for Photovoltaic Power Generation System," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, DOI: 10.1109/JESTPE.2019.2913216.

K Sateesh Kumar, A. Kirubakaran and N Subrahmanyam, "A New Structure of Single-Phase

ELECTRICAL ENGINEERING

Two-Stage Hybrid Transformerless Multilevel PV Inverter," *International Journal of Circuit Theory and Applications*, vol. 47, no.1, pp. 152-174, Jan. 2019.

R. Arunprasath, D. Vijayakumar, M. Rathinakumar, S. Meikandasivam and A. Kirubakaran, "Performance Evaluation of SEPIC Based Single-Phase Seven-Level Inverter for Renewable Applications," *International Journal of Renewable Energy Research*, vol. 9, no. 2, pp. 704-711, 2019.

Kavita Kiran Prasad, Hareesh Myneni and G. Siva Kumar, "Power Quality Improvement and PV Power Injection by DSTATCOM With Variable DC Link Voltage Control from RSC-MLC," *IEEE Transactions on Sustainable Energy*, vol. 10, no. 2, pp. 876-885, April 2019.

Hareesh Myneni and G. Siva Kumar, "Simple Algorithm for Current and Voltage Control of LCL DSTATCOM for Power Quality Improvement," *IET Generation, Transmission & Distribution*, vol. 13, no. 3, pp. 423-434, Feb. 2019.

A Pranay Kumar, G Siva Kumar, D Sreenivasarao, "Three-Phase Four Switch DSTATCOM Topologies with Special Transformers for Neutral Current Compensation and Power Quality Improvement" *IET Generation, Transmission & Distribution*, vol. 13, no. 3, pp. 368–379, Feb. 2019.

G. Eshwar Gowd, P. C. Sekhar, and D Sreenivasarao "Real-Time Validation of a Sliding Mode Controller for Closed-Loop Operation of Reduced Switch Count Multilevel Inverters," *IEEE Systems Journal*, vol. 13, no. 1, pp. 1042–1051, Mar 2019.

V. Hari Priya, D. Sreenivasarao, and G. Siva Kumar, "Zero-Sequence Voltage Injected Fault Tolerant Scheme for Multiple Open Circuit Faults in Reduced Switch Count Based MLDCL Inverter," *IET Power Electronics*, vol. 11, no. 8, pp. 1351–1364, July 2018.

Kalyan Chakravarthi Meka, A. V. Giridhar, D. V. S. S. Siva Sarma, "PD Source Location Utilizing Acoustic TDOA Signals in Power Transformer by Fuzzy Adaptive Particle Swarm Optimization", *Radio Engineering*, vol. 27, No. 4, Dec. 2018, PP.1119-1127.

Punna Srinivas, Udaya Bhasker Manthati, "FOPID Controller for Multiple-Input Bidirectional DC-DC Power Converter of HESS" *Journal of Advanced Research in Dynamical and Control Systems* (JARDCS-2018), vol. 10,pp. 404-416.

K. V Praveen Kumar and T. Vinay Kumar, "Enhanced Direct Torque Control and Predictive Torque Control Strategies of an Open-End Winding Induction Motor Drive to Eliminate Common-Mode Voltage And Weighting Factors," *IET Power Electronics*, vol. 12, no. 8, pp. 1986-1997, June 2019.

K. M. R. Eswar, K. V. P. Kumar and T. Vinay Kumar, "A Simplified Predictive Torque Control Scheme for Open-End Winding Induction Motor Drive," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 7, no. 2, pp. 1162-1172, June 2019.

R. E. KodumurMeesala, V. P. K. Kunisetti and T. Vinay Kumar, "Enhanced Predictive Torque Control for Open End Winding Induction Motor Drive Without Weighting Factor Assignment," *IEEE Transactions on Power Electronics*, vol. 34, no. 1, pp. 503-513, Jan. 2019.

Ravi Eswar K M and Vinay Kumar T, "Enhanced Predictive Torque Control with Auto-Tuning Feature for Induction Motor Drive," *Electric Power Components and Systems, Taylor & Francis* , vol. 46, Issue 7, pp. 825–836, October 2018.

Kunisetti V. Praveen Kumar and Thippiripati Vinay Kumar, "An Enhanced Three-Level Voltage Switching State Algorithm for Direct Torque Controlled Open End Winding Induction Motor," *Journal of Institution of Engineers, (India), Series B*, vol. 99, no. 3, pp: 235-243, 2018.

K. V. Praveen Kumar & Vinay Kumar T, "Improvised Predictive Torque Control Strategy for an Open End Winding Induction Motor Drive fed with Four-Level Inversion using Normalized Weighted Sum Model," *IET Trans.on Power Electronics*, vol. 11, Issue 5, pp. 808-816, 2018.

RamuluChinthamalla, Ramsha Karampuri, Sachin Jain, "Dual Solar Photovoltaic Fed Three-Phase Open-End Winding Induction Motor Drive for Water Pumping System Application", *Electric Power Components & Systems Journal (Taylor & Francis)*, vol. 46 (2018), No.16-17, Dec 2018, pp. 1896-1911.

Ravi Eswar K M and Vinay Kumar T, "Modified Predictive Torque and Flux Control for Open End Winding Induction Motor Drive based on Ranking Method," *IET Electric Power Applications*, vol. 12, Issue 4, pp.463 - 473, 2018.

Narender Reddy, Srinivasan Pradabane, "Modified H-bridge Inverter based Fault-Tolerant Multilevel Topology for Open-End Winding Induction Motor Drive," *IET Trans on Power Electronics*, June 2019 (https://digital-library.theiet.org/ content/ journals/10.1049/iet-pel.2018.6061).

Satish Kumar Injeti and T.Vinod Kumar, "A WDO Frame Work for Optimal Deployment of DGs and DSCs in a Radial Distribution System under Daily Load Pattern to Improve Techno-Economic Benefits", *International Journal of Energy Optimization Engineering*, vol. 7, Issue-2, 2018.

Satish Kumar Injeti Sd. Sharif, T.Vinod Kumar, "Simultaneous Optimal Allocation of DGs and Capacitor banks in Radial Distribution Systems",

Distributed Generation and Alternative Energy Journal, Taylor& Francis, vol. 33, Issue 3, pp. 3-34, 2018.

Soujanya K, Rajesh Kumar P, Satish Kumar Injeti, "Optimal Multilevel Threshoding Selection For Brain MRI Image Segmentation Based on Adaptive Wind Driven Optimization", Measurement, Elsevier (SCI), vol. 130, pp. 340-361, 2018.

Satish Kumar Injeti, M. Divya, "Optimal Gain Scheduling of PID Controller for the Speed Control of PMSM Drive using Bio-inspired Optimization Algorithms", *International Journal of Electrical Engineering and Informatics*, 11(2):308-325, 2019.

C. Srinivasarathnam, Chandrasekhar Yammani&SyduluMaheswarapu, "Load Frequency Control of Multi-micro grid System Considering Renewable Energy Sources using Grey Wolf Optimization" Journal Smart Science, Taylor & Francis (T&F), (https://doi.org/10.1080/23080477.2019.1630057).

Gurappa Battapothula, Chandrasekhar Yammani and Sydulu M, "Multi-Objective Optimal Planning of FCSs and DGs in Distribution System with Future EV Load Enhancement" *IET Electrical Systems in Transportation*, DOI: 10.1049/iet-est. 2018.5066 .

Chandrasekhar Yammani, Pankaj Prabhat, "Reliability Improvement of Future Microgrid with Mixed Load Models by Optimal Dispatch of DGs" *International Trans. on Electrical Energy Systems*, (John Wiley & Sons), January 2019. https://doi.org/ 10.1002/etep.2816.

Gurappa Battapothula, Chandrasekhar Yammani and Sydulu M, "A Simultaneous Optimal Planning of Electrical Vehicle Fast Charging Stations and DGs in Distribution System" *Journal of Modern Power Systems and Clean Energy*, Springer Publishers, January 2019. https://doi.org/ 10.1007/s40565-018-0493-2.

C. Srinivasarathnam, Chandrasekhar Yammani&SyduluMaheswarapu, "Multi-Objective Jaya Algorithm for Optimal Scheduling of DGs in Distribution System Sectionalized into Multi-Microgrids" Journal Smart Science, Taylor & Francis (T&F), vol. 7, No. 1, pp. 59–78, 2019.

Chandrasekhar Yammani, Pankaj Prabhat, "Collaborative Demand Response In Smart Electric Grid with Virtual System Operator" IET Smart Grid, 2018, vol. 1 Iss. 3, pp. 76-84.

O.V.S.R.Varaprasad, D.V.S.S.SivaSarma, H.K.M.Paredes, and M.G.Simões. "Enhanced Dual-Spectrum Line Interpolated FFT with Four-Term Minimal Sidelobe Cosine Window for Real-Time Harmonic Estimation in Synchrophasor Smart-Grid Technology." Electronics, 8, no. 2 (2019).

O.V.S.R.Varaprasad, D.V.S.S.Siva Sarma and M.G.Simões. "Scalable Single-Phase Multi-Functional Inverter for Integration of Rooftop Solar-PV to Low-Voltage Ideal and Weak Utility Grid," Journal of *Electronics, vol.8, no. 3* (2019

Publications (in peer reviewed conferences)

R Jagadeesh, N Vishwanathan, S Porpandiselvi, "An Efficient Parallel Resonant Converter for LED Lighting" *IEEE National Power Systems Conference* NPSC-2018, NIT Trichy, Dec. 14 – 16, 2018.

R Snehalatha, N Vishwanathan, S Porpandiselvi, "Variable Frequency Controlled Two-Load Induction Cooking System", *IEEE National Power Systems Conference* NPSC-2018, NIT Trichy, December 14 – 16, 2018

P. Manoj, V.T. Somasekhar, A. Kirubakaran, "A Space Vector Modulated Quasi-Z-Source Based Four-Level VSI for PV Application", *IEEE International Conference on Environment and Electrical Engineering and IEEE Industrial and Commercial Power Systems* Europe (EEEIC / I&CPS Europe), 11 – 15 June 2019

Bhaskar S. S. Gupta Yelamarthy, Srinivasa Rao Sandepudi, "A Novel Fault-Tolerant Converter Topology for Induction Motor Drive," *IEEE International Conference on Power Electronics, Drives and Energy Systems* (PEDES), Chennai, India, 2018, pp. 1-6.

Siddarth B G, Narasimharaju B. L, S. Madhu Babu, Shwetab, Uday Shankar, Comparative Study of Sine PWM Techniques on Switched Capacitor Multilevel Inverter (SCMLI)", *IEEE 1st Int. Conference on Energy, Systems and Information Processing*, pp.1-4, IIITD&M, Kancheepuram, India, July 04 - 06, 2019.

Narasimharaju B. L, G. Sainadh, Uday Shankar" PV Fed LLC - LC Multi Resonant Converter Based Led Driver", *IEEE 1st Int. Conference on Energy, Systems and Information Processing*, July 04 - 06, 2019, pp.1-5, IIITD&M, Kancheepuram, India.

SatyakarVeeramallu, Porpandiselvi S, Narasimharaju B L & K Ramakrishna Reddy "High Efficiency Reduced Ripple Three Phase Series Resonant Converter for LED Lighting Applications" *3rd Int. Conf. ICEECCOT-2018* 14-15, December 2018, GSSSIETW, Mysuru, pp. 78-83.

V.K. SatyakarVeeramallu, Porpandiselvi S, Kasi Ramakrishna Reddy Ch, "Buck-Boost Based Parallel Resonant Converter for Multiple Load LED Lighting Application", *IEEE International Conference on Electrical, Electronics, Communication, Computer, and Optimization Techniques* (ICEECCOT), pp. 72-77, 2018, India

K Srinivas, S Porpandiselvi, P Sharath Kumar, "Pulse Frequency Controlled Resonant Inverter for Different

Material Induction Cooking Loads", *IEEE International Conference on Inventive Computation Technologies* (ICICT-2018), pp. 743-747, 2018, India.

V.K. SatyakarVeeramallu, Porpandiselvi S, Narasimharaju B.L., ChKasi Ramakrishna Reddy, "High Efficiency Reduced Ripple Three Phase Series Resonant Converter for LED Lighting Applications", *IEEE International Conference on Electrical, Electronics, Communication, Computer, and Optimization Techniques* (ICEECCOT), pp. 78-83, 2018, India.

G. Govinda Reddy, S Porpandiselvi, P Sharath Kumar, "Dual frequency Buck-Boost interleaved Inverter for ALL Metal Induction Heating Applications", *Third IEEE International Conference on Electrical, Electronics, Communication, Computer Technologies and Optimization Techniques*(ICEECCOT),14-15, Dec. 2018.

T. Abhilash, A. Kirubakaran, V.T. Somasekhar, "A Seven-Level Hybrid Inverter with DC-Link and Flying Capacitor Voltage Balancing", *IEEE International Conference on Environment and Electrical Engineering and IEEE Industrial and Commercial Power Systems* Europe (EEEIC / I&CPS Europe), 11 – 15, June 2019.

Chinmay Kumar Das, A. Kirubakaran, V.T. Somasekhar, "A Five-Level Quasi Z-Source Based NPC Inverter for PV Applications", *IEEE International Conference on Environment and Electrical Engineering and IEEE Industrial and Commercial Power Systems* Europe (EEEIC / I&CPS Europe), 11 – 15, June 2019.

K. Sateesh Kumar, A. Kirubakaran and N. Subrahmanyam, "A Novel Two-stage Hybrid T-type Five-Level Transformerless Inverter," *In Proc. i-PACT*, Vellore, India, 2019.

B. S. Kumar and A. Kirubakaran, "A Single- Phase Quasi-Z-Source based Seven-Level Inverter with Capacitor Voltage Balancing," *8th IEEE India International Conference on Power Electronics* (IICPE), Jaipur, India, pp. 1-5, 2018.

J. R. Rahul, A. Kirubakaran and C. K. Das, "A Novel Hybrid Quasi Z-Source Based T-Type Seven-Level Inverter," *8th IEEE India International Conference on Power Electronics* (IICPE), Jaipur, India, pp. 1-5, 2018.

J. R. Rahul and A. Kirubakaran, "Xilinx FPGA Based Single Phase Five-Level Cascaded Z-Source Inverter," *8th IEEE India International Conference on Power Electronics (IICPE)*, Jaipur, India, pp. 1-4, 2018.

B. S. Kumar and A. Kirubakaran, "A complet fault tolerant solution for a single phase five- level hybrid flying capacitor inverter," *In Proc. i-PACT*, Vellore, India, 2019.

R. Arunprasath, M. Rathinakumar, D. Vijayakumar, S. Meikandasivam and A. Kirubakaran, "Two stage SEPIC Based Single-phase Five-level Inverter for Photovoltaic Applications," *In Proc. i-PACT*, Vellore, India, 2019.

Hareesh Myneni and G. Siva Kumar, "A New Interactive Control Algorithm of DSTATCOM for Power Quality Improvement," *IEEE Int. Conference on Power Electronics, Drives and Energy Systems (PEDES)*, Chennai, India, 2018, pp. 1-5.

M. KalyanChakravarthi, A. V. Giridhar, D. V. S. S. Siva Sarma, "Localization of Incipient Discharge in Power Transformer Using UHF Sensor", *International Conference on High Voltage Engineering and Technology* , Hyderabad, Feb-2019.

Udaya BhaskerManthati, Annu K M, Srinivas Punna, "Analysis of Sliding Mode Controller and PI Controller for Distributed Energy Systems" *IEEE Int. Conference on Smart Grid and Smart Cities (IEEE-ICSGSC 2019)* at University of California, Berekeley, USA, 25-28 June 2019.

Sangani Prashanth, Udaya Bhasker Manthati, Vishnu Sidharthan and P, Srinivas Punna, "Efficient Interleaved Buck Converter Driver for LED applications", *IEEE International Conference on sustainable Energy Technologies and Systems* (IEEE-ICSETS-2019), Bhubaneswar, Orissa, India.

Udaya Bhasker Manthati, "Hybrid Energy Storage source for renewable energy systems" *Telangana State Science Congress* (TSSC-2018),22-24 December 2018 at NIT-W, Warangal, Telangana, India.

P Vishnu Sidharthan, K Srikanth, M Udaya Bhasker, M S Chandrasekhar, T.S. Balasubramanian, "Energy Harvesting from Series Connected Piezoelectric Discs" *Telangana State Science Congress* (TSSC-2018),22-24 December 2018 at NIT-W, Warangal, Telangana, India.

Vishnu Sidharthan, Udaya Bhasker M, SrikanthKorla, M S Chandrasekhar, " Energy Harvesting of Piezoelectric with Synchronized Switch Harvesting on Inductor", *IEEE International Conference On Recent Innovations in Electrical, Electronics & Communication Engineering* Bhubaneswar, Orissa, India.

C. Srinivasarathnam, Chandrasekhar Yammani and Sydulu M, "Multi-Objective Optimal Scheduling of Microsources in Distribution System based on Sectionalization into Microgrid" 2nd *IEEE Int. Conf. on Sustainable Energy*, 2019.

Funded Research Projects 2018-19)

Prof. S Srinivasa Rao (PI), Prof. B. K. Murthy(CO-PI), Investigations on Control Flexibilities of Grid Integrated Solar Photo Voltaic Energy Conversion System, Sponsored under RSoP Scheme by Central Power Research Institute (CPRI), Bangalore, Ministry

ELECTRICAL ENGINEERING

of Power (MoP), Govt. of India. Nov 2018, Rs. 31.10 Lakhs.

Dr. B. L Narasimharaju (Indian-PI), Dr. A. V. Giridhar (Co-PI), Dr.Ch. Ramulu (Co-PI), Prof. Subhashish Bhattacharya (Foreign-PI), NCS University USA; Dr. Akshay Kumar Rathor (Co-PI), Concordia University, Canada; Dr. Harish S. Krishnamoorthy (Co-PI), University of Houston, USA; "Design and Development of New High Gain Transformer-less Inverter Topology for PV Based Grid Tie Applications", SPARC-India, MHRD, GOI. Rs.95.04 Lakhs (SPARC: 68.99172 Lakhs +Host Institute: 26.05), 2019.

Dr. B. L Narasimharaju (PI); Prof. D. M Vindod Kumar, Prof. S. Srinivasa Rao, Dr. A.V. Giridhar, Dr. V. V Mani, Design and Development of High Efficient Switched Reluctance Motor based Solar Photovoltaic (SPV) Water Pumping System (WPS), IMPRINT-India, MHRD. Rs.78.954 Lakhs.2019.

Dr. B. L Narasimharaju (PI); Dr. N. Vishwanathan (Co-PI) & Dr. S. Porpandiselvi (Co-PI) Design and Development of High-Efficient PFC based AC-DC LED Driver for AC-Grid Fed LED Lighting System. Rs.27.535 Lakhs, 2019.

Dr S Porpandiselvi, (PI), Prof. N Vishwanathan (Co-PI),and Dr. B L Narasimharaju(Co-PI) 'Development of High PF Grid connected Induction Cooker with Direct AC-AC Conversion for Vessels of Different Material', DST-SERB-CRG Scheme, Rs. 32.89 Lakhs, 2019.

Dr S Porpandiselvi, (PI): Prof. N Vishwanathan (Co-PI), Dr. B. L. Narasim-haraju (Co-PI), "Design and Development of Efficient Induction Cooker suitable for Vessels of different materials", Sponsored under RSoP by Central Power Research Institute (CPRI), Bangalore. Rs. 14.28 Lakhs, 2019.

Dr. P Suresh Babu (PI) "Blackout Prevention and Quick Service Restoration in Regional and United Indian Power Grid with Protection Reliability Enhancement using Optimal PMU Placement". SERB-DST, Government of India, New Delhi, Rs. 24.87 lakhs,2019.

Dr. A. Kirubakaran (PI) "Development of a High-Efficiency Single Phase Quasi-Z-Source Based Isolated DC/AC Converter for PV Applications" SERB-DST, Rs.33.37 Lakhs.

Dr. T Vinay Kumar(PI) "An Effective Predictive Torque Controlled Permanent Magnet Synchronous Motor Drive for a Photo-Voltaic based Hybrid Electric Vehicle with Reduced CO2 Emissions". under ECR of SERB-DST, Rs. 26.20 Lakhs, 2019.

Dr. Udaya Bhasker M (PI), "Modeling and simulation of energy harvesting using piezo-materials and super capacitors", sponsored by DRDO, Hyderabad.

Dr. I Satish Kumar (PI), Development of an Efficient Framework for Optimal Allocation of Energy Sources in a Restructured Distribution Systems including D-FACTS and PMU's, DST-SERB, Rs 16.68 Lakhs..

Dr. Chandrasekhar Yammani (Co-PI), Grid Interconnection protocols for largely dispersed minigrids/microgrids for electrification of rural India, under DST, India-Under Indo-Norway joint call on Renewable Energy with Rs. 39.55 Lakhs.

Conferences Conducted

N. Vishwanathan, B.L Narasimharaju& S. Porpandiselvi, One day National Conference on "Power Converters & Electric Drives (PCED – 2018) (1, Nov., 2018), EED NIT Warangal.

Seminars Conducted

Dr. BaddamAnantha Reddy, Managing Director of Pious Electronics Pvt. Ltd., Sukhila Power Electronics Pvt. Ltd. and Infinity Projects Pvt. Ltd. Topic: Role of Energy Storage Systems in Electric Vehicle Systems", 26th September 2018.

Dr. Amarjyot Singh, Founder and CEO Skylark Labs and 2011 Alumnus of EEE Department, NIT Warangal. Topic: Contemporary Surveillance Systems - Face Recognition to Drones, 4th Oct. 2018.

Sri. Sainath M Moorthy, Principal, market design and analysis at the Electric Reliability Council of Texas. Topic: ERCOT electricity markets overview and emerging challenges, 30th Jan. 2019.

Sri. Kailash Chandra Keshre, Electrical Head (Rtd), Tata Consulting Engineers Limited, Bangalore. Topic: Practical aspects of LT Switchgear protection.

Sri Kameswara Rao, Associate Professor Civil Engineering Department, NIT Warangal. Topic: Philosophy of linear systems, 19th Feb. 2019.

Dr. M. Sydulu, Professor, Electrical Engineering Department. Topic: Recent trends in power systems and its challenges, 27th Mar. 2019.

Dr. P.V Rajgopal, Additional General Manager (Retired), R&D, BHEL Hyderabad. Topic: Electric Vehicles - Battery/Fuel Cell/Hybrid Powered, 16th April 2019.

Workshops Conducted

P. Suresh Babu, Simulation and Analysis of Modern Power System Issues-5 days CEP-5-9 November 2018, TEQIP-III -NIT Warangal.

ELECTRICAL ENGINEERING

Dr. Chandrasekhar Yammani "A five day CEP on "Advanced Technologies in Power Engineering "sponsored by TEQIP-III,17-21 Dec- 2018, NIT Warangal.

Dr. D. Sreenivasarao, "Electric Vehicle (NKN Summer Course)," sponsored by E&ICT Academy, NIT Warangal (Ministry of Electronics and Information Technology (MeitY), GOI) during 28 May - 1 June, 2018.

Dr. Udaya Bhasker Manthati and Dr. Suresh Babu Perli, "Six-day national level workshop on "Applications of Digital Signal Processing Techniques for Power Electronic Systems" sponsored by E &ICT Academy,3-18 May 2018, NIT-W, India.

P Suresh Babu, Applications of Digital Signal Processing Techniques for Power Electronic Systems, Six Day FDP - 13-18 May 2019 sponsored by E&ICT Academy NIT Warangal.

Dr. B. L Narasimharaju & Dr.Ch. Ramulu, Six Day Faculty Development Programme on Strategies and ICT Tools For Power Conversion Technologies & Applications, 1- 6 May 2019 sponsored by E&ICT Academy NIT Warangal.

Dr. N. Vishwanathan, Dr. B.L Narasimharaju & Dr. S. Porpandiselvi, Five-Day Short-Term-Course on "Resonant Converters and Applications, 02-06 July, 2018, NIT Warangal (Self Finance).

Dr. B. L Narasimharaju, Dr. A. V. Giridhar & Dr. Ch. Ramulu, Five Day National SPARC Workshop on "Advanced Resonant Converters for Micro Grid and Electric Transportation", 15 - 19 July 2019, NIT Warangal.

Dr. B. L Narasimharaju, Dr. A. V. Giridhar & Dr. Ch. Ramulu, Three Week in-House SPARC Course on "Analysis of High Gain Converters for Grid Connected Photovoltaic Systems, 1st, 2nd & 3rd Week, July 2019 NIT Warangal.

Dr. G Siva Kumar and Dr. T Vinay Kumar, Six Day Faculty Development Program on "Recent Trends in Power Electronics Applications in Smart Grid, Electric Vehicles, and Renewable Energy"17-22 June, 2019 at NIT Warangal, sponsored by E&ICT Academy, NIT Warangal

A. Kirubakaran, "A Six Day Faculty Development Programme on "Integration of Renewable Energy Sources" 3-8 June 2019 sponsored by E&ICT Academy NIT Warangal.

SPARC Project Sanctioned

Development of New High Gain Transformer-less Inverter Topology for PV Based Grid Tie Applications, Dr. B. L Narasimharaju (PI), Dr. A. V. Giridhar (Co-PI), Dr.Ch. Ramulu, (Co-PI). Foreign Investigators: Prof. Subhashish Bhattacharya (PI), NCS University USA, Dr. Akshay Kumar Rathor, (Co-PI), Concordia University, Canada, Dr. Harish S. Krishnamoorthy (Co-PI), University of Houston, USA for Rs. 95.04 Lakhs

MECHANICAL ENGINEERING

The Department of Mechanical Engineering was established in the year 1959 along with the institute REC Warangal. The Department offers a B.Tech program in Mechanical Engineering, M.Tech programs with seven different specializations and Doctoral degrees. Being one of the foundational departments, it has contributed enormously to the institute's reputation. The Mechanical Engineering department is one of the largest in the institute in terms of both facilities and faculty. The Department has a total of 37 faculty members with rich profiles and strong academic standing in the entire nation. The Department of Mechanical Engineering has acquired research funding of several crores under various schemes. There are also 4 approved projects under the prestigious SPARC program of MHRD, in collaboration with international reputed universities from Taiwan, Singapore, and the USA. Faculty members of the department are also active in publications, organizing FDPs, workshops, National and International conferences, experts in several external committees and in other significant outreach activities. The department placement records are very high with B.Tech students having above 90% placement every year. The highest pay package in every year is close to 20 Lakhs per annum and the average is around 8-9 lakhs per annum. Companies like Tata Motors, GE, Alstom, ABB, L&T, Rolls Royce, Philips, Intel, Godrej ...to name a few, come for on campus recruitment.

FACULTY

N. Selvaraj, Professor,
Modeling and Simulation, FMS

K. Madhu Murthy, Professor
Thermal Engineering, IC Engines

C.Surya Prakash Rao, Professor
CAD/CAM, CIM

L. Krishnanand, Professor
Industrial Engineering, CAD/CAM

S.SrinivasaRao,Professor
Two-phase flow, I.C.Engines

P.BangaruBabu, Professor
Mechanical Vibrations,FEM

A.Neelakanteswara Rao, Professor
Operations Management, SCM

A.Venu Gopal, Professor
Conventional and UCM

K.V.SaiSrinadh, Professor
MBM, Manufacturing process

P.Ravi Kumar, Professor
I.C. Engines, Alternate Fuels

G.Amba Prasad Rao, Professor
I.C. Engines, Alternate Fuels

R. Narasimha Rao, Professor
Tribology, Kinematics , DOM

A.Kumar,Professor
FSW/Processing, Additive Manf.

V. Suresh Babu , Professor
Mechanism, Dynamics, Vibrations

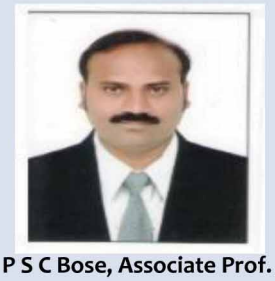
G. R.K Gupta, Associate Professor
CFD, Turbomachines, Jet propul.

I A Kumar Reddy,Assoc. Prof.
Production

VeereshBabuA,Associate Prof.
IC Engines, Alternate Fuels, EC

Y. Ravi Kumar ,Associate Prof.
CAD/CAM/, Rapid Prototyping,AM

Joseph Davidson M,Associate Prof.
Metal Forming, CAD/CAM, SM



P S C Bose, Associate Prof.
Machining of high temp, Superalloy

Vasu V,Associate Prof.
Nanamaterials, Nanofluids, NC

G N Srinivasulu, Associate Prof.
.PEM Fuel Cells; I.C.Engines;

P Vamsi Krishna, AssociateProf.
SM,Lubricants In Machining

K Kiran Kumar,Associate Prof.
ThermalEngineering,HT,Nanofluids

V. Rajesh Khana Raju, Assoc Prof.
Fluid Dynamics, HT, CFD

Srikanth Korla,Associate Prof.
Piezo EnergyHarvesting, SHM

Hari Kumar V, Associate Prof
CAD, FEM / Isogeometric Analysis

D. Jaya Krishna,Associate Prof.
Solar energy, CFD, LHS materials

Satish Ben,Associate Prof.
SHM,ConditionMonitoringNanocom

ChandramohanV.P,Associate Prof.
CFD, Convection and conduction HT

T. Sadasiva Rao, Asst.Prof. Production

Syed Ismail, Asst.Prof.
Tribology, Surface Text,Lubrication

Karthik Balasubramanian,Asst.Prof.
Microchannel Flow Boiling, PCHT

Gujjala Raghavendra, Asst.Prof.
Composites, NM,Tribology, PC.

Venkatesh Gudipadu, Asst.Prof..
Abrasive Flow Machining, MAF

M Vijaya Kumar,Asst.Prof.
Manufacturing Systems,Design,SCM

P Suresh, Asst.Prof.
3D Inte.macro/microsensors design

MECHANICAL ENGINEERING

Patents Granted

K. Balasubramaniam and P. Suresh, A novel ultrasonic waveguide technique for distributed sensing and measurements of physical and chemical properties of surrounding media. Publication No: US20180113030A1

P. Suresh and K. Balasubramaniam Integrated Thermocouple Waveguide Sensor System and Method to Measure Physical Properties of Waveguide Material and Surroundings, Patent Application No. 201941032842

Patents Filed

Chandramohan V.P., Ramakrishna Balijepalli, Pritam Das, K. Kirankumar Design and development of solar updraft tower (SUT) plant for generating electrical power: A novel structure, appropriate materials with optimized collector angle, Application No: 201941018001 A, 17/05/2019

Srikanth K developed a Pen stand puzzle, application No. 201641009916, publication date: 17/06/2016, status: under examination.

Srikanth K developed a Dual security pad lock, application no. 5643/CHE/2015, publication date: 20/10/2015, status: under examination

Publications in peer-reviewed journals

Ch. Sri Chaitanya, RN Rao, Surface Failure of Syntactic Foams in Sliding Contact, Materials Today: Proceedings 15P1 (2019) 63-67. [SCOPUS], Impact factor: 0.694 June 2019.

A N Jinoop, C P Paul, J Denny, S K Nayak, P Vamsi Krishna, K S Bindra, "Laser Additive Manufacturing of Hastelloy-X Thin Walls using Directed Energy Deposition: Parametric Investigation and Multi-Objective Analysis", Lasers in Engineering, 2019, Scopus. (Accepted) (IF: 0.383)

Srinu Gugulothu, Vamsi Krishna Pasam, "Performance evaluation of CNT/MoS2 hybrid nanofluid for Surface roughness in machining", International Journal of Automotive and Mechanical Engineering (IJAME), 2019, Scopus (Accepted) (IF: 0.822)

Srinu Gugulothu, Vamsi Krishna Pasam, "Optimizing multi-response parameters in turning of AISI1040 steel using Desirability approach", International Journal of Mathematical, Engineering and Management Sciences, 2019, IJMEMS publications , Scopus (Accepted) (IF: 0.82)

A Prasad Reddy, P Vamsi Krishna, R N Rao. Strengthening and mechanical properties of SiC and graphite reinforced Al6061 hybrid nanocomposites processed through ultrasonically assisted casting technique. Transactions of the Indian Institute of Metals, 2019 (Accepted). (SCI). (IF: 0.910).

Gopala Rao Thellaputta, C. S. Raju, P. S. C. Bose, C.S.P. Rao, "Adaptive neuro fuzzy model development for prediction of cutting forces in milling with rotary tools", Materials today: Proceedings 5 (2018) 7429–7436.

G Arunsandeep, A Lingayat, VP Chandramohan, VRK Raju, KS Reddy, A numerical model for drying of spherical object in an indirect type solar dryer and estimating the drying time at different moisture level and air temperature, International Journal of Green Energy (2018), Vol. 15, no. 3, 189–200 . SCI Expanded.

Prabhakara Rao Ganji, Rudra Nath Singh, V.R.K.Raju, S.Srinivasa Rao, Design of piston bowl geometry for better combustion in direct injection compression ignition engine, Sadhana (2018) 43 (6), 92. SCI Expanded.

Satyapal Yadav, Abhay Bhanudas Lingayat, V.P. Chandramohan, V. R. K. Raju, Numerical analysis on thermal energy storage device to improve the drying time of indirect type solar dryer. Heat and Mass Transfer (Accepted)

S.V.B. Vivekanand V.R.K. Raju, Numerical study of the hydrodynamics and heat transfer characteristics of liquid-liquid Taylor flow in microchannel. Heat Transfer-Asian Research 2018; 47:794–805.

K. Manoj, V. Narayanamurthy, and S Korla, Analysis and Characterization of a cantilever energy harvester, Journal of Structural Engineering, 45(2018)1:1-5

V. K. Manupati et al., (2019), "Integrated Process Planning and Scheduling in Networked Manufacturing Systems for I4.0: A review and framework proposal", Wireless Networks (Springer) (IF:2.405)

V. K. Manupati et al., (2019), "Investigating the performance improvement of an Indian manufacturing industry by converting assembly line to a pure cell system", European J. of Industrial Engineering. (Inderscience), Accepted 2019.

V. K. Manupati et al. (2019). "SNA based Industrial Plant Layout Analysis in the context of Industry 4.0".

International Journal of Industrial and Systems Engineering Computations. Accepted

V. K. Manupati, Suraj Panigrahi, Muneeb Ahsan, Somnath Lahiri, Akshay Chandra, J J Thakkar, Goran Putnik, M. L. R. Varela. (2019), "Estimation of manufacturing systems degradation rate for residual life prediction through dynamic workload adjustment" Sadhana, IMF 0.75.

V K Manupati, Digjoy Samantha, (2018). "A multi-criteria decision making approach for theurban renewable in southern India". Sustainable Cities and Society, Sustainable Cities and Society 42, 471–481.

V. K. Manupati, Sivakumar Jane Jedidah, Shreya Gupta, Aditi Bhandari, Rajyalakshmi G, (2018), "Optimization of a multi-echelon sustainable production-distribution supply chain system with lead time consideration under carbon emission policies". Computers and Industrial Engineering, Elsevier,

Nagaraju, D., Narayanan, S., Manupati, V.K. and Rao, A.R., (2018). "Integrated Three-Level Supply Chain Model for Optimality of Inventory and Shipment Decisions under Cubic Price Dependent Demand". Materials Today: Proceedings, 5(5), pp.13521-13534.

M. B. S. Sreekara Reddy, Ch. Ratnam, G.Rajyalakshmi, V. K. Manupati, (2018). "An effective hybrid multi objective evolutionary algorithm for solving real time event in flexible job shop scheduling problem", Measurements, Elsevier, Volume 114, Issue No:, pp-78-90, IMF 2.359

Varela, M.L., Putnik, G.D., Manupati, V.K., Rajyalakshmi, G., Trojanowska, J. and Machado, J., (2018). Collaborative manufacturing based on cloud, and on other I4. 0 oriented principles and technologies: a systematic literature review and reflections. Management and Production Engineering Review.

G Arun Manohar, V Vasu, K Srikanth,Development of a high redundancy actuator with direct driven linear electromechanical actuators for fault-tolerance, Procedia computerscience, vol.133, pp. 932-939, 2018.

G Arun Manohar, V Vasu, K Srikanth, Modeling and simulation of high redundancy actuator for fault-tolerance, Materials Today: Proceedings, vol.5, pp. 18867-18873, 2018.

G Suresh, V Vasu, G Raghavendra, Optimization of Input Parameters on Erosion Wear Rate of PTFE/HNT filled nanocomposites, Materials Today: Proceedings, vol.5, pp. 1462-1469, 2018.

Gamini Suresh, V Vasu, M Venkateswara Rao ,A Composite (Taguchi-Utility-RSM) Approach for Optimizing the Tribological Responses of Polytetrafluoroethylene (PTFE) Nanocomposites for Self-lubrication Applications, Silicon, vol. 10, pp,2043-2053, 2018.

R. Nishanth, K. Balasubramaniam and P. Suresh, Interpretation of Axi and Non-axi Symmetric Reflectors in the Ultrasonic Sensor Developments, IEEE Sensors Vol. 18, No. 14, July 2018).

R. Nishanth, K. Balasubramaniam and P. Suresh, Ultrasonic waveguide based level measurement using flexural mode F (1, 1) in addition to the fundamental modes. Review of Scientific Instruments, 90 (4), 045108,2019.

Naidu, PP., Raghavendra, G., Ojha,S., Paplal, B. (2019), Effect of g-C3N4 nanofiller as filler on mechanical properties of multidirectional glass fiber epoxy hybrid composites. Journal of Applied Polymer Science, 48413.

G Punugupati, PSC Bose, G Raghavendra, CSP Rao, Response Surface Modeling and Optimization of Gelcast Fused Silica Micro Hybrid Ceramic Composites Silicon, 1-16

G Punugupati, PSC Bose, G Raghavendra, CSP Rao, S Ojha, Erosion Behavior of Gelcast Fused Silica Ceramic Composites Silicon, 1-9

MO Prakash, G Raghavendra, M Panchal, S Ojha, PSC Bose Influence of Distinct Environment on the Mechanical Characteristics of Arhar Fiber Polymer Composites Silicon 10 (3), 825-830

G Punugupati, PSC Bose, G Raghavendra, CSP Rao Influence of Solid Loading and Ratio of Monomers on Mechanical and Dielectric Properties of Hybrid Ceramic Composites Silicon, 1-10

G Suresh, V Vasu, G Raghavendra Optimization of input parameters on erosion wear rate of PTFE/HNT filled nanocomposites Materials Today: Proceedings 5 (1), 1462-1469

Z Shanti Kiran, V Suresh Babu, K V sai srinadh, "Effect of Nanoclay, Glass fiber volume, and orientation on tensile strength of epoxy-glass composite and optimization using Taguchi method", World journal of

Engineering, vol. 15, no. 2, pp: 312-320 (2018). doi: 10.1108/WJE-08-2017-0286.

Z Shanti Kiran, V Suresh Babu, K V sai srinadh, "Investigation of the microhardness and solid

particle erosive wear of organoclay filled glass-epoxy nanocomposites and Optimization using

Taguchi method",Australian Journal of Mechanical Engineering

Syam Kumar Chokka, B. Satish Ben, K V S Srinadh, "Enhanced Tensile and Wear Properties of CFRP Composites Manufactured with Vacuum Infusion Process", Materials Science Forum; Transtech Publishers -Accepted. (Scopus).

Gondegaon, Sangamesh, and Hari K. Voruganti. "An efficient parametrization of planar domain for isogeometric analysis using harmonic functions." Journal of the Brazilian Society of Mechanical Sciences and Engineering 40.10 (2018): 493.

Valaparla Ranjith Kumar, Karthik Balasubramanian, K Kiran Kumar, Nikhil Tiwari and Kanishk Bhatia, "Numerical investigation of heat transfer and fluid flow characteristics in circular wavy microchannel with tangentially branched secondary channels". Proc IMechE Part E: J Process Mechanical Engineering, SAGE publications, 2019, page 1-13, DOI: 10.1177/0954408919869543

Suman Shah, K. Kiran Kumar "Experimental Study & Heat Transfer Analysis on Copper Spiral Heat Exchanger Using Water Based SiO_2 Nanofluid as Coolant." World Journal of Nano Science and Engineering 8, (2018) 57-68.

Ramesh Babu Bejjam, K Kiran Kumar"Numerical Investigation on Heat Transfer and Fluid Flow Characteristics of Natural Circulation Loop with Parallel Channels."Numerical Heat Transfer and Fluid Flow, Lecture Notes in Mechanical Engineering" (2019), pp. 425-43

Y Siva Kumar Reddy, Karthik Balasubramanian, V.P. Chandramohan, "Thermal energy analysis on liquid desiccant air conditioning system at different desiccant solution parameters", Proc IMechE Part E: J Process Mechanical Engineering, Feb 2019, page 1-14, DOI: 10.1177/0954408919825721 (SCI; Impact factor: 1.211).

Reddy, Y. Siva Kumar, K. Balasubramanian, and V. P. Chandramohan, "Study on Desiccant Solution Control Strategies for Efficient Liquid Desiccant Air Conditioning System Control Performance", Science and Technology for the Built Environment, Taylor & Francis, Nov 2018, page 322-335, Vol 25, Issue 3,

S Venkata Sai Sudheer, K Kiran Kumar and Karthik Balasubramanian, "Experimental studies of heat transfer and flow regimes during flow boiling of water and alumina nanofluids at different heat and mass fluxes". Proc. IMechE, Part C: J Mechanical Engineering Science 2019;

Abhay Lingayat, V.P. Chandramohan, V.R.K. Raju, Numerical analysis on solar air collector provided with artificial square shaped roughness for indirect type solardryer, Journal of Cleaner Production, Elsevier, IF = 5.7,190(July 2018)353367

Pritam Das and V. P. Chandramohan, Effect of chimney height and collector roof angle on flow parameters of solar updraft tower (SUT) plant, Journal of Thermal Analysis and Calorimetry, Springer, Sep. 2018,

Yaswanthkumar, V. P. Chandramohan, Numerical analysis of flow parameters on solar updraft tower (SUT) with and without thermal energy storage (TES) system, Journal of Thermal Analysis and Calorimetry, Springer,Apr.2019,136(1),331-343,DOI: 10.1007/s10973-018-7756.

Ramakrishna Balijepalli, Chandramohan V.P., K. Kiran Kumar, Optimized design and performance parameters for wind turbine blades of a solar updraft tower (SUT) plant using theories of Schmitz and aerodynamics Forces, Sustainable Energy Technologies and Assessments, Elsevier, 30 (2018), 192–200, DOI: 10.1016/j.seta.2018.10.001.

A.Yaswanthkumar, V. P. Chandramohan, Influence of thermal energy storage system on flow and performance parameters of solar updraft tower power plant: A three dimensional numerical analysis, Journal of Cleaner Production, Elsevier, IF = 5.7, 207 (10), 136-152, 2019.

Ramakrishna Balijepalli, Chandramohan V.P., K. Kiran Kumar, A complete design data and performance parameter evaluation of a pilot scale solar updraft tower, Heat Transfer Engineering, Taylor & Francis, 2019,

MECHANICAL ENGINEERING

Manojkumar Dundi, V.R.K. Raju, V.P. Chandramohan, Characterization of enhanced liquid mixing in T-T mixer at various Reynolds numbers. Asia-Pacific Journal of Chemical Engineering, 2019, Wiley, 14(2), 1-16. DOI: 10.1002/apj.2298.

Ravichandra, D., Puli Ravi Kumar and V.P. Chandramohan, A Review Report on Turbocharged Diesel Engine with Alternative Fuels, Journal of The Institution of Engineers (India): Series C, Springer, 2019, 1-10. DOI: 10.1007/s40032-019-00510-4.

T. Manoj Dundi, V. R. K. Raju, V. P. Chandramohan, Numerical evaluation of swirl effect on liquid mixing in a passive T-micromixer, Australian Journal of Mechanical Engineering, Taylor & Francis, 2019,

T. Manoj Dundi, V.R.K. Raju, V.P. Chandramohan, Characterization of mixing in an optimized designed T–T mixer with cylindrical elements, published 28th Feb. 2019.Elsevier,IF=1.91,

Manbodh Kumar Mishra, V. P. Chandramohan, Karthik Balasubramanian, Comparative study of cooling of automobile LED headlights without and with fins and finding comfortable operating conditions, Archive of Mechanical Engineering, SCI, accepted 19th June 2019.

Chandramohan V.P., Influence of air flow velocity and temperature on drying parameters: An experimental analysis with drying correlations, IOP Conference Series: Materials Science, Engineeringand Renewable Energy,377(2018)012197,

M. Krishna Kishore, A. Kumar "Influence of tool shoulder end features on friction stir weld characteristics of Al-Mg-Si alloy" International Journal of Advanced Manufacturing Technology (2018) 1-14. (I.F: 2.0) (SCI)

Krishna Kishore Mugada, Kumar Adepu "Influence of ridges shoulder end features with polygonal pins on material flow and friction stir weld characteristics of 6082 aluminum alloy" Journal of Manufacturing Processes Vol. 32 (2018) 625-634. (I.F: 2.2) (SCI)

R Tharmaraj, M J Davidson, SK Subbu, Effect of Selective Heating on Formability and Densification of Powder Metallurgy Preforms During Upsetting, Transactions of the Indian Institute of Metals, (Springer) 72 (Issue 5), 1289–12

C HariKrishna, M J Davidson, , Damage modeling and critical damage evaluation of AA2014 cast alloy embedded with fly ash composite under upsetting, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science(SAGE), Volume 232, Issue 21, Pages 3797-3806.

K Bharath, AK Khanra, M J Davidson, , Structural Properties Evaluation of Semisolid Extruded Al–Cu–Mg Powder Metallurgy Alloys, Transactions of the Indian Institute of Metals, (Springer) 72 (4), 1063

Prabhakara Rao Ganji, Kashyap Babu Chowdary Putta, Kattela Siva Prasad, V R K Raju and S. Srinivasa Rao, Optimization of EGR and SOI for better Combustion Characteristics Using Response Surface Methodology, International Journal of Ambient Energy, May 2019,

Siva Prasad Kattela, S. Srinivasa Rao and V. R. K. Raju, Comparative study on single-injection and pilot injection strategies for DI CI engine fuelled with the butanol/diesel blend, International Journal of Ambient Energy, pp.1-8, International Journal of Ambient Energy,

P.Madhukar,N.Selvaraj,Raghavendra.G,C.S.P.Rao, Production of high performance AA7150-1%SiC nanocomposite by novel fabrication process of ultrasonication assisted stir casting Ultrasonics-Sonochemistry Elsevier July 2019.

Suresh G, N.Selvaraj,Kanmani Subbu, C.S.P.Rao, Fabrication and experimental study to optimize the recast layer and the material removal in electric discharge machining (EDM) of AA6061-B4C composite Materials today Proceedings Science direct Elsevier July 2019

Suresh G, N.Selvaraj,Kanmani Subbu, C.S.P.Rao, The EDM performance in making of rectangular channels on synthesized AL-B4C composites at varied compaction loads Journal of engineering Manufacture-Part B May 2019.

Jagan Mohan Reddy K, A Nilakenteswararao, & L. krishnanand. (2019), A review on supply chain performance measurements systems. Procedia Manufacturing. Volume 30, 2019, Pages 40-47.

Amrut Mulay, B.Satish Ben, Syed Ismail and Andrzej Kocanda (2019), Prediction of average surface roughness and formability in single point incremental forming using the artificial neural network, Archives of Civil and Mechanical Engineering, Elsevier, Vol. 19, pp. 1135-1149. Impact Factor: 2.763

Venkateswara Babu P., Ismail Syed and Satish Ben Beera (2019), Influence of positive texturing on friction

and wear properties of piston ring-cylinder liner tribo pair under lubricated conditions, Industrial Lubrication and Tribology, Vol. 71 Issue: 4, pp.515-524. Impact Factor: 1.037.

Venkateswarlu Velisala and G N Srinivasulu, Computational Fluid Dynamics Study ofSerpentine Flow Field Proton Exchange Membrane(PEM) Fuel Cell Performance, Heat transfer engineering.

istry of Rural Development, 23.05.2006, Rs. 10.00 Lakhs.

Publications in peer-reviewed conferences

N.Ch. Kaushik, Ch Sri Chaitanya, R.N. Rao, Material removal mechanism of hybrid Grp/SiCp/Al-Mg-Si composites during high stress abrasive wear condition. Proceedings of Asia International Conference on Tribology 2018(ASIATRIB 2018), pp. 334-335, 17-20 September 2018 © Malaysian Tribology Society (MITRIBOS), Kuching, Sarawak. Malaysia.

R.N. Rao, Ch. Sri Chaitanya, Failure Analysis of Fibre Reinforced Polymer Matrix Composites, 10th International Conference on Advancements in Polymeric Materials [APM-2019], January 22-24, 2019, CIPET, Chennai, India

S.K. Sahoo, R.N. Rao, Kuchipudi Srinivas, M. K. Buragohain, "NDE of glass fiber reinforced composite structures using single sided solid-state proton NMR", 6th International Conference on Recent Advances in Composite Materials (ICRACM – 2019), IIT, BHU, Varanasi, India, Feb, 25-28, 2019.

Ch. Sri Chaitanya, R. N. Rao, Tribological Behaviour of Syntactic Foams in Dry Sliding Conditions: Effect of Applied Load and Sliding speed, International Conference on Advanced Functional Materials and Devices [ICAFMD-2019], February 26-28, 2019, NIT Warangal, Warangal, India.

L. Viswanadham, R. N. Rao, Ch. Sri Chaitanya, Vibration Response Comparison of Magnesium and Steel Cantilever Beams, International Conference on Advanced Functional Materials and Devices [ICAFMD-2019],February 26-28, 2019, NIT Warangal, Warangal, India.

Neelam Parimala, Gaurav Mahendra and P. Vamsi Krishna, "Modelling and simulation of nanofluids to study cooling and lubrication effect", International Conference on Materials, Manufacturing and Modelling, International Conference on Materials, Manufacturing and Modelling (ICMMM 2019), March 29 - 31, VIT Univeristy, Vellore.

D. Venkata Sivareddy, P.Vamsi Krishna, A.Venu Gopal, "Optimization of Machining Parameters for Vibration Assisted Turning of Ti6Al4V Alloy Using Analysis of Variance", International Conference on. Applied Mechanical Engineering Research (ICAMER 2019), 2-4 May 2019, NIT Warangal.

Pratyush Kar, G Rajesh Babu and P Vamsi Krishna, Optimization of Tool and Process Parameter for Injection Molded Component, 7 th International and All India Manufacturing Technology, Design and Research Conference (AIMTDR 2018), 13 th to 15 th December, 2018, Anna University, Chennai.

N.Manoj Kumar, V.R.K.Raju*, S.V.B.Vivekanand , APR 2018, "Stability of two-fluid stratified flow in a concentric cylindrical annulus with inner cylinder rotation", International Conference on Thermal Analysis and Energy Systems.

T Manoj Dundi, V. R. K. Raju*, V. P. Chandramohan, S. Chandrasekhar, Charul Gupta, APR 2018, "Numerical investigations on effect of dissimilar inlet velocities on mixing performance of a passive T-micromixer" International Conference on Thermal Analysis and Energy Systems.

S. Chandrasekhar, V. R. K. Raju*, V. P. Chandramohan, T Manoj Dundi, Charul Gupta, APR 2018, "Effect of channel confluence angle on Magnetohydrodynamic mixing performance", International Conference on Thermal Analysis and Energy Systems.

Srikanth Korla, Naresh Kali, Sandeep Pathak, Effect on vibration characteristics of fiber metal laminates sandwiched with natural fibers, IMMT 2019, BITS Pilani -Dubai campus (Accepted)

K.Manoj,S.Korla, and V. Narayanamurthy, Experimental studies of vibration energy harvester subjected to harmonic and random excitation, INCAM 2019 Conference, 3-5 July 2019, IISc Bangalore.

Kamepalli Anjaneyulu, Gudipadu Venkatesh," A Review on Experimental Investigation of Magnetic Abrasive Finishing process". ICRAMMT, 2019, International conference

MECHANICAL ENGINEERING

V. K. Manupati, Siddharth Madan, Somnath Lahiri, Jayakrishna Kandasamy A novel framework and effective scheduling of cross-docking center for multi-objective truck Scheduling Problem. 2018 International Conference on Production and Operations Management Society,(POMS),Srilanka..

V.K.Manupati et al., (2018) ModellingSustainable Manufacturing practices for plastic part manufacturing organization using Interpretive Structural Modeling, IEEEXplore, POMS, Srilanka.

A.V. Borgaonkar, S. Ismail, (2019), Effect of Temperature on the Tribological Performance of MoS2-TiO2 Coating Material, 1st International Conference on Applied Mechanical Engineering Research (IC-AMER2019), NIT Warangal, Telangana, India during May 2-4, 2019.

K. Balasubramaniam, R. Nishanth, and P. Suresh Ultrasonic Waveguide Sensors for Measurements in Process Industries, IEEE Sensors 2019, Delhi, India

K. Balasubramaniam, R. Nishanth, and P. SureshUltrasonic waveguide-based liquid Level Measurement using Flexural mode F(1,1). 1st International Conference on Applied Mechanical Engineering Research (ICAMER2019), NITW, 2019.

Abhishek Kumar, S Ismail, P. Suresh., Development of neem oil based biodiesel and study of its impact on tribological characteristics Advanced Functional Materials and Devices (ICAFMD – 2019),NITW

M. Kameswara Reddy,V. Suresh Babu, K. V. Sai Srinadh, Z Shanti Kiran, "An overview on effect of POSS Nanoparticles on the Mechanical Properties of Epoxy resin", International Conference On Smart Engineering Materials (ICSEM 2016), R V college of engineering, Bangalore.

Syam Kumar Chokka, B. Satish Ben, K V S Srinadh; Influence of CFRP configuration and adhesive layer thickness on adhesive bonding of SS plates using CFRP Patch- Numerical Analysis ; ICAFMD-2019, NIT Warangal, India.

Suresh G, N.Selvaraj,Kanmani Subbu, C.S.P.Rao,.Experimental investigation and mathematical modelling for material removal and tool wear in making of rectangular channels by electric discharge maching (EDM) on alumium – Boron carbide composite sintered preform, Ist International conference on applied mechanical engineering research, NIT, Warangal, 2-4 May 2019

Suresh G, N.Selvaraj,Kanmani subbu,V.K.Patel, C.S.P.Rao FEA based electro thermal modeling of die sinker electro discharge machining (EDM) of Aluminum alloy AA6061, International conference on numerical optimization in engineering and sciences (NOIEAS),NIT Warangal, 19-21, June 2019.

P.Madhukar,N.Selvaraj,C.S.P.Rao, Process optimization of digital conjugate surfaces: A review, International conference on numerical optimization in engineering and sciences (NOIEAS),NIT Warangal, 19-21, June 2019.

Murahari Kolli, Adepu Kumar, 'Parametric Optimization of Electrical Discharge Grinding on Ti-6Al-4V Alloy using Response Surface Methodology' 1st International Conference on Applied Mechanical Engineering Research, NIT Warangal, May 2-4 2019.

Funded Research projects

Vamsi Krishna P doing a project on National Centre for Development of Advanced Materials and Manufacturing Processes for Clean Coal Technologies for Power Applications through DST & ARCI

Vamsi Krishna P doing a project on Vibration Assisted Turning for Improving Fatigue Life of Ti6Al4V Aerospace Components Funding agency and scheme: DST- AMT, level-1

G Venkatesh doing a project on Manufacturing of Advanced Materials using Microwave Hybrid Heatin, RSM grant, NIT Warangal

A.Kumar and K.V.Sai Srinadh are doing an ongoing project on Investigation of interfacial interaction and grain structure development in friction stir welds for dissimilar joining of high strength aluminum to titanium alloys (10.40 Lakhs), India-Belarus Joint Project- June 2019 (Ongoing)

P Suresh is doing a project on Ultrasonic Sensors Designand Development for Industrial Application funded by NIT Warangal

Vijay Kumar M doing a project on DST - Science and Engineering Research Board (ECR)

Srikanth k doing a project on Modelling and simulation of energy harvesting using piezo materials and super capacitors, DRDO grant

MECHANICAL ENGINEERING

Conferences organized

Harikumar V,Kiran Kumar K, and Vamsi Krishna P has organized 1st International Conference on Applied Mechanical Engineering Research(ICAMER2019) 2nd - 4th May 2019

MJ Davidson, B. Satish Ben and D. Jayakrishna has organized National Conference on Emerging Trends in Mechanical Engineering from 2nd-4th MAY 2019

Srikanth K as acted as Joint Secretary, International Conference on "Emerging Trends in Mechanical Engineering (ETME 2019)", NIT Warangal

Workshops organized

R Narashimaha Rao has organized 5days workshop on Mechanical and Tribological Behavior of Advanced Composites (MTBAC-2019) from 21st – 25th Jan 2019

P S C Bose organized a 5days workshop on Advances in Electro Mechanical Engineering in Steel Making from 21-01-2019 to 25-01-2019. And from 22-04-2019 to 26-04-2019

P S C Bose, Vijay Kumar M organized a 5days workshop on New Frontiers of Mechanical Engineering Applications in Steel Making from 11-02-2019 to 15-02-2019

Vijay Kumar M is Coordinator for One-week FDP on "AI, ML and Block Chain Technology in Production and Supply Chain Management", April 25th to 30th, by E & ICT and Mechanical Engineering Department at NIT Warangal.

V Vasu organized a 5day workshop on ICT strategies for hybrid Vehicles Feb 27 to 3 March 2019.

V Vasu organized a 5day workshop on ICT Tools in Advanced Manufacturing Engineering from May 27 to 1stJune 2019 he also organized a 5day workshop on NKN Sponsored Workshop on " Robotics and AI" from 24th to 28th June 2019.

GIAN Courses Organized

V. Suresh Babu and B. Satish Ben organized a six days GIAN course on Lightweight Technologies for Automotive Applications from 24th - 29th June 2019

P S C Bose organized a 5days GIAN course on Precision Manufacturing from 18-03-2019 to 22-03-2019

V Vasu organized a GIAN course on Mechatronics and Product Designfrom 16th to 20th Dec 2019.

G Raghavendra, Ismail Syed, and B Satish Benare organized a 6-day GIAN Course on Development, Mechanical Characterization, and Applications of Advanced Composites"-2018.

M J Davidson organized A five day GIAN course on Hybrid Additive Manufacturing Viewed from Materials Science: Fundamentals and State of the Art 3rd April 2019 to 7th April 2019

N Selvaraj organized A five day GIAN course on Precision manufacturing18th – 22nd March 2019

SPARC Project Sanctioned

Dr. Naga Srinivasulu G, Prof. S. S Rao,Dr.V Vasu, Experimental Investigations on different Geometrical shapes of Passive Direct Methanol Fuel cell stacks for Low Power Applications, Project Code: P772, Proposal-Id :772

Dr.Narasimha Rao R, Dr. S. Ismail: Insight Development on Tribological Response of Hybrid Aluminum Based Nanocomposites for Transportation sector.Project Code :P1393, Proposal-Id : 1393

Dr. Naga Srinivasulu G, Prof. S S Rao Dr. G Amba Prasad Rao Dr. V R Khana Raju: Simulation and experimental evaluation of dual fuel Homogeneous ChargeCompression Ignition Engine by using reactivity fuels. Project Code :P773, Proposal-Id : 773

Dr.K. Balasubramanian, Dr. Kiran Kumar Kupireddi, Dr.Chandramohan V P, Thermal Management of Green Data Centers.Project Code :P811, Proposal-Id : 811

Books and Book Chapters

V Vasu published a Text Book on Theoretical analysis of compact heat exchanger using Nanofluids, LAMBERT Academic Publishing, 2018

V.K. Manupati, Goran Putnik, M.L.R.Varela, Jaya Krishna.K, Handbook of Research on "Emerging applications in Supply Chains for Sustainable Business Development", IGI Global Publication, 2018.

Guest Editorial Publication

V.P. Chandramohan, Prabal Talukdar (2018), Selected Papers from 1st International and 18th National ISME Conference on Enabling Sustainable Development,

Heat Transfer Engineering, Taylor & Francis, Guest Editorial, DOI: 10.1080/01457632.2018.1546652.

Book Chapter

G. Venkatesh, Chapter:7 – "Abrasive flow machining," Modern Machining Processes, Page no 111-124-ANE Publications

V Vasupublished A Chapter "Application of Nanofluids:A Review " in Vol. 2 titled "Nano properties" of the 8 Vol. set of Nanotechnology. Studium Press Ltd, Houston, TX, USA.

Ravichandra D., Puli R.K., Chandramohan V. (2019) Production and Comparison of Fuel Properties for Various Biodiesels. In: Chandrasekhar U., Yang LJ., Gowthaman S. (eds) Innovative Design, Analysis and Development Practices in Aerospace and Automotive Engineering (I-DAD 2018). Lecture Notes in Mechanical Engineering. Springer, Singapore, 267-276, 21 Dec. 2018. DOI: 10.1007/978-981-13-2718-6_25.

Syam Kumar Chokka, Beera Satish Ben and Kowtha Venkata Sai Srinadh Overhauling of Steel "Pipes Using Vacuum Bagging Processed CFRP Patch" DOI:http://dx.doi.org/10.5772/intechopen.87074ww

Shakuntala O., Raghavendra G., Acharya S.K. (2018) Characterization of Wood Apple Shell Particles. In: Kumar S., Sani R., Yadav Y. (eds) Conference Proceedings of the Second International Conference on Recent Advances in Bioenergy Research. Springer Proceedings in Energy. Springer, Singapore.

Awards/Prizes/Recognitions/ Achievements

P Suresh received Keshav-Rangnath Excellence Research Award Certificate and Rs 50,000 for the year 2018 at IIT Madras. Award received in August 2018.

T.K. Saksena Memorial Award -2018 certificate and Rs 5,000 for the Best Ph.D. Thesis Award from CSIR, NPL – Ultrasonic Society of India, Delhi. Award received in November 2018.

Vijay Kumar M Received Young Engineer Award from IEI 2018 for Industrial Engineering division..Institution of Engineers (India),

Raghavendra G Awarded as YOUNG ENGINEER OF THE YEAR AWARD – 2018 by Telangana State and the Institution of Engineers (India),

Raghavendra G got the Best paper Award for paper. Effect of Eggshell particulate reinforcement on Tensile Behavior of Eggshell-Epoxy Composite. ICIPDIMS, May -2019 NIT Rourkela

A KumarAwarded 2018 IIM SAIL Gold medal (Certificate of Merit) as one of the co-authors of the Technical Paper published in Transactions of the Indian Institute of Metal

State of the art Laboratories / Equipment

B . Satish Ben purchased one equipment named "High Speed Camera" under the SERB-ECR Research Project

V PChandra Mohan developed the following setups Indirect type of solar dryer (ITSD),Solar updraft tower (SUT) powerplant,Hot air oven,Freezedryer

P Suresh developed theA multi-channel Temperature measurement systemPico Scope for interfacing the ultrasonic instruments with computer and analyzing the data. Pulsar Receiver used (DSR) for transmitting and receiving the ultrasonic signals in the fluids and solids Conventional ultrasonic transducers are using for this testing.Software developed for on-line data collection and analysis.

Students achievements in national / International events

G Venkatesh students team got best static event award in international Go-kart championship in LPU in march-2019

Raghavendra G students got the Best Paper Award for paper. Effect of Eggshell particulate reinforcement onTensile Behavior of Eggshell-Epoxy Composite. ICIPDIMS, May -2019 NIT Rourkela

Manoj Panchal, G. Raghavendra. Preparation and Characterization of Layered Chitosan from Crab Shells. ICAFMD-2019 physics department, NIT Warangal.

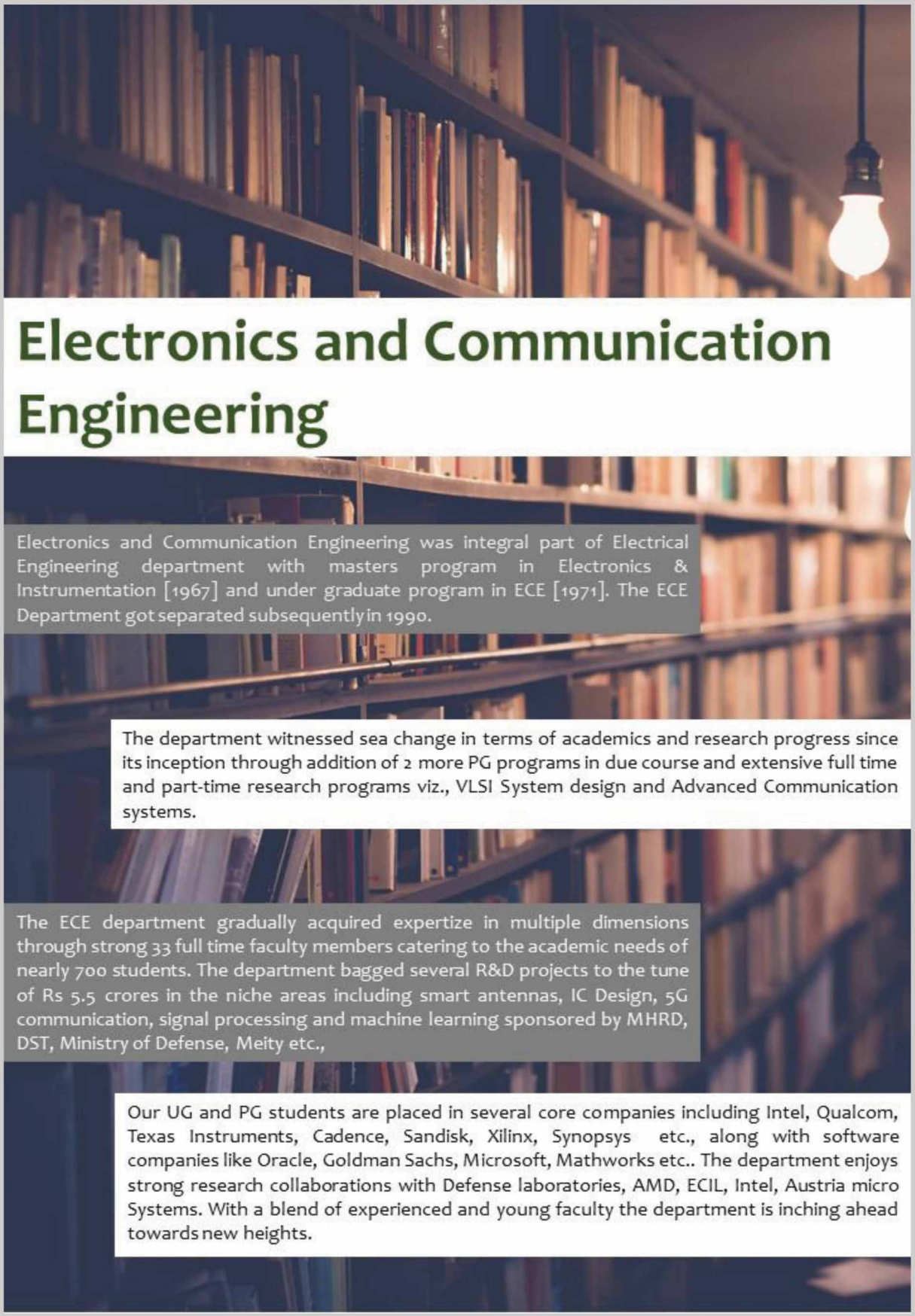
Special Equipment

LASER ASSISTED MACHINING SYSTEM

Specifications
CNC Lathe
Laser Unit Comprising of
(a) Laser head & lamp power
(b) Chiller/cooler
Laser Operated Software
Safety and Other Installation

SOLAR UPDRAFT TOWER

Specifications
The diameter of absorber plate, collector cover angle and inlet gap as 3.5 m, 30° and 0.1 m respectively. The height and diameter of chimney as 6 m and 0.6 m.



Electronics and Communication Engineering

Electronics and Communication Engineering was integral part of Electrical Engineering department with masters program in Electronics & Instrumentation [1967] and under graduate program in ECE [1971]. The ECE Department got separated subsequently in 1990.

The department witnessed sea change in terms of academics and research progress since its inception through addition of 2 more PG programs in due course and extensive full time and part-time research programs viz., VLSI System design and Advanced Communication systems.

The ECE department gradually acquired expertize in multiple dimensions through strong 33 full time faculty members catering to the academic needs of nearly 700 students. The department bagged several R&D projects to the tune of Rs 5.5 crores in the niche areas including smart antennas, IC Design, 5G communication, signal processing and machine learning sponsored by MHRD, DST, Ministry of Defense, Meity etc.,

Our UG and PG students are placed in several core companies including Intel, Qualcom, Texas Instruments, Cadence, Sandisk, Xilinx, Synopsys etc., along with software companies like Oracle, Goldman Sachs, Microsoft, Mathworks etc.. The department enjoys strong research collaborations with Defense laboratories, AMD, ECIL, Intel, Austria micro Systems. With a blend of experienced and young faculty the department is inching ahead towards new heights.

Faculty

Prof. N Bheema Rao
Ph.D – IIT Bombay
Professor and Head
Research Areas: Design and Modelling of On-chip Inductors for RF applications and Device modeling.

Prof. Narasimha Sarma
Ph.D – IIT Kharagpur Professor (HAG)
Research Areas: Numerical Electromagnetics, ANNs and Wireless Sensor Networks, Antennas.

Prof. T Kishore Kumar
Ph.D – JNTU
Professor
Research Areas: Speech, Adaptive, Radar, Real Signal Processing; VLSI & Embedded Systems

Prof. Anjaneyulu L
Ph.D – NIT Warangal
Professor
Research Areas: Signal & Image Processing, Antennas, Underwater communications & instrumentation,

Prof. C B Rama Rao
Ph.D – IIT Kharagpur Professor
Research Areas: Digital and Adaptive Signal Processing, DSP Architectures & Algorithms.

Sri. Raghunath M V

Associate Professor
Research Areas: Image Processing; Communication Systems

Sri. Kodali Ravi Kishore

Associate Professor
Research Areas: Wireless Sensor & Computer Networks, Digital System Design, Wireless Communications

Sri. K L V Sai Prakash Sakuru
Associate Professor
Research Areas: Sensors and IoT Networks, Mobile Networks, Green Communications.

Sri. P Harikrishna Prasad

Associate Professor
Research Areas: Wireless Communications

Dr. Lakshmi B
Ph.D – IIT Kharagpur
Associate Professor
Research Areas: IoT, VLSI Architectures, Embedded System Design, FPGA Design, Low Power VLSI design

Sri. K V Sridhar

Associate Professor
Research Areas: Bio-medical signal/ Image Processing, Adaptive Signal Processing

Dr. Hanumanth Rao T V K
Ph.D – Anna University
Associate Professor
Research Areas: Biomedical signal processing and VLSI

Faculty

Dr. P Srihari Rao
Ph.D – NIT Warangal
Associate Professor
Research Areas: Analog/ Mixed Signal/ RF IC Design, Communication Systems, Smart Sensors

Dr. A Prakasa Rao
Ph.D – NIT Warangal Associate Professor
Research Areas: Smart Antenna Systems, Optimization Techniques, and Signals and Systems.

Dr. P Muralidhar
Ph.D – NIT Warangal
Associate Professor
Research Areas: Embedded Systems& FPGA based Design, VLSI Architectures for Video Signal Processing Algorithms

Dr. D Vakula
Ph.D – NIT Warangal
Associate Professor
Research Areas: Antenna Arrays, & Fault Diagnosis; Multi-function & Ultra Wide Band Antennas,ANN

Dr. V Venkata Mani
Ph.D – IIT Delhi Associate Professor
Research Areas: Signal Processing for wireless communication,MIMO, OFDM, UWB & Green Communication

Dr. Ravi Kumar Jatoth
Ph.D – NIT Warangal
Associate Professor
Research Areas: Signal Processing AlgorithmsNature Inspired AlgorithmsSignal Conditioning Circuits

Dr. S. Anuradha
Ph.D – Andhra University
Associate Professor
Research Areas: Wireless and Mobile communications, Coding Techniques, Fading Channels, Cognitive Radios

Smt. P Prithvi

Assistant Professor
Research Areas: Speech Processing

Smt. V Rama

Assistant Professor
Research Areas: Bio-medical Signal Processing, Artificial Neural Networks, Digital Logic Design

Sri. K Sarangam

Assistant Professor
Research Areas: VLSI Circuit Design, low power design, novel device

Dr. Kalpana Naidu
Ph.D – IIT Hyderabad
Assistant Professor
Research Areas: Resource Allocation for Heterogeneous Networks and 5G; Wireless Networks

Dr. G Arun Kumar
Ph.D – Jadavpur University
Assistant Professor
Research Areas: Microwave and Millimeter wave passive, active circuits – front end design, filters and antennas.

Faculty

Dr. Atul Kumar Nishad
Ph.D – IIT Ropar
Assistant Professor
Research Areas: Nanoscale Interconnects and Devices, 2D materials, VLSI Circuit Design, Spintronics

Dr. V Narendar
Ph.D – MNNIT Allahabad
Assistant Professor
Research Areas: Modelling & Simulation of Semiconductor Devices, CNT & 2D material based devices, VLSI Circuits

Dr. Himansu S Pradhan
Ph.D – IIT Bhubneswar
Assistant Professor
Research Areas: Fiber Optic Sensors, Optical Signal Processing & Communication, Structural Health Monitoring

Dr. Rahul J Pandya
Ph.D – IIT Delhi
Assistant Professor
Research Areas: Optical Communication & Networks, IoT, Machine Learning & Artificial Intelligence

Dr. Gopi Ram
Ph.D – NIT Durgapur Assistant Professor
Research Areas: Time-Modulated Antenna Array Structures; Evolutionary Optimization Techniques.

Dr. K N Srinivasarao B
Ph.D – IIT Kharagpur
Assistant Professor
Research Areas: VLSI architectures for image and video processing, Embedded systems design.

Dr. M Farukh Hashmi
Ph.D – VNIT Nagpur
Assistant Professor
Research Areas: Image Processing & Embedded Systems, IoT, Machine Learning, RTOS

Dr. Maheshwaram Satish
Ph.D – IIT Roorkee
Assistant Professor
Research Areas: Novel devices design, Compact modeling, Design of embedded/IoT systems

Dr. K Prakash
Ph.D – IISc Bangalore
Assistant Professor
Research Areas: Flexible Electronics, Embedded Systems & VLSI, Biomedical Electronics.

ELECTRONICS & COMMUNICATION ENGINEERING

Publications (in peer reviewed journals)

S. Rebelli and B. R. Nistala, "A Multiresolution Time Domain (MRTD) Method for Crosstalk Noise Modeling of CMOS-Gate-Driven Coupled MWCNT Interconnects," in IEEE Transactions on Electromagnetic Compatibility, 2019.

S. R. Suddapalli and B. R. Nistala, "A center-potential-based threshold voltage model for a graded-channel dual material double-gate strained-Si MOSFET with interface charges," Journal of Computational Electronics, 2019.

Surekha Reddy Bandela, T Kishore Kumar, "Speech emotion recognition using semi-NMF feature optimization," Turkish Journal of Electrical Engineering and Computer Science, 2019.

Rakesh Pogula, Kishore Kumar T, Felix Albu, "Robust Sparse Normalized LMAT algorithms for Adaptive System Identification under Impulsive Noise Environments" Circuits, Systems and Signal Processing, 2019.

Sudeep Surendran, T. Kishore Kumar, "Oblique Projection and Cepstral Subtraction in Signal Subspace Speech Enhancement for Colored Noise reduction", IEEE/ACM Transactions on Audio, Speech and language processing, Vol. 26, No.12, PP: 2328-2340, 2018.

Arunkumar and L. Anjaneyulu, Data analysis and validation of acquired temperature data on underwater platform Defence Science Journal Vol 68, No.6, pp.597-603, 2018.

P. Hari Krishna Prasad and L. Anjaneyulu, Time Domain Auto Pulse Shaping Operation, IETE Journal of Education, 59:2, 62-69, 2018.

Ch. Sulakshana, Keshav Dahal, L. Anjaneyulu, and Wenbing Chen, "A CPW fed T-shaped Reconfigurable Antenna for multi radio applications", Applied Computational Electromagnetics Society, Vol. 33, no. 11, pp. 1276-1285, 2018.

Dasari, K. and Lokam, A., "Exploring the Capability of Compact Polarimetry (Hybrid Pol) C Band RISAT-1 Data for Land Cover Classification" IEEE Access, 6, pp.57981-57993, 2018.

D. Kiran, L. Anjaneyulu, "Comparison of SVM classifier and Wishart Classifier on L- Band ALOS-Palsar-2 data over Metropolitan Area" International Journal of Engineering and Technology (UAE) (ISSN: 2227-524X), 2018.

D. Kiran, L. Anjaneyulu, "Exploring the capability of C- band SENTINEL 1B data for Land cover classification water body mapping and oil spill detection" Journal of Advance Research in Dynamical and Control Systems (JARDCS) (ISSN: 1943-023X), 2018.

P. Hari Krishna Prasad and L. Anjaneyulu," Time domain Auto Pulse Shaping operation", IETE Journal of Education, Vol. 59, No. 2, pp 52-69, 2018.

Ratikanta Sahoo and D. Vakula, "Compact metamaterial inspired conformal dual-band antenna loaded with meander lines and fractal shaped inductor for Wi-Fi and WiMAX applications," IET Microwaves, Antennas & Propagation, 2018.

Ratikanta Sahoo, DameraVakula. "Gain enhancement of conformal wideband antenna with parasitic elements and low index metamaterial for WiMAX application," AEU-International Journal of Electronics and Communications, 105, pp. 24-35, 2019.

Ratikanta Sahoo, DameraVakula." Bow-tie-shaped wideband conformal antenna with wide-slot for GPS application". Turkish Journal of Electrical Engineering & Computer Sciences, vol. 27, no. 1, pp.80-93, 2019.

Ratikanta Sahoo, DameraVakula, and NVSN Sarma, "Printed Cross-Slot Wideband Conformal Antenna for GPS Application," Applied Computational Electromagnetics Society Journal; Vol. 33, No. 10, pp.1175–1181, 2019.

Sairam, Chandana, DameraVakula, and MadaChakravarthy. "Design of Broadband Compact Canonical Tetra Sleeve Cage Antenna Covering UHF Band." Progress InElectromagnetics Research 85, pp.81-89, 2019.

Singha, Rahul, and VakulaDamera, "Artificial Material Integrated Ultra-wideband Tapered

Slot Antenna for Gain Enhancement with Band Notch Characteristics Artificial Material Integrated Ultra-wideband Tapered Slot Antenna for Gain Enhancement with Band Notch Characteristics", Vol. 27.1, pp.55, 2018

Singha, Rahul, and D. Vakula, "Gain enhancement of the ultra-wideband tapered slot antenna using broadband gradient refractive index metamaterial", International Journal of RF and Microwave Computer-Aided Engineering,Vol. 28(2), pp.e21191, 2018

VVM, S P Valluri "A novel approach for reducing complexity in the SLM-GFDM system Physical Communication", Vol.34, pp.188-195, 2019.

SP Valluri, VV Mani "Investigation of blind CFO estimation for GFDM system using universal software radio peripheral: theory, simulations and experiments", IET Communications, 2019.

V Kishore, VV Mani, "A dc biased optical generalised frequency division multiplexing for im/dd systems Physical Communication",Vol.33,pp.115-122, 2019.

S Vappangi, VV Mani "Concurrent illumination and communication: A survey on Visible Light Communication", Physical Communication,Vol.33,pp.90-114, 2019

S Vappangi, VV Mani "Effects of frequency and timing offsets in DCT-based multiple access system for VLC Optics Communications", Vol.435,pp.297-310, 2019

V Kishore, VV Mani, "An LED modelled GFDM for optical wireless communicationsAEU-International Journal of Electronics and Communications", Vol.101,pp.54-61, 2019

SK Bandari, VV Mani, A Drosopoulos "Novel hybrid PAPR reduction schemes for the MGFDM systemPhysical Communication", Vol.31,pp.69-78, 2018

S Vappangi, VV Mani "Performance analysis of DST-based Intensity modulated/direct detection (IM/DD) systems for VLC", IEEE Sensors Journal, 2018

S Vappangi, VV Mani "A low PAPR multicarrier and multiple access schemes for VLC", Optics Communications,Vol.425,pp.121-132, 2018

S Valluri, VV Mani "Joint channel mitigation and side information estimation for GFDM systems in indoor environments", AEU-International Journal of Electronics and Communications,Vol.95,pp.146-154, 2018

J Bhookya, Ravi Kumar Jatoth "PID Controller Design for Decentralized Tito Process Using Modified Differential Evolution Algorithm". Journal of Control and Intelligent Systems 2019.

J Bhookya, Ravi Kumar Jatoth "Performance Comparison of Optimal PID Controller Design for TITO System". Journal of Engineering and Applied Sciences, Vol: 13 Issue: 3 pp. 3330-3336, 2018.

S. Anuradha, K. ShriRamtej, "Performance Analysis of Hybrid PAPR Reduction for LTE Uplink Communications", Physical Communication,Vol. 29, pp.103-111, 2018

Kalpana and Ramesh Babu "Quick resource allocation in Heterogeneous Networks," in Wireless Networks, Springer Journal, vol.24, Issue.8, pp. 3171-3188, 2018.

Kalpana and Ramesh Babu "Swift resource allocation in wireless networks," IEEE Transactions on Vehicular Technology vol.67, Issue. 7, pp. 5965-5979, 2018.

Kalpana and Ramesh Babu, "Quicker solution to reduce interference in wireless networks," in IET communications", vol. 12, Issue. 14, pp. 1661-1670, 2018.

G. Arun Kumar, S. Mondal, Bijit Biswas, and D. R. Poddar,"A Broadband Millimeter wave Waveguide Window: A Low Cost Design for Environmental Protection", IEEE Transactions on Microwave Theory and Techniques, Vol. 66, No.10, pp.4540-4547, 2018.

VadthiyaNarendar, S. K. Gupta and S Saxena"First Principle Study of Doped Graphene for FET Applications" Silicon Journal Vol. 11, Issue.1, pp. 277-286, 2019.

Gopi Ram, D. Mandal, R. Kar, S. P. Ghoshal, "Pattern Synthesis and Broad Nulling Optimization of STMLAA with EM Simulation," International Journal of

Numerical Modelling: Electronic Networks, Devices and Fields, Vol. 31, Issue 5, 2018.

Tiwari, V., Hashmi, M.F., Keskar, A. G. and Shivaprakash, Speaker identification using multi-modal i-vector approach for varying length speech in voice interactive systems. Cognitive Systems Research, Elsevier 2018.

Hashmi, M.F.,Vinay Kumar, V., Kene, J. D. and Keskar, A. G. A Parallel Computing Framework for Object Detection and Tracking in High Resolution Video Surveillance using GPU. Cluster Computing, 2018.

Singh, D. N., Sharma, S. K., Hashmi, M. F. Optimized And Secured IOT Enabled Health Monitoring and Diagnosis System: Comprehensive Review. Journal of Engineering and Applied Sciences.

Hashmi, M.F. and Keskar, A.G. Fast and Robust Copy Move Forgery Detection Using Wavelet Transforms and SURF. The International Arab Journal of Information Technology, 16(3), 2019.

Tiwari, V., Hashmi, M.F., Keskar, A. G. and Shivaprakash,Virtual Home Assistant for Voice Based Controlling and Scheduling with Short Speech Speaker Identification. Multimedia Tools and Applications, Springer, 2018.

Publications (in peer reviewed conferences)

S. Siva Priyanka and T. Kishore Kumar, "GSC Adaptive Beam forming Using Fast NLMS algorithm for Speech Enhancement", 3rd International Conference on Imaging, Signal Processing and Communication (ICISPC 2019), July 27-29, 2019 in NTU Singapore.

S. Siva Priyanka and T. Kishore Kumar, "GSC Beam forming using Different Adaptive Algorithms for Speech Enhancement", has been accepted in 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), IIT Kanpur, July 6-8 2019, India.

Rakesh and T. Kishore Kumar, "Modified Least-Mean Mixed - Norm Algorithms for

Adaptive Sparse System Identification under Impulsive Noise Environment" 2019 42nd

International Conference on Telecommunications and Signal Processing (TSP) in Budapest, Hungary, July 1-3, 2019.

Sunil Kumar Koduri and Prof. T. Kishore Kumar, "Speech Bandwidth Extension Aided By Hybrid Model Transform Domain Data Hiding" IEEE International Symposium on circuits and systems (ISCAS 2019), DOI:10.1109/ISCAS.2019.8702323, Sapporo, Japan, 26-29 May 2019.

Surekha Reddy B and T. Kishore Kumar, " Emotion Recognition of Stressed Speech using Teager Energy and Linear Prediction Features ", 18th International Conference on Advanced Learning Technologies (ICALT), IIT Bombay, July 9-13, 2018.

Pranitha, B. and Anjaneyulu, L., 2019. Assessment of UWAC System Performance Using FBMC Technique. In Recent Trends in Signal and Image Processing (pp. 53-62). Springer, Singapore.

SulakshanaChilukuri, Pandu Rangaiah Y, KeshavDahal and AnjaneyuluLokam, "A Multi-Band Frequency and Pattern Reconfigurable Antenna for Wi-Fi/WiMAX and WLAN applications", 9th International Conference on Mechanical and Aerospace Engineering IEEE, Budapest, Hungary, July 10-13, 2018.

Pranitha, B., Le Minh, H., Aslam, N., Anjaneyulu, L. and Vangala, S., 2018, July. BER Performance Investigation of MIMO Underwater Acoustic Communications. In 2018 11th International Symposium on Communication Systems, Networks & Digital Signal Processing (CSNDSP) (pp. 1-5). IEEE

D. Kiran, Dr. L.Anjaneyulu (2019) "The Significance of transmitting a circular polarized component over a linear polarized component of RISAT-1 data for Land cover Classification" POLinSAR Conference ESA, Italy.

Valupadasu, Rama, and Butchi Rama Rao Chunduri. "Automatic Classification of

Cardiac Disorders Using MLP Algorithm." In 2019 Prognostics and System Health Management Conference (PHM-Paris), pp. 253-257. IEEE, 2019.

Valupadasu, Rama, Butchi Rama Rao Chunduri and Bharath Kumar . "Detection Of Malignant Tumor Using Wavelet decomposition And Artificial Intelligence." In PHM 2019 International Conference in Paris, France, ID: 88.

M.BikromjitKhumancha ,AartiBaraiy, C.B. Rama Raoz ."Lung Cancer Detection from Computed Tomography (CT) Scans using Convolutional Neural Network."

M.V. Raghunadh, Dr. N. Bheema Rao, " High Performance double split series stacked multilayer On-chip Inductor for 5G applications", International Conference OWT 2019, MNIT, Jaipur, 25-27 March 2019

Raghunadh M V, RadhaRevathiNeelima Singh Gullapalli, Harshali R Jagtap, " Design and simulation of LTE prototype filter for filter bank multicarrier(FBMC) system", International Conference On Computing, Power And Communication Technologies (GUCON 2019), 27-29 Sept 2019

Prasad, R. H., Vakula, D., &Chakravarthy, M. (2018, December). A Novel Fractal Slot DGS Microstrip Antenna for Wi-Fi Application. In 2018 IEEE Indian Conference on Antennas and Propogation (InCAP) (pp. 1-4). IEEE.

S Vappangi, VV Mani," A Power efficient DST-based multicarrier and multiple access systems for VLC", 2018 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), pp.1-6,Dec 2018,

S Vappangi, VV Mani, "A Low PAPR DST-based optical OFDM (OOFDM) for Visible Light Communication", 2018 21st International Symposium on Wireless Personal Multimedia Communications (WPMC), pp.200-205, Nov 2018.

S Vappangi, VV Mani," Interference Analysis in DCT-Based Multiple Access System for VLC", 2018 21st International Symposium on Wireless Personal Multimedia Communications (WPMC), pp.550-555,Nov 2018.

SP Valluri, VV Mani," Receiver design for UW-GFDM systems", 2018 21st International Symposium on Wireless Personal Multimedia Communications (WPMC), pp.588-593, Nov 2018.

VV Mani, "Demonstration of effect of oversampling on jitter removal for Multitaper GFDM system using SDR", 2018 International Conference on Advanced Technologies for Communications (ATC),pp.115-119,Oct 2018

JailsinghBhookya, RavikumarJatoth "Fractional Order PID Controller design for Multivariable Systems using TLBO" 2019 International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2019) at NIT Warangal

Soma, Prathap, and Ravi Kumar Jatoth. "Hardware Implementation Issues on Image Processing Algorithms." 2018 4th International Conference on Computing Communication and Automation (ICCCA). IEEE, 2018 at Galgotias University, New Delhi.

Prathap Soma, Ravi Kumar Jatoth and HathiramNenavath "Implementation of Single Image Dehazing System on DSP TMS320C6748 Processor" attended International Conference on Soft Computing: Theories and Applications 2018 on December 21-23 at NIT Jalandhar.

S.Anuradha, Rahul gupta," A direct sequence spread spectrum Transceiver with enhanced security using chaotic and gold sequence", ICCCNT 2018, July 10-12, pp. 1 - 6, IISc Bangalore.

S.Anuradha, D.Srikar," A compact Super wide band antenna for wireless communications", ICCCNT 2018, July 10-12, pp. 1 - 4, IISc Bangalore.

S.Anuradha, K.ShriRamtej," PAPR reduction in LTE uplink Communications by Airy companding Transform", ICCCNT,2018, July 10-12, pp. 1 - 5, IISc Bangalore.

Anuradha, Ch.Vijayadurga " On channel estimation in Universal Filtered multicarrier

system" 41st International conference on PIERS, Rome , June 17- 20, 2019

Anuradha, D.Srikar "A Compact 3 Port Integrated Wide Band Sensing Antenna and Narrow Band Antennas for Cognitive Radio Applications"" 41st International conference on PIERS, Rome , June 17- 20,2019

R. J. Pandya, Ravi Goyal, and Rupam Kumar Kundu, "Fault-Tolerant and Medium Access Control (FTMAC) protocol for IoT over VLC", International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW), Thrichy, pp.1-5, May 2019.

S.Anuradha, D.Srikar "A Low profile and compact UWB Antenna for Wireless Communication Applications"" IMICPW-2019,NIT Trichy, May 22-24.(IEEEXplore)

S.Anuradha, SaisahityaKasa, ManojnaKaturi, MHarshaVardhan "Performance Analysis of Generalized Frequency Division Multiplexing in Cognitive Radio Under Fading Channels" IMICPW-2019,NIT Trichy, May 22-24. (IEEEXplore)

S.Anuradha, M.Ranjeeth, "Throughput Analysis in Cooperative Spectrum Sensing Network using an Improved Energy Detector", 21st International Conference on Advanced Communication Technology (ICACT), Feb. 17-20 2019, South Korea (IEEEXplore).(Best paper award)

S.Anuradha, DMallikarjuna Reddy, A.Swarnabai "A Novel space based AIS receiver architecture for maritime surveillance" International Conference on Small Satellites ICSS-2019, Feb7-9.(Springer)

Tanuja Das, Bijit Biswas, and G. Arun Kumar, " Design of a H-plane Waveguide Narrow bandpass filter with sharp roll-off at Ka-band", 2018 IEEE International Microwave and RF Conference (IMaRC), November, 28-30, Kolkata, India.

Bijit Biswas, G. Arun Kumar, and D. R. Poddar, "A U-band Power Efficient MMIC Frequency Tripler with Integrated Output Amplifier," 2018 IEEE International Microwave and RF Conference (IMaRC), November, 28-30, Kolkata, India.

Souma GuhaMallick, G. Arun Kumar, Sayan Chatterjee, Bijit Biswas, D. R. Poddar, "Transitions from SIW to Various Transmission Lines for Substrate Integrated Circuits," 2019 URSI-Asia Pacific Radio Science Conference, March, 09-15, New Delhi, India.

Monika Gangwar and Atul Kumar Nishad,"Design and simulation of modified ultra low power CMOS Comparator for Sigma Delta Modulator" Second International Conference on Intelligent Computing and Control Systems (ICICCS 2018), IEEE Xplore Compliant Part Number: CFP18K74-ART; ISBN:978-1-5386-2842-3, pp:1425-1427, Jun 2018.

Jyoti Rani and Atul Kumar Nishad, "A Novel Approach to Design Low Power Self Repairing Full Adder Circuit" Second International Conference on Intelligent Computing and Control Systems (ICICCS 2018),IEEEXplore Compliant Part Number: CFP18K74-ART; ISBN:978-1-5386-2842-3, pp: 1215-1219, Jun 2018.

Jyoti Rani and Atul Kumar Nishad, "A Novel Approach to Design Low Power and High Speed Self-Repairing Full Adder Circuit" Second International Conference on Intelligent Computing and Control Systems (ICICCS 2018), IEEE Xplore Compliant Part Number: CFP18K74-ART; ISBN:978-1-5386-2842-3, pp: 1938-1942, Jun 2018.

VadthiyaNarendar, Shrey and Naresh Kumar Reddy B., "Performance Enhancement of Multi-Gate MOSFETs Using Gate Dielectric Engineering", GUCON 2018: IEEE International Conference On Computing, Power And Communication Technologies, September 28-29, 2018, Greater Noida, Uttar Pradesh, India.

VadthiyaNarendar, RichaParihar and Ashutosh Kumar Pandey "Short Channel Effects (SCEs) Based Comparative Study of Double-Gate (DG) and Gate-All-Around (GAA) FinFET Structures for Nanoscale Applications" VCAS International Conference on VLSI, Communication and Signal Processing, November 29-December 1, 2018, MNNIT Allahabad, Utter Pradesh, India.

VadthiyaNarendar and Ashutosh Kumar Pandey "Impact of Dimensional Effects on Subsurface Leakage Current of a Low-VTH Nanoscale MOSFET under Accumulation Bias" VCAS 2018 International Conference on VLSI, Communication and Signal Processing, November 29-December 1, 2018, MNNIT Allahabad, Utter Pradesh, India.

R. J. Pandya, "L-band Extended National Optical Fiber Network to achieve the mission of Digital India", International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW), Thrichy, pp.1-3, May 2019.

Anuradha, K.ShriramTej "Exponential Companding Transform to Mitigate PAPR in SC-FDMA Systems" 41st International conference on PIERS, Rome , June 17-20,2019

Chary, N. R., Singh, D.N., Hashmi, M. F. Detection of Stepping-Stone Introduction on Host System. INROADS- An International Journal of Jaipur National University, 6(2), July-Dec 2018.

V.T.R. Vantukala , D. Thumma, V. K. Galla, S. Maheshwaram, " Virtual Mouse Control Using Colored Finger Tips and Hand Gesture Recognition", accepted for presentation in IEEE TENCON 2019.

S. Karthik, Sairam, P. Muralidhar, "Hybrid Fast Motion Estimation for HEVC," 6th international conference on Signal Processing and Integrated Networks (SPIN), 2019.

Funded Research Projects 2018-19

(Completed Projects)

Prof NVSN Sarma, Dr D Vakula, "Design and Simulationof Miniature Antennas", RCI,

Hyderabad, 9.9 Lakhs.

Dr. T Kishore Kumar, "Development of Novel Robust Speech Bandwidth Extension Algorithms for High Definition Telephony", SERB, 23.35 Lakhs

Dr. T Kishore Kumar, "Development of Novel Adaptive Beamforming Algorithms for speech Enhancement", SERB, 18.57 Lakhs

Dr. L. Anjaneyulu ,"VR based Simulator for Electric Winder", MOIL Limited (Ministry of Mines), Nagpur, 18.63 Lakhs

Dr. L.Anjaneyulu , Dr T.Anil Kumar ,"Study and implementation of Channel Estimation Techniques for 5G Wireless Communication Systems", SERB, DST, New Delhi, under TARE, 18.30 Lakhs.

Dr. V. V. Mani, Dr. T Kishore Kumar, "Visible Light Communication test bed for Indoor Applications", SERB, New Delhi, 25.55Lakhs

Dr. Ravi Kumar Jatoth,"Development of a Real-Time Video-De-hazing system", SERB, 3.62 Lakhs

Dr. Gande Arun Kumar, "Design and Development of a W-band Front-end for Imaging Applications using Silicon-Germanium Technology", DST-SERB-ECRA, 37.5 Lakhs

Dr. S. Anuradha, "Development of Real Time UFMC System for Mobile Applications", DST-SERB, 25.76 lakhs

Dr. S. Anuradha, Dr. P. Sriharirao, "Optimizing Chaotic Code set for DLC receiver with verification on FPGA", RCI, Hyderabad, 9.955 lakhs

Dr. Ravi Kumar Jatoth ,"Design and implementation of intelligent fractional order controller for industrial applications using IoT", DST, 3.49 Lakhs

Dr P Sreehari Rao and Dr. P Muralidhar, "Advanced CMOS clock recovery circuits for mobile applications", SPARC, 45 lakhs

Dr. V. V. Mani, Dr. Rahul J. Pandya, et. al. "VLC-Based Vehicular Communication for enhancing Road Safety in Smart Cities", SPARC, 69 Lakhs

Consultancy

(from Industry)

Dr D Vakula, Prof NVSN Sarma, "Modelling and Simulation of Wide band Antenna Array for Missile Application", RCI, Hyderabad, 18.6 lakhs

Prof NVSNSarma. Dr D Vakula, "Design and Simulation of Miniature Antennas" ,RCI,Hyderabad Rs 9.9 Lakhs.

Metallurgical and Materials Engineering

The Metallurgical Engineering Department of NIT, Warangal was founded in the year 1965. Except the last academic year, the B.Tech students are having at least 80% placement continuously in the last five years. The third and final year students of (5 each) B.Tech program are supported by Ministry of Steel Scholarship. Every year 8 to 10 students are qualifying in GATE with ranks less than 150. The Master and doctoral degree students have got an opportunity to do their project work/ part of the research work in Europe through ERASMUS-MUNDUS scholarship. About 37 research scholars are currently pursuing their PhD in the department. In the year 2017-18, the department got an opportunity to serve in the National Mission Project on developing Advanced Ultra Supercritical (AUSC) technology for the country. The department secured Rs. 23.5 crores worth project to evaluate the materials that are going to be used in AUSC technology. Under this funding, state-of-art research facilities to study creep and high temperature fatigue properties of materials are developed. Currently about 26 crores worth of research projects are being carried out in the department. Some of the major research funding organisations are DAE-BRNS, DST-SERB, UGC-DAE-CSR, ARDB, NTPC-NETRA, AUSC, ISRO, and DRDO. The department moved to a new academic building in the month of Sep 2018.

FACULTY

Dr. G. V. S. Nageswara Rao
Professor
Powder metallurgy, Surface Engineering
Materials Testing and Characterization
Thermo-Mechanical Processing
Nanomaterials

Dr.Ajoy Kumar Pandey
Assistant Professor
Mechanical Metallurgy
Bio-Ceramics
Powder Metallurgy

Dr. N. Narasaiah
Professor
Mechanical Behaviour of Materials
Fatigue
Fracture Mechanics
Failure Analysis

Dr. Brahma Raju Golla
Assistant Professor
Ultra High Temperature Ceramics
Advanced Materials Processing
Physical Metallurgy, Tribology of Materials, Thin film Coatings

Dr.Asit Kumar Khanra
Associate Professor
Powder Metallurgy, Processing of Advanced Ceramics, Biomaterials, Electrical Discharge Machining (EDM) and Deformation behaviour.

Dr. B. Srinivasa Rao
Assistant Professor
Process- Microstructure- Property Relationship, Ultrafine/Nanocrystalline Materials, Phase Transformations, High Pressure Studies, Metastable Microstructures

Dr. C. Vanitha
Associate Professor& Head
Physical Metallurgy
Texture
Nuclear Materials
Light Metals & Alloys, Corrosion

Dr. R. Arockia Kumar
Assistant Professor
Shape Memory Alloys
Friction Stir Processing
Physical Metallurgy
Severe Plastic Deformation

Dr.Talari Mahesh Kumar
Associate Professor
Metal Joining, Additive Manufacturing, High Temperature Materials, Functional Materials and Metal Matrix Nanocomposites

Dr. Uma Maheswara Rao Seelam
Assistant Professor
Non-equilibrium Processing of Materials
Advanced Characterization
Magnetic Materials

Dr. N. Kishore Babu
Associate Professor
Metal Joining
Nanocomposites
Additive Manufacturing

Dr. V. Sreedevi
Assistant Professor
Synthesis and Characterization of Bulk Nanocrystalline Materials, Mechanical Behaviour of Materials; Alternate Energy Materials

Dr. V. Rangadhara Chary
Assistant Professor
High Performance Structural Ceramics, High Entropy Alloys
Phase Transformations
Thermodynamics of Materials

Dr.Avishkar Bhaurao Rathod
Assistant Professor
Wear, Particulate Technology, Steel Making, Failure Analysis of Engineering Materials

METALLURGICAL AND MATERIALS ENGINEERING

Publications (in peer reviewed journals)

Vemoori Raju, Roy Johnson, Asit Kumar Khanra, Preparation and comparative evolution of mechanical behavior of Fe and Fe_2O_3 foams and their polymer composites, Journal of Alloys and Compounds 750, 71-76 (2018).

MubinaShaik, Asit Kumar Khanra, Bhaskar Prasad Saha, Processing of sintered and CVD coated SiC/CNFs thin composite tubes, Materials Chemistry and Physics 220, 225-232 (2018).

Katti Bharath, Asit Kumar Khanra, M.J. Davidson, Effect of Temperature and Densification behavior on Semi-solid Extruded Al-Cu-Mg Powder Metallurgy Alloys, Transaction of Indian Institute of Metals (Press – 2019).

Vemoori Raju, G. Ushashree and Asit Kumar Khanra, Fabrication and Properties Evaluation of Alumina based Open cell Foams, Transaction of Indian Institute of Metals (Press – 2019).

V. ShivkumarKhaple, V.V. Satya Prasad, D. V. V. Satyanarayana, Brahma Raju Golla, "Evolution of Microstructure with Increasing Carbon Content and Its Effect on Mechanical Properties of Disordered Iron-Aluminium Alloy" Bulletin of Material Science 42 234 (2019).

Brahma Raju Golla and Sravan Kumar Thimmappa, Comparative study on microstructure and oxidation behavior of ZrB_2-20vol.%SiC ceramics reinforced with Si_3N_4/Ta additives, Journal of Alloys and Compounds 797 92-100(2019).

Sravan Kumar Thimmappa and Brahma Raju Golla, Effect of tantalum addition on microstructure and oxidation of spark plasma sintered ZrB_2-20vol.%SiC composites, Ceramics International 45 13799-13808(2019).

Mahammad Ali Shaik, Khader Hussain Syed and Brahma Raju Golla, "Electrochemical behavior of mechanically alloyed hard Cu-Al alloys in marine environment" Corrosion Science 153 249-257 (2019).

Mahammad Ali Shaik and Brahma Raju Golla, "Development highly wear resistant Cu - Al alloys processed via powder metallurgy" Tribology International 136 127-139 (2019).

Akhil P.S., Mahammad Ali Shaik, and Brahma Raju Golla, "Mechanical, wear and dielectric behavior of HDPE-TiO_2 composites" Journal of Applied Polymer Science 136 47610(2019).

Sravan Kumar Thimmappa, Brahma Raju Golla, VV Bhanu Prasad, BhaskarMajumdar and BikramjitBasu, Phase stability, hardness and oxidation behaviour of spark plasma sintered ZrB_2-SiC-Si_3N_4 composites, Ceramics International 45 9061-9073 (2019).

Akhil P.S., Brahma Raju Golla and A. R. James, "Characterization of high κ HDPE-TiO_2 composites: A first report" Materials Letters 241 128-131 (2019).

Vignesh Raja S, Brahma Raju Golla, Mahammad Ali S, Ankit Yadav, Sarath Chandra T D and Shivkumar K, "Modeling and characterization of porous Tantalum scaffolds" Transactions of the Indian Institute of Metals 72(4):935-949 (2019).

KommineniGeethasree, V V Satya Prasad, Brahma Raju Golla, ZafirAlam, "Cyclic oxidation behavior of Fe-Cr modified slurry silicide coated Nb-18.7Si alloyed with Ti and Zr," Corrosion Science 148 293-306 (2019).

Sivakumar S, Brahma Raju Golla and Koteswararao V. Rajulapati, "Influence of ZrB_2 hard ceramic reinforcement on mechanical and wear performance of aluminum" Ceramics International 45 7055-7070 (2019).

Brahma Raju Golla, Mahesh Tummala, P. S. Akhil and A. R. James, "Novel High-Density Polyethylene-Niobium Pentoxide Dielectric Materials" Polymer Composites 40 749-757 (2019).

D B ASagar, B Vikas, B Saha, N Narasaiah, P Jayapal, G D J Ram & M S K Rao Study of Microstructure and Mechanical properties of Friction Welded Metastable Beta Titanium Alloy Titan 1023, Materials Today: Proceedings, Vol. 5, pp. 20760–20768 (2018).

M. Ananda Rao, M. V. Pavan Kumar, S. Subba Rao and N. Narasaiah, Rheological behavior of coal-water slurry using sodium tripolyphosphate as a dispersant International Journal of Coal Preparation and Utilization, 2018, https://doi.org/10.1080/19392699.2018.1485664

M. Ananda Rao, M. V. Pavan Kumar, S. Subba Rao and N. Narasaiah, Rheological behavior of coal-water slurries of Indian coals using carboxymethylcellulose as dispersant- a comparative study International Journal of Coal Preparation and Utilization, 2018 https://doi.org/10.1080/19392699.2018.1485664

Abhinav Kumar Karnati, AritraSarkar, A. Nagesha, P. Parameswaran, R.Sandhya, N. NarasaiahEvaluation of high cycle fatigue behaviour of alloy 617M at 973 K: Haigh diagram and associated mechanisms, International Journal of Pressure Vessels and Piping, Volume 172, pp 304-312 (2019).

BalajiPadya, N. Narasaiah, P.K. Jain, T.N. Rao A facile co-solvent strategy for preparation of graphene

nanoplatelet powder: An industrially viable innovative approach Ceramics International, Vol. 45, pp. 13409 – 13413 (2019).

Y. Madhavia, L. Rama Krishnaa, N. Narasaiah, Influence of micro arc oxidation coating thickness and prior shot peening on the fatigue behavior of 6061-T6 Al alloy International Journal of Fatigue, Vol. 126, pp. 297-305 (2019).

M. Ananda Rao, VeerapuramYerriswamy, M. V. Pavan Kumar, N. Narasaiah, A comparative study on the rheological properties of two coal water slurries with sodium tripolyphosphate as dispersant International Journal of Coal Preparation and Utilization, June 2019 https://doi.org/10.1080/19392699.2019.1621300

Sudarshan Kumar, A. Kumar and C. Vanitha, Corrosion behaviour of Al 7075 /TiC composites processed through friction stir processing Materials today: proceedings (Accepted 2019)

Ayush Kumar Goyal, SGSapate, S Mehar, N Vashishtha, P Bagde and A Rathod, "Tribological properties of HVOF sprayed WC-Cr3C2-Ni coating", Mater. Res. Express 6 (2019) 106415.

Publications (in peer reviewed conferences)

M.J. Davidson, Asit Kumar Khanra, Katti Bharath, "Microstructural evolution of Al-Cu-Mg Sintered Alloys processed by Semi-solid Extrusion Process", MS&T2018, Columbus, USA, October (14-18) 2018.

Vemoori Raju, G. Ushashree and Asit Kumar Khanra, "Fabrication and Properties Evaluation of Alumina based Open cell Foams", ICAMPS 2018, Thiruvanthapuram, Kerala, Octo (25-27) 2018.

Funded Research Projects 2018-19

Dr. G. V. S. Nageswara Rao, Mission Directorate, AUSC Consortium, Generation of Creep Data of wrought Alloys of 617M and 304HCu, 620.90 Lakhs.

Dr. G. V. S. Nageswara Rao, Mission Directorate, AUSC Consortium, Evaluation of Creep-Fatigue interaction properties of Alloy 617M forging, 348.89 Lakhs.

Dr. G. V. S. Nageswara Rao, Mission Directorate, AUSC Consortium, Evaluation of Creep-Fatigue interaction properties of Alloy 625 Casting, 348.89 Lakhs.

N. Narasaiah, R. Arockia Kumar, Dr.G.V.S. Nageswara Rao, Ajoy K. Pandey, B. Srinivasa Rao, Mission Directorate, AUSC Consortium, Evaluation of creep-fatigue crack growth (CFCG) for Alloy 625 Cast material, 490.56 Lakhs (01.05.2018–30.09.2019).

N. Narasaiah and team, DST, Govt. of India (ARCI Hyderabad), Oxide dispersion strengthened (ODS) iron based alloys for Advanced Utra Super Critical (AUSC) Technology, 90.812 Lakhs (01.10.2018 – 30.09.2021).

Ajoy K. Pandey, B. Srinivasa Rao, Asit K. Khanra, G. Brahma Raju, N. Narasaiah, Mission Directorate, AUSC Consortium, Evaluation of Creep – Fatigue Crack Growth (CFCG) for Alloy 617 forging material, 481.00 Lakhs (01.05.2018–30.09.2019).

Highlights/ Special Equipment/ Instrumentation

Equipment under AUSC projects (18 Nos. of creep machines and 2 Nos. of 100 kN servo-electric fatigue testing systems with a cost of Rs.6 Crores) have been received and installed.

Creep Fatigue Crack Growth Testing Equipment: 5.5 Crores (04 Machines), Servo hydraulic Fatigue Testing System: 86 Lakhs

RastriyaAvishkarAbhiyan students under Dr. Uma Maheswara Rao Seelam prepared a working model of an optical microscope using cardboard. It was in news/media coverage.

SOPHISTICATED EQUIPMENT

Laboratories to evaluate high temperature properties of materials developed under the AUSC consortium grant (approximately 15 crores)

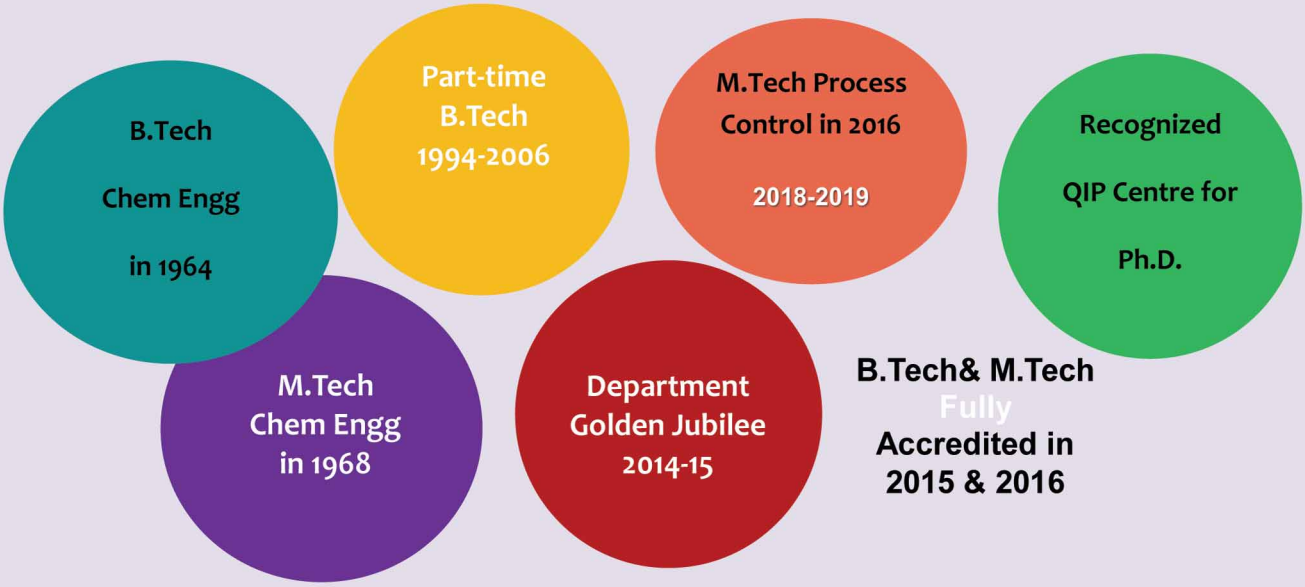
100kN Servo-electric fatigue testing systems

Creep testing systems (18 nos.)

100kN CFCG machines

SEM and XRD under DST-FIST

CHEMICAL ENGINEERING



Thrust research areas

- Water Technologies
- Energy Systems
- Synthesis of Nanomaterials
- Process Control
- Process Intensification
- Fluidization
- Chemical looping combustion
- Catalysis
- Modelling, Simulation & Optimization
- Biochemical Engg.
- Carbon Capture and utilization
- High Performance Thermoset Composites

Faculty

Prof. Y. PydiSetty
(Ph.D, IIT Madras)
Professor
Fluidized beds, Biochemical Engg., Microbial fuel cells

Prof. Shirish H. Sonawane
(Ph.D, NMU Maharashtra)
(BOYSCAST Fellow, Erasmus Mundus Fellow, FTAS, FMAS)
Professor & Head
hydrodynamiccavitations, Energy storage devices Nanomaterials

Prof. A. Venu Vinod
(Ph.D, NIT Warangal)
Professor
Fluidized beds, Bioreactors, Heat transfer, Nanofluids

Prof. SarathBabu Anne
(Ph.D, NIT Warangal)
Professor
Modelling and simulation, Reaction Engineering, CO2 Capture and Utilization

Prof. Anand Kishore K.
(Ph.D, NIT Warangal)
Professor
BiochememicalEngg., Modelling and simulation

Dr. K. Srivani
(Ph.D, NIT Warangal)
Associate Professor
Biochemical Engineering

Dr. S. Srinath
(PhD, NIT Warangal)
Associate Prof.
Fluidized bed combustion, Modelling and simulation

Dr. A. Seshagiri Rao
(PhD, IIT Madras)
Associate Prof.
Process control, Wastewater treatment

Dr. P.V. Suresh
(PhD, IIT Madras)
Associate Prof.
Fuel cells, CO2 Capture Utilization, CFD, Chemical looping Combustion.

Dr. S. Vidyasagar
(Ph.D, IIT Madras)
Associate Prof.
Sustainable energy technology, Modeling and simulation

Dr. S. Murali Mohan
(Ph.D, IIT Delhi)
Assistant Professor
Flow batteries, Fuel cells, Membrane Separations

Dr. G. Uday Bhaskar Babu
(Ph.D, IIT Kharagapur)
Assistant Professor
Modelling and simulation, Energy integration

Assistant Professor
Chemical Process Scheduling, Process Modelling &Simulation Hybrid Separations ChemicalLooping Combustion

Dr. Raghu Raja Pandiyan
(Ph.D, IIT Kharagapur)
Assistant Professor
Thermoset Composites, Process Modeling and Simulation

Dr.K.SRajmohan
(Ph.D, IIT madras)
Assistant Professor
NanoCatalysis, Fuel cells and batteries, biorefineries.

Dr. ManoharKakunuri
(Ph.D, IIT Hyderabad)
Assistant Professor
Synthesis of Carbon Nanomaterials, Li-ion batteries

Emeritus/Visiting Professors

Prof. M. Chidambaram
IIT Madras (Retired)

Prof. P.M. SatyaSai
BARC (Retired)

Prof. D.V.R. Murthy
NIT Suratkal (Retired)

Prof. G. Venkat Reddy
NIT Warangal (Retired)

CHEMICAL ENGINEERING

Projects

Development of 10 kW/50 kWh Redox Flow Battery System for Solar PV Applications, IMPRINT, Co-PI: Dr. PV Suresh, INR 399.0 Lakhs (In collaboration with IIT Madras)

Development and Demonstration of Hydrogen Flow Battery using Non-Precious electrocatalysts, SPARC, PI: Dr. S. Murali Mohan, Co-PI:Dr. K.S. Rajmohan, INR 43.17 Lakhs.

A Novel Hybrid System for Textile Dye Waste Water Treatment, GYTI award by BIRAC SRISTI, PI: Prof. Shirish H. Sonawane, INR 15 .0 Lakhs

Process Development for the production of Janus nanoparticles for selected catalytic reactions, DST SERB ,, PI: Prof. Shirish H. Sonawane, Co-PI: Dr. Uday Bhaskar, INR 20.87 Lakhs.

Ultrasonic encapsulation of bioactive compounds to deliver in the food matrix Indo Russia DST, PI: Prof. Shirish H. Sonawane, INR 16.0 Lakhs

Development of starch based polyurethane nano-coatings for packaging application by sonochemical approach, Indo Tunisia DST, PI: Prof. Shirish H. Sonawane, Co-PI: Dr. G. Uday Bhaskar Babu, INR 15.0 Lakhs.

Heat Transfer Enhancement in Plate-Fin Exchanger using Nanorefrigerants, Sponsored by Aeronautics Research & Development Board (ARDB), PI:Prof. A. Venu Vinod, INR 31.0 Lakhs.

Design and Development of Passive Direct Methanol Fuel Cell integrated with Liquid Electrolyte for Portable Power Applications, DST SERB, Co-PI: Dr. P.V. Suresh, INR 19.0 Lakhs.

Theoretical and experimental studies on Chemical looping combustion of coal, DST SERB, PI: Dr. P. V. Suresh, INR 27.0 Lakhs.

Identification and Control strategies for improvement of Proton Exchange Membrane (PEM) Fuel Cell, DST SERB , PI: Dr. G. Uday Bhaskar Babu, INR 17.0 Lakhs.

Advanced control of wastewater treatment plants for improved effluent quality, cost reduction and effluent violations removal, DST SERB, PI: Dr. A. Seshagiri Rao, Co-PI: Dr. G. Uday Bhaskar Babu, INR 40.4 Lakhs.

Nonlinear model predictive control of wastewater treatment plants, Indian National Science Academy (INSA)-German Research Foundation (DFG) funding under Bilateral Exchange Programme 2019, PI: Dr. A. Seshagiri Rao, INR 0.70 Lakhs and Euros 5250.

Patents

Shirish H. Sonawane, Bharat Bhanvase, **Y. Pydi Setty** and **S. Srinath**, Systems for preparation of nano organic pigment dispersions using cavitation reactors, Indian Patent Number: 306507, Granted on 29-01-2019.

Shirish H. Sonawane, YadagiriMaralla, Particle size reduction of pharmaceutical material/drugs using innovative crystallization process, Indian Patent application no.201841033163, publication date: 14/09/2018

Y. Pydi Setty, T. Sunil Kumar, Counter current continuous multistage wall heated fluidized bed dryer Publication Number: 3338/CHE/2014 A, Publication Date: 18-07-2014.

International Visits

Prof. Shirish H. Sonawane, International Research Council meeting at South Ural State University, Russia 22nd-24th June, 2019.

Prof. Sarath Babu Anne and Dr. V. Ramsagar, Khalifa University, Abu Dhabi, 20-22nd Nov, 2018.

Dr. A. Seshagiri Rao, Technical University of Dortmund, Germany, 20th May-20th July, 2019

Publications

D.Yogendrasasidhar and **Pydi Setty.Y**, Drying kinetics, exergy and energy analyses of Kodo millet grains and Fenugreek seeds using wall

CHEMICAL ENGINEERING

heated fluidized bed dryer, Energy, 151, 799–811 (2018).

D. YogendraSasidhar and **Y. Pydi Setty** , Experimental studies and thin layer modeling of pearl millet using continuous multistage fluidized bed dryer staged externally, Engineering, Science and Technology - An International Journal, 22 (2), 428-438 (2019).

DivyaPriya A and **Y. Pydi Setty** ,Effect of MnO2: rGO ratio on the performance of a microbial fuel cell: An experimental optimization study, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 600-610 (2018).

DivyaPriya A and **Y. Pydi Setty** , Cashew apple juice as substrate for microbial fuel cell, Fuel, 246 (15), 75-78 (2019).

D. Yogendrasasidhar and **Pydi Setty. Y**, Experimental Energy Studies and Artificial Neural Network Modeling For Continuous Wall Heated Fluidized Bed Dryer, Materials today Proceedings,17 (1), 9-15 (2019).

G Srinivas , … **Y Pydi Setty** , Determination Of Optimum Conditions In A Continuous Wall Heated Fluidized Bed Dryer, International Journal of Pure and Applied Mathematics 118(24),1-17 (2018).

K Tejasvi, **Pydi Setty Y**, … , Chakarvathy K, Application of artificial natural networks for the prediction of aluminium agglomeration processes, International Journal of Activation, Aeronautics, and aerospace, 5 (5) 7 (2018).

K Tejasvi, **Pydi Setty Y**, Venkateswara Rao V , Ultrafine Aluminium: quench collection of Agglomerates, International Journal of Aviation, Aeronautics, and aerospace, 6(1) 2019

D.Yogendrasasidhar and **PydiSetty.Y**, Energetic and exergetic analyses of Barnyard millet drying using continuous multistage fluidized bed dryer, Journal of Food Process Engineering (Accepted).

Shalini and **Y. Pydi Setty**, Multistage Fluidized Bed Bioreactor for Dye Decolorization using Immobilized Polyurethane foam: A Novel Approach, Biochemical Engineering Journal, Accepted, 2019.

D .YogendraSasidhar and **Y. Pydi Setty**, Effect of distributor on performance of a continuous fluidized bed dryer, Heat and Mass Transfer, Heat and Mass Transfer, Volume 54, Issue 3, pp.641-649,(2018).

K Tejasvi, and **Y Pydisetty**, aluminium particles with potential applications as composite propellants, Bulletin of material science, 42(5), 1-7 ,(2019)

Prashant L.Suryawanshi, … **Shirish H.Sonawane,**MakarandS.Pimplapure, A review on microreactors: Reactor fabrication, design, and cutting-edge applications, Chemical Engineering Science, 189, 431–448, (2018).

Swapnil H., … **Shirish H. Sonawane**, R. Subasri, Evaluation of self-healing properties of inhibitor loaded nanoclay-based anticorrosive coatings on magnesium alloy AZ91D, Journal of Magnesium and Alloys 000, 1–10 (2018).

Rajesh Kumar, ….**Shirish H. Sonawane**, M. Ashok kumar, Ultrasound-assisted synthesis of Pt–Co/C bimetallic alloys for oxygen reduction in PEM fuel cells, Sustainable Energy Fuels, 2 , 1491–1499 (2018) .

YadagiriMaralla, **Shirish Sonawane**, Process intensification using a spiral capillary microreactor for continuous flow synthesis of performic acid and it's kinetic study, Chemical Engineering & Processing: Process Intensification, 125, 67–73 (2018).

NishantKumar, … **Shirish H. Sonawane**, Experimental study on pool boiling and Critical Heat Flux enhancement of metal oxides based nanofluid, International Communications in Heat and Mass Transfer 96, 37–42. (2018).

Aman Raj, Bhaskar Bethi, **Shirish H. Sonawane**, Investigation of removal of crystal violet dye using novel hybrid technique involving hydrodynamic cavitation and hydrogel, Journal of Environmental Chemical Engineering 6 (4), 5311-5319 (2018).

CHEMICAL ENGINEERING

PK Labhane, GH Sonawane, **SH Sonawane**, Influence of rare-earth metal on the zinc oxide nanostructures: application in the photocatalytic degradation of methylene blue and p-nitro phenol, Green Processing and Synthesis 7, 360-371 (2018).

Srinivas Rao Divi, **S. H. Sonawane**, Shantanu Das, Uncertainty analysis of Transfer Function of Proton Exchange Membrane Fuel Cell and Design of PI/PID controller for supply manifold pressure control, Indian Chemical Engineer, 1-5, (2018).

S. Shabana, R. … **S.H. Shirish,** Ultrasound assisted acid hydrolyzed structure modification and loading of antioxidants on potato starch nanoparticles, Ultrasonic sonochemistry, 51, 444-450 (2019).

S. J. Charde, S. S. Sonawane**, S. H. Sonawane**, N. G. Shimpi, Degradation Kinetics of Polycarbonate Composites: Kinetic Parameters and Artificial Neural Network, Degradation Kinetics of Polycarbonate Composites, Chem. Biochem. Eng. Q., 32 (2) 151–165 (2018).

H. S. Vardikar,,,**S. H. Sonawane, S**onochemical Synthesis, Characterization and Sorption Study of Kaolin-Chitosan-TiO2 Ternary Nanocomposite: Advantage over conventional method, Materials Chemistry and Physics, 217 457–467 (2018) .

Nishant Kumar, NandkishorUrkude, Shriram S. Sonawane, **Shirish H. Sonawane**, Experimental study on pool boiling and Critical Heat Flux enhancement of metal oxides based nanofluid, International Communications in Heat and Mass Transfer 96, 37–42 (2018).

YadagiriMaralla, **Shirish H. Sonawane**, Process Intensification by Using a Helical Capillary Microreactor for a Continuous Flow Synthesis of Peroxypropionic Acid and Its Kinetic Study, PeriodicaPolytechnica Chemical Engineering, 2019. https://doi.org/10.3311/PPch.12885.

Srinath Suranani, Y Maralla, SM Gaikwad, **SH Sonawane** ,Process intensification using corning® advanced-flow™ reactor for continuous flow synthesis of biodiesel from fresh oil and used cooking oil, Chemical Engineering and Processing-Process Intensification 126, 62-73 (2018).

SH Adsul, …,**S.H. Sonawane**, R Subasri Aluminum, pillared montmorillonite clay-based self-healing coatings for corrosion protection of magnesium alloy AZ91D, Surface and Coatings Technology, 352, 445-461 (2018).

Sujan Kumar, Bashapaka and **Venu Vinod** Ananthula, Experimental and Modeling Studies on Mixing Behavior of Binary Mixtures in a Spout-Fluid Bed, *Particulate Science and Technology*,37:4, 387-398, (2019).

Anil Kumar Naik B; **Venu VinodAnanthula** , Heat Transfer Enhancement using Non-Newtonian Nanofluids in a Shell and Helical Coil Heat Exchanger, *Experimental Thermal and Fluid Science* **90,** 132-142 (2018).

B. Anil Kumar Naik, **A. Venu Vinod**, Rheological Behavior and Effective thermal conductivity of non- Newtonian nanofluids, *Journal of Testing and Evaluation* (ASTM), 46 (2), 445-456, 2018.

SurywanshiGajananDattarao, B. Basant Kumar Pillai, Venkata Suresh Patnaikuni, **RamsagarVooradi, Sarath Babu Anne** ,Formic Acid Synthesis – A Case Study of CO2 Utilization from Coal Direct Chemical Looping Combustion Power Plant, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 2019.

Surywanshi GD, B. Basant Kumar Pillai, **Venkata Suresh Patnaikuni, RamsagarVooradi, Sarath Babu Anne**, Energy and exergy analyses of Performance analysis of chemical looping combustion based 660 MWe supercritical coal fired power plant, International Journal of Exergy, *Accepted*, 2019.

B. Basant Kumar Pillai, Surywanshi GD, **Venkata Suresh Patnaikuni, Sarath Babu Anne**, Vooradi, R Performance analysis of a double calcium looping integrated biomass fired power plant: exploring a carbon reduction opportunity, International Journal of Energy Research, 43, 5301-5318 (2019).

CHEMICAL ENGINEERING

Vooradi, R., **Sarath Babu Anne**, Anjan K Tula, Mario R Eden, RafiqulGani ,Energy and CO_2 management for chemical and related industries: Issues,opportunities and challenges, BMC Chemical Engineering, Accepted (2019)

D Kishore, K. **Anand Kishore** and RC Panda ,Identification and control of process using the Modified asymmetrical Relay Feedback method, International Conference on Robotics and Smart Manufacturing (RoSMa2018), Procedia Computer Science, 133, 1029–1034 (2018).

Kingstone Lesley Jabez, Urmila Das, R Manivannan, **Sarat Babu Anne**, Influence of HTPB prepolymer on achieved properties of composite solid propellant, **High Performance Polymers**, 0954008319830468 (2019).

D. Kishore, SmrutiRanjanSethi, **K. Anand Kishore** and RC Panda ,An Improved Identification and Control of 3x3 MIMO System Using Relay+Subspace method, *Indian Chemical Engineer journal*, 61, 87-101 (2018).

R. Sathish Babu, P. Chandra Sai, **K. Anand Kishore**, **Shirish H Sonawane**, Studies on removal of Arsenic using Cellulose acetate-Zinc oxide nanoparticle mixed matrix membrane, Journal of international Nano letters, 8, 201-211 (2018).

Satish Babu Rajulapati, **Anand Kishore Kola**, …, Screening, Optimization of Culture Conditions and Scale-Up for Production of the L-Glutaminase by Novel Isolated Bacillus sp. Mutant Endophyte using Response Surface Methodology ,journal of Biocatalysis and Agricultural Biotechnology, ISSN: 1878-8181, 18, 101077 (2019).

Narsimha Pandi, **Shirish Hari Sonawane**, Sarang P. Gumfekar, **Anand Kishore Kola**, … Muthupandian Ashokkumar ,Electrochemical Performance of Starch-Polyaniline Nanocomposites Synthesized by Sonochemical Process Intensification", ID: 7609, Journal of Renewable Materials

DarekarAshitoshDattatray, **Vidyasagar Shilapuram**, Detailed parametric investigation of Dry Gasification Oxy-Combustion Power Cycleusing ASPEN Plus simulations**,** Fuel 236, 501-515 **(2019)**

D. Kishore, SmrutiRanjanSethi, **K. Anand Kishore and RC Panda**, An Improved Identification and Control of 3x3 MIMO System Using Relay+Subspace method, *Indian Chemical Engineer journal* 61, 87-101 (2018).

Purushottama Rao Dasari, **M. Chidambaram** and A. **Seshagiri Rao**,Simple method of calculating dynamic set-point weighting parameters for time delayed unstable processes, IFAC-PapersOnLine, 51(1), 395 – 400 (2018).

Sheikh Abdulla, **Venkata Suresh Patnaikuni**, Detailed analysis of polymer electrolyte membrane fuel cell with enhanced cross-flow split serpentine flow field design, International Journal of Energy Research, 43, 2806-2820 (2019).

Ritesh Ramesh Palkar, **Venkata Suresh Patnaikuni, Vidyasagar Shilapuram**, Step by step methodology of designing a liquid–solid circulating fluidized bed using computational fluid dynamic approach, Chemical Engineering Research and Design, 138, 260-279 (2018).

Vooradi, R**., Venkata S. Patnaikuni**, Anjan K. Tula, **Sarath B. Anne**, Mario R. Eden, RafiqulGani, Hybrid Separation Scheme for Azeotropic Mixtures - Sustainable Design Methodology, Chemical Engineering Transactions, 69 (2018), 637-642

Sammit E. Karekar, Uday D. Bagale, **Shirish H. Sonawane**, Bharat A. Bhanvase andDipak V. Pinjari ,A smart coating established with encapsulation of Zinc Molybdate centred nanocontainer for active corrosion protection of mild steel: release kinetics of corrosion inhibitor, Composite Interfaces, 2018 25 (9), 785-808

ChandrasaiPotlaDurthi, Satish Babu Rajulapati, Aseem Ali Palliparambi, Anand Kishor Kola, **Shirish H. Sonawane**,Studies on removal of arsenic using cellulose acetate–zinc oxide nanoparticle mixed matrix

CHEMICAL ENGINEERING

membrane, International Nano Letters, 8 (3), 201-211 2018

Sammit E. Karekar, Uday D. Bagale, **Shirish H. Sonawane,** Bharat A. Bhanvase and Dipak V. Pinjari ,A smart coating established with encapsulation of Zinc Molybdate centred nanocontainer for active corrosion protection of mild steel: release kinetics of corrosion inhibitor, Composite Interfaces, 2018 25 (9), 785-808

ChandrasaiPotlaDurthi, Satish Babu Rajulapati, Aseem Ali Palliparambi, Anand Kishor Kola, **Shirish H. Sonawane**, Studies on removal of arsenic using cellulose acetate–zinc oxide nanoparticle mixed matrix membrane, International Nano Letters, 8 (3), 201-211 2018

I.Yu. Potoroko, …**S.H. Sonawane**, … M.T. Velyamov, Sonochemical micronization of taxifolin aimed at improving its bioavailability in drinks for athletes, Human. Sport. Medicine 2018, vol. 18, no. 3, pp. 90–100, DOI: 10.14529/hsm180309

Kalinina, iy Potoroko, RiFatkullin, D Ivanova , Improvement in biological activity ofdihydroquerecetin by means of ultrasound micronization Technology and the study of Merchandaise of Innovative food stuff, Innovative food stuff, 143 (144), 291-296

P.K. Labhane , L.B. Patle , G.H. Sonawane, **S.H. Sonawane**, Fabrication of ternary Mn doped ZnO nanoparticles grafted on reduced graphene oxide (RGO) sheet as an efficient solar light driven photocatalyst, Chemical Physics Letters 710 (2018) 70–77.

M. Suresh Kumar, **S.H. Sonawane**, B.A. Bhanvase, Bhaskar Bethi, Treatment of ternary dye wastewater by hydrodynamic cavitation combined with other advanced oxidation processes (AOP's), Journal of Water Process Engineering 23 (2018) 250–256

P. Rajesh Kumar, Prashant L. Suryawanshi, Sarang P. Gumfekar, Bharat A. Bhanvase, **Shirish Sonawane** Sonochemical synthesis of Pt-Co/C electrocatalyst for PEM fuel cell Applications, Surfaces and Interfaces 12 (2018) 12, 116-123

G. Maruthi Prasad and A. Seshagiri Rao ,Evaluation of Gap metric based multi model controller schemes for non-linear systems: An experimental study, ISA Transactions, Accepted, April 2019.

H. Upender, L. Pavan Kumar and **K. Anand Kishore** ,Hydrodynamic studies comparison by simulation with experimental results of reverse fluidized bed, International Journal of Engineering & Technology (Scopus Indexed), 7 (3.29) (2018) 21-25

K. Ghousiya Begum, **A. Seshagiri Rao*** and T. K. Radhakrishnan, Novel IMC filter design based PID controller design for Systems with One Right Half Plane (RHP) Pole and Dead-time, International Journal of Automation and Control, Accepted, January 2019 (Scopus)

R. Ranganayakulu, **G. Uday Bhaskar Babu*** and **A. Seshagiri Rao** .Analytical design of Enhanced Fractional filter PID controller for improved disturbance rejection of second order plus time delay processes, Chemical Product and Process Modeling, Accepted, September 2018 (Scopus).

V. Anitha, K. Abinaya, S. Prakash, **A. Seshagiri Rao** and B. Vanavil ,Bacillus cereus KLUVAA mediated biocement production using hard water and urea, Chemical and Biochemical Engineering Quarterly, 32(2), 257 - 266, 2018.

K. Ghousiya Begum**, A. Seshagiri Rao*** and T. K. Radhakrishnan ,Performance assessment of control loops involving unstable systems for set-point tracking and disturbance rejection, Journal of the Taiwan Institute of Chemical Engineers, 85, 1 – 17, 2018.

K. Ghousiya Begum, **A. Seshagiri Rao** and T. K. Radhakrishnan ,Optimal controller synthesis for second order time delay systems with atleast one RHP pole, ISA Transactions, 73, 181 – 188, 2018.

ArunaPagidi, G.Arthanareeswaran, **Murali Mohan Seepana** ,Synthesis of highly stable PTFE-ZrP-PVA composite membrane for high-temperature direct methanol fuel cell, International Journal of Hydrogen Energy (IJHE), 2019, *In press*.

CHEMICAL ENGINEERING

Book Chapters

D. Yogendrasasidhar and **Y. PydiSetty,** Studies on Heat and Mass Transfer Coefficients of Pearl Millet in a Batch Fluidized Bed Dryer, Springer Nature Singapore Pte Ltd., , D. Srinivasacharya and K. S. Reddy (eds.), Numerical Heat Transfer and Fluid Flow, Lecture Notes in Mechanical Engineering,2019.

SaiRohith, ….,**Rajmohan K.S., Srinath S.** Hydrothermal carbonization for valorization of ricehusk, Chapter 6 in Biochemical and Environmental Bioprocessing: Challenges and Developments, Editors: Jerold and V. Sivasubramanian, CRC Press (2019).

ThirumalaBai P**., K. S. Rajmohan**, P. S. Sai Prasad, **S. Srinath.** Oxidative dehydrogenation of ethane to ethylene over metal oxide catalysts using carbon dioxide, Chapter 7 in the book: Purification and Conversion to Chemicals and Fuels, 119-151. Springer Nature (2019).

RaghuramChetty, …**S Srinath, KS Rajmohan**Electrochemical Reduction of Carbon Dioxide into Useful Low-Carbon Fuels, CO_2 Separation, Chapter 8 in the book: Purification and Conversion to Chemicals and Fuels, 119-151. Springer Nature (2019)

Saradha Devi G., ...**Srinath S., ..Rajmohan K.S.** Energy recovery from biomass using gasification, Chapter 19 in Current Developments in Biotechnology and Bioengineering: Resource Recovery from Wastes, Elsevier (2019).

G. Maruthi Prasad, A. Adithya and **A. Seshagiri Rao,** Design of multi model fractional controllers for non-linear systems: An experimental investigation, Computer Aided Chemical Engineering, Anton A. Kiss, Edwin Zondervan, Richard Lakerveld, LeylaÖzkan (Eds.), Elsevier, Volume 46, 2019.

Murali Mohan Seepana, Jerold M. **Rajmohan K.S.,** Production of biofuels from algal biomass, Biochemical and Environmental Bioprocessing: Challenges and Developments, Editors: Jerold and V. Sivasubramanian, CRC Press (2019).

Rajmohan K.S.,Ramya C, **Murali Mohan S.,** Recent advancements and perspectives on biological degradation of azo dye, Chapter 2 in Biochemical and Environmental Bioprocessing: Challenges and Developments, Editors: Jerold and V. Sivasubramanian, CRC Press (2019).

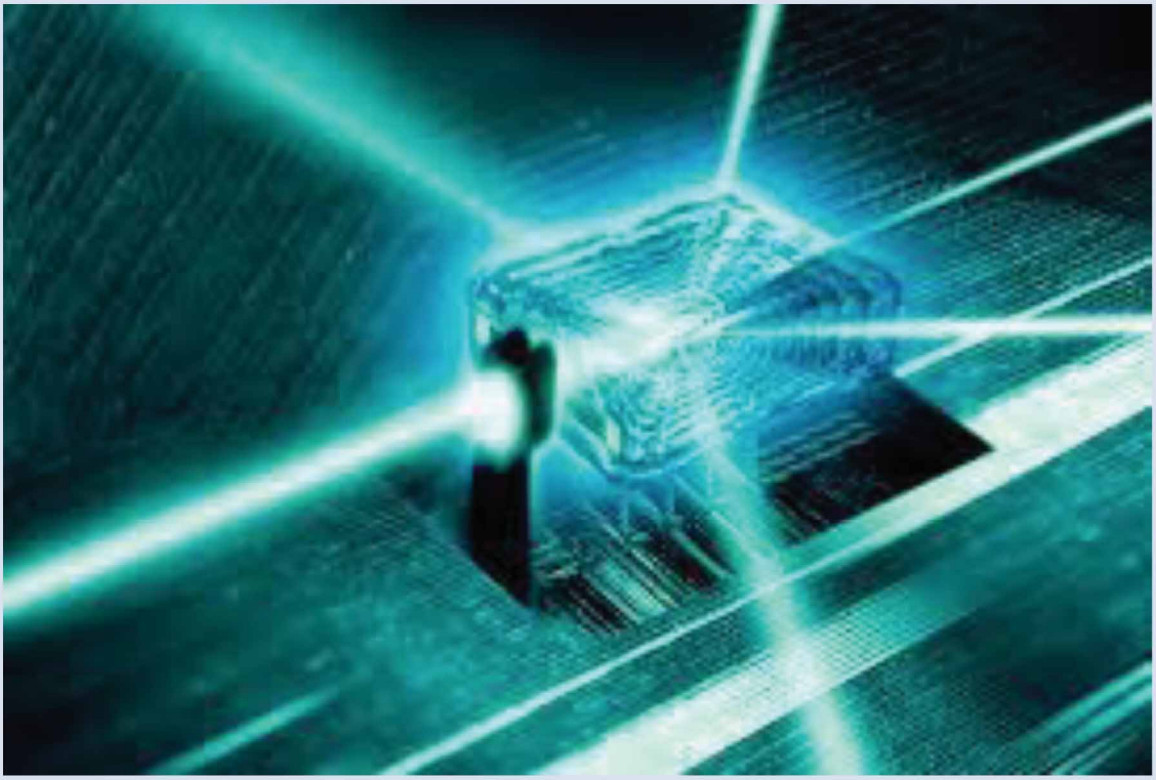
Manigandan S, **..K.S. Rajmohan,**Current trends in gold recovery from electronic wastes, Chapter 16 in Current Developments in Biotechnology and Bioengineering: Resource Recovery from Wastes, Elsevier (2019).

Rajmohan K.S.,S.Varjani, Perspectives on bio-oil recovery from Plastic waste, Chapter 23 in Current Developments in Biotechnology and Bioengineering: Resource Recovery from Wastes, Elsevier(2019).

CHEMICAL ENGINEERING

Conferences, GIAN and Workshops organized

Program/Course name	Funding agency	Coordinators
Computational Fluid Dynamic Modeling of Fluidized Beds, 13-17th Sept. 2018	MHRD/ GIAN Course	Dr. Y. Pydi Setty and Dr. PV Suresh
Two Week Second-Simulation Workshop on "ASPEN and ANSYS (CFD) for Chemical Engineering Students & Scholars (ACCESS-2019)", 3-14th June 2019	Self-financing	Dr. Sarath Babu Anne, Dr. Ramsagar V and P. V Suresh
One day Workshop on "Steady State Process Simulation using Aspen", 11th July 2019	SRM University, Chennai	Dr. Sarath Babu Anne, Dr. Ramsagar V
New Pedagogical Approaches and Avenues for Teaching and Learning in Technical Education (NPAATLTE), 22-23rd Feb 2019	Teaching Learning Centre, NIT Warangal	Dr. K. Anand Kishore
Modeling and Control of Wastewater Treatment Plants , 19-23rd Nov 2018	MHRD/ GIAN Course	Dr. A. Seshagiri Rao and G. Dr. Uday Bhaskar Babu
Process Automation and Control, 9-13th July 2018	TEQIP – III NITW	Dr. A. Seshagiri Rao and Dr. G. Uday Bhaskar Babu
Two Week Simulation Workshop on "Aspen and ANSYS (CFD) for Chemical Engineering Students & Scholars (ACCESS-2019)"	Self-financing	Dr. V. Ramsagar Dr. P. V. Suresh Dr. T. Sunil Kumar Dr. A. Sarath Babu
"Advanced Computer Aided Modeling of Chemical & Biochemical Processes"	MHRD/GIAN Course	Prof. A. Sarath Babu and Dr. V. Ramsagar
"Exergy Analysis of Industrial Processes".	MHRD/GIAN Course	Dr. V Ramsagar and Prof. A. Sarath Babu
Advanced soft materials : synthesis and applications (ASM-2018)	TEQIP-III NITW	Dr. ManoharKakunuri & Dr. S. Manigandan
International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2019) -INDIA, 15-16th Feb, 2019	TEQIP-III NITW /NITW Alumni	Prof. A. Venu Vinod, Dr. Dr. P. V. Suresh, Dr. S. Murali Mohan



COMPUTER SCIENCE AND ENGINEERING

Department of Computer Science & Engineering is the most sought by students in India and abroad for admissions in to all its programmes. Popularity is gained for its innovative teaching of courses in ever updated curriculum so that top software industries prefer our students. Alumni have spread over the world across MNCs enjoying their positions in top brass and running their own industries. Department was established in 1991 and currently offering B.Tech.(CSE), M.Tech.(CSE), M.Tech.(CSIS), MCA and Ph.D by following pedagogical and technological methods to address the ever advancing courses.

Department has its associated centre of excellence in Big Data, High Performance Computing Cluster Lab, resource centre under ISEA project of MeitY and E&ICT academy of MeitY offering FDPs to the nation both in direct teaching and also through National Knowledge Network. High profile ethics, culture and values are imparted to drive individuals towards exploring themselves in their field of interest. It offers a global exposure to the students enabling them to collaborate with other institutes and expand their horizons. World class facilities, collaborative faculty and Centre of excellences offer vast scope for the students towards lifelong learning

Focused areas of teaching are from general problem-solving techniques to algorithm design; covering all the core courses that enable students to comprehend the functionalities of system software, application software, design of databases, design of compilers and software, communication protocols and computational strategies, convolutional methods of advanced learning; offering thrust courses as electives from time to time with practices on mod-ern tools on state-of-art computing platforms and infrastructure.

Annual Yields:

Laureates have emerged with immense achievements Start-ups are another major sector taken up by the students that forms a platform for the implementation of new ideas through young minds. Around 95% of students endure into careers in renowned industry and academia in India and abroad.

FACULTY

Dr. R.B.V. Subramaanyam
Professor and Head
Areas of Interest:
Data Mining, Big Data Analytics, Fuzzy Data Mining, Graph Databases; Machine Learning.

Dr. DVLN Somayajulu
Professor (HAG)
Areas of Interest:
Databases, Information Extraction, Query Processing, Big Data and Privacy

Dr. B. B. Amberker
Professor
Areas of Interest:
Cryptosystems and Signature schemes, Pairing Based Cryptography, Game Theory, Secure Multiparty Computations

Dr S G Sanjeevi
Professor
Areas of Interest:
Machine Learning and Soft Computing; Artificial Intelligence, Software Engg

Dr. P Radha Krishna
Professor
Areas of Interest:
Data Mining, Machine Learning, Big Data, Databases and workflow Systems

Dr. K. Ramesh
Associate Professor
Areas of Interest:
Architectures and Coding infrastructures in Computer Networks, Service-oriented, Distributed, Secured, Cluster and Cloud Computing

Dr. Ch. Sudhakar
Associate Professor
Areas of Interest:
Cloud Computing, Distributed Systems, High Performance Computing, Operating Systems

Dr. S. Ravi Chandra
Associate Professor
Areas of Interest:
Software Engineering, Design Patterns, Software Architecture, , Service Oriented Architecture, Cloud Computing, Privacy Preserving

Dr. R. Padmavathy
Associate Professor
Areas of Interest:
Cryptanalysis and Network Security

Dr.RashmiRanjan Rout
Associate Professor
Areas of Interest:
Computer Networks, Mobile Computing; Wireless Ad-hoc and Sensor Networks;Internet of Things, Network Security

Dr. T. Ramakrishnudu
Assistant Professor

Areas of Interest: Association Rule Mining; Distributed Data Mining; Big Data Analytics; Web Mining; Database Systems; Web Technologies;

Dr. Raju Bhukya
Assistant Professor

Areas of Interest: Software Engineering, Bioinformatics, Computer Organization

Dr.U.S.N. Raju
Assistant Professor

Areas of Interest: Computer Vision and Image Processing

Dr. K.V. Kadambari
Assistant Professor

Areas of Interest: Computational Neuroscience, Modeling and simulation, Machine learning, AI, Neuro Imaging.

Dr. P. VenkataSubba Reddy
Assistant Professor
Areas of Interest: Algorithms and Graph Theory

Dr.ManjubalaBisi
Assistant Professor

Areas of Interest: Software Reliability Modeling and Prediction, Machine Learning, Soft Computing

Dr. Earnest Paul Ijjina
Assistant Professor

Areas of Interest: Computer Vision, Machine Learning, Soft Computing, Video Content Analysis, Deep Learning

Dr.Sushil Kumar
Assistant Professor

Areas of Interest: Soft Computing, Metaheuristics, Image Processing, Nature Inspired Algorithms

Dr. N Renugadevi
Assistant Professor

Areas of Interest: Group Key Management Techniques, Public Key Cryptography Key Exchange, Cognitive Radio Networks, Wireless Networks

Dr. E Suresh Babu
Assistant Professor

Areas of Interest: Wireless Networks, Internet of Things, Security, Cryptography Schemes, Blockchain Technology

Dr. M Sandhya
Assistant Professor
Areas of Interest: Bio-metrics, Image Processing, Pattern Recognition

Dr. M Srinivas
Assistant Professor
Areas of Interest: Medical Imaging, Machine Learning, Computer Vision, Deep Learning

Dr.IiaiahKavati
Assistant Professor
Areas of Interest: Bio-metrics, Image Processing, Machine Learning, Internet of Things

Dr.Smita Naval
Assistant Professor
Areas of Interest: Malware analysis, IoT Security, Pattern Recognition

Dr.Sujit Das
Assistant Professor
Areas of Interest: Fuzzy Set, Evolutionary Computation, Robust and Optimal Decision using Soft Computing

COMPUTER SCIENCE & ENGINEERING

Publications (in peer reviewed international journals)

lahariVyshnaviBommasani, Erukala Suresh Babu, SasankAluri, " A Novel Semantic Medical Access Monitoring System For E-Health Applications using Internet of Medical Things", International Journal of Engineering & Technology Feburary-2018 Vol-7 Issue-1.1 pp 265-272 ISSN- 2227-524X Publisher:Science Publishing Corporation, RAK Free Trade Zone, UAE.

BalaBharathi, E.SureshBabu, "A Novel Approach to Cyber Hazard Management Intelligence System", International Journal of Engineering & Technology March-2018 Vol-7 Issue-2.7 pp 473-479 ISSN- 2227- 524X

Aditya Kumar Sahu, Gandharba Swain, E.SureshBabu, " Digital Image Steganography Using Bit Flipping",Cybernetics And Information Technologies Vol 18, No 1, March-2018, 2018

Sujit Das, Mohuya B. Kar, SamarjitKar, Tandra Pal, "An approach for decision making using intuitionistic trapezoidal fuzzy soft set ", Annals of Fuzzy Mathematics And Informatics, 2018 (Volume 16, No. 1, (August 2018), pp. 85–102

Sai Krishna Mothku, RashmiRanjan Rout "Fuzzy Logic Based Adaptive Duty Cycling for Sustainability in Energy Harvesting Sensor Actor Networks", Journal of King Saud University-Computer and Information Sciences (Elsevier), Published online:3rd Oct 2018

Lingam Greeshma, RashmiRanjan Rout, DVLN Somayajulu, "Learning Automata-Based Trust Model for User Recommendations in Online Social Networks", Computers & Electrical Engineering (Elsevier), Published: Vol 66, page No. 174-188, 2018.

Anil Pinapati and R.Padmavathy, "A Reversible Data Hiding using Prior Pixel Pairs in Two-Dimensional Histogram with Tri-Directional Modification of Difference-Histogram", IETE Technical Review, Nov 2018 DOI: 10.1080/02564602.2018.1538825.

Sujit Das, DebashishMalakar, SamarjitKar, Tandra Pal, "A brief review and future outline on decision making using fuzzy soft set", International journal of fuzzy systems applications 7 (2) (2018) 1-43

Shweta Bhandari, RekhaPanihar, Smita Naval, Vijay Laxmi, AkkaZemmari, Manoj Singh Gaur, SWORD: Semantic aWareandrOidmalwaRe Detector", Journal of Information Security Applications 42: 46-56 (2018)

Dr. Sushil Kumar, Brain Tumor Segmentation using DE Embedded OTSU method and Neural Network Multidimensional Systems and Signal Processing, 2018 [IF-2.388]

Sai Krishna Mothku, RashmiRanjan Rout, Markov Decision Process and Network Coding for Reliable Data Transmission in Wireless Sensor and Actor Networks,Pervasive and Mobile Computing (Elsevier), Accepted on 22.03.2019.

Sai Krishna Mothku, RashmiRanjanRout,Adaptive Fuzzy-Based Energy and Delay-Aware Routing Protocol for a Heterogeneous Sensor Network,Hindawi, Journal of Computer Networks and Communications, Volume 2019, Article ID 3237623, 11 pages

Jagannath Roy, Sujit Das, SamarjitKar, and Dragan Pamučar,An Extension of the CODAS Approach Using Interval-Valued Intuitionistic Fuzzy Set for Sustainable Material Selection in Construction Projects with Incomplete Weight Information Symmetry,doi:10.3390/sym110303932019, 11, 393;

Amalendu Si, Sujit Das, and SamarjitKar,An approach to rank picture fuzzy numbers for decision making problems, Decision Making: Applications in Management and Engineering,DOI: https://doi.org/10.31181/dmame 1902049s 2019

Tanmay Sharma and R Padmavathy,Special-q Techniques for Number Field Sieve to Solve Integer Factorization,DOI: 10.1007/978-981-10-8968-8_40,pp.471-485, Smart Innovations in Communication and Computational Sciences, Springer, 2019.

P. VenkataSubba Reddy, DeepakkumarV.Gupta and AakankshaHere,Computing Topological Indices and Polynomials of Some NanostarDendrimersNonlinear Studies, 2019, 26(2), pp. 269-278.

Dr. Sushil Kumar, An intelligent lung tumor diagnosis system using whale optimization algorithm and support vector machine,International Journal of System Assurance Engineering and Management,2019.

Avijit De, PradipKundu, Sujit Das, SamarjitKar,A ranking method based on interval type-2 fuzzy sets for multiple attribute group decision making Soft Computing, 2019,DOI: https://doi.org/10.1007/ s00500-019-04285-9

Avijit De, Sujit Das, SamarjitKar,Multiple attribute decision making based on probabilistic interval-valued intuitionistic hesitant fuzzy set and extended TOPSIS method,Journal of Intelligent & Fuzzy Systems, 2019, DOI: 10.3233/JIFS-190205

Publications (in peer reviewed international conferences)

M.Ayoubi, S.Ravichandra, "SEDA-SOA: A Scalable Event -Driven Context-Aware Service Oriented Architecture 2018, 9th International Conference on Computing, Communications and Networking Technologies (ICCCNT), 10-12, July 2018, Bengaluru, INDIA ieeexplore.ieee.org.

Vinay Raj, S.Ravichandra, " Microservices: A Perfect SOA Based Solution for Enterprise Applications compared to Web Services 2018, 3rd, IEEE International Conference on Recent Trends in Electronics, Information and Communication Technology (RTEICT-2018), 18-19 May 2018.

Anil Pinapati and R.Padmavathy, " Multimedia Encryption on Bitplanes of Image Using ECC on Koblitz Curves with Lopez–Dahab Projective Coordinates, DOI https://doi.org/10.1007/978-981-13-7091-5_2

B S SachinGovind, T Ramakrishnudu (main supervisor) and K Lakshmi Saideep, Novel recommender systems using personalized sentiment mining IEEE CONECCT 2017- The IEEE International Conference on Electronics, Computing and Communication Technologies, Bangalore, India, 16-17 March 2018.

T.RamakrishnuduandTangedipalliBalakrishna , Personalised context aware content relevant disease prediction and diet recommendation system UK Academy for Information Systems Annual International Conference (UKAIS2018), Oxford, UK, 20-21 March 2018.

K. ViswanathanIyer, SonuSeoran, Samarth Guptha and P. VenkataSubba Reddy, A Note on Domination Cover Number of Different Graph Operations International Conference on Discrete Mathematics (ICDM-2019), June 8-10, 2019, Bengaluru.

K. ViswanathanIyer, Sukhdev Singh, Samarth Guptha and P. VenkataSubba Reddy, Double Roman Domination in Join, Corona and Rooted Product of Graphs International Conference on Discrete Mathematics (ICDM-2019), June 8-10, 2019, Bengaluru.

P. VenkataSubba Reddy, DeepakkumarV.Gupta and Aakanksha Here, Computing Topological Indices and Polynomials of Some Nanostar Dendrimers Third International Conference on Mathematical Techniques in Engineering and Applications (ICMTEA 2018), December 7-8, 2018, Dehradun.

DeepakkumarV.Gupta, P. VenkataSubba Reddy and Aakanksha Here, New Results on Topological Indices of Graphs International Conference on Mathematical Methods, Modeling and Simulation in Chemical Sciences (ICMMSC 2018), December 6-8, 2018, Chennai.

P. Chakradhar and P. VenkataSubba Reddy, Complexity of Roman {2}-Domination and the Double Roman Domination in Graphs International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM 2018) , December 3-5, 2018, Chennai.

Deepakkumar V. Gupta and P. VenkataSubba Reddy, A Note on Topological Indices of

Trees, International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2018), October 23-25, 2018, Delhi.

Deepakkumar V. Gupta and P. VenkataSubba Reddy, Parameterized Complexity of Variants of Connected Domination in Graphs, International Conference on Discrete Mathematics and its Applications to Network Science (ICDMANS 2018), July 7 - 10, 2018, Goa.

Kiran Dey and P. VenkataSubbaReddy,Complexity of New Variants of Secure Domination in Graphs, International Conference on Discrete Mathematics and its Applications to Network Science (ICDMANS 2018), July 7 - 10, 2018, Goa.

Dr.E.SureshBabu, S. Naganjaneyulu ,P. V. Srivasa Rao ,G. K. V. Narasimha Reddy, An Efficient Cryptographic Mechanism to Defend Collaborative Attack against DSR Protocol in Mobile Ad-Hoc Networks, 3rd International Conference on Information and Communication Technology for Intelligent Systems ICTIS 2018, April 06-07, 2018 Organized in Hotel Pride Plaza, Ahmedabad, India

Earnest Paul Ijjina and Sanjay Kumar Sharma,Accident detection from dashboard camera video,IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT 2019), IIT Kanpur, July 6-8, 2019

Earnest Paul Ijjina, Dhananjai Chand, Savyasachi Gupta and Goutham K, Computer Vision-based Accident Detection in Traffic Surveillance,IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT 2019), IIT Kanpur, July 6-8, 2019

Earnest Paul Ijjina, Hand gesture recognition based on saliency and foveation features using convolutional neural network, International Conference on Computational Intelligence and Informatics (ICCII 2018), Hyderabad, Dec 20-21, 2018

Earnest Paul Ijjina, Human fall detection using temporal templates and convolutional neural networks,International Conference on Computational Intelligence and Informatics (ICCII 2018), Hyderabad, Dec 20-21, 2018

Earnest Paul Ijjina, Action recognition using motion history information and convolutional neural networks, International Conference on Computational Intelligence and Informatics (ICCII 2018), Hyderabad, Dec 20-21, 2018

Earnest Paul Ijjina, Action recognition in sports videos using stacked auto encoder and HOG3D features, International Conference on Computational Intelligence and Informatics (ICCII 2018), Hyderabad, Dec 20-21, 2018

Amalendu Si, Sujit Das, SamarjitKar, An Approach to Rank Picture Fuzzy Numbers for Decision Making Problems, First International Conference on Frontiers of Operations Research & Business Studies (FORBS 2018)

Funded Research Projects 2018-19.

Dr. RashmiRanjan Rout, NRDMS, Department of Science and Technology, India- **33.3 lakhs**

Dr.E.SureshBabu, ICPS Programme, Sponsored by Deparment of Science and Technology(DST), May-2019- **9.00 Lakhs**

National/International Conferences Organised

Prof. R. B. V. Subramanyam (Organizing Chair) & Prof. D. V. L. N. Somayajulu (General Chair), Dept. of CSE, NIT Warangal the Sixth International Conference on Big Data Analytics 2018, from 18th December,2018 to 21st December 2018

Prof. R. B. V. Subramanyam, "NationalConfernces on Recent Advances in Modeling Expert Systems (RAMES)", Organised by Department of CSE, National Institute of Technology Warangal, from 26th – March 2018 to 28th March, 2018.

COMPUTER SCIENCE & ENGINEERING

FDPs/Workshop/Seminar Conducted

The Deparment has conducted 50+ Faculty DepevelopmentProgramme, 5+ National Knowledge Network Programme through E&ICT Academcyand TEQIP-III

Dr. E.SureshBabu, " Key Note Address on Cyber Security in Andhra Pradesh Science Congress-2018(APSC-2018)", Yogi Vemana University, Kadapa, 11th November 2018.

Dr. M. Srinivas, "Deep Learning with Image and Computer Vision Applications in 9th International Conference on Soft Computing for Problem Solving ", Liverpool Hope University, Liverpool, UK 2 - 4 September 2019

Achievements/Awards/Innovations

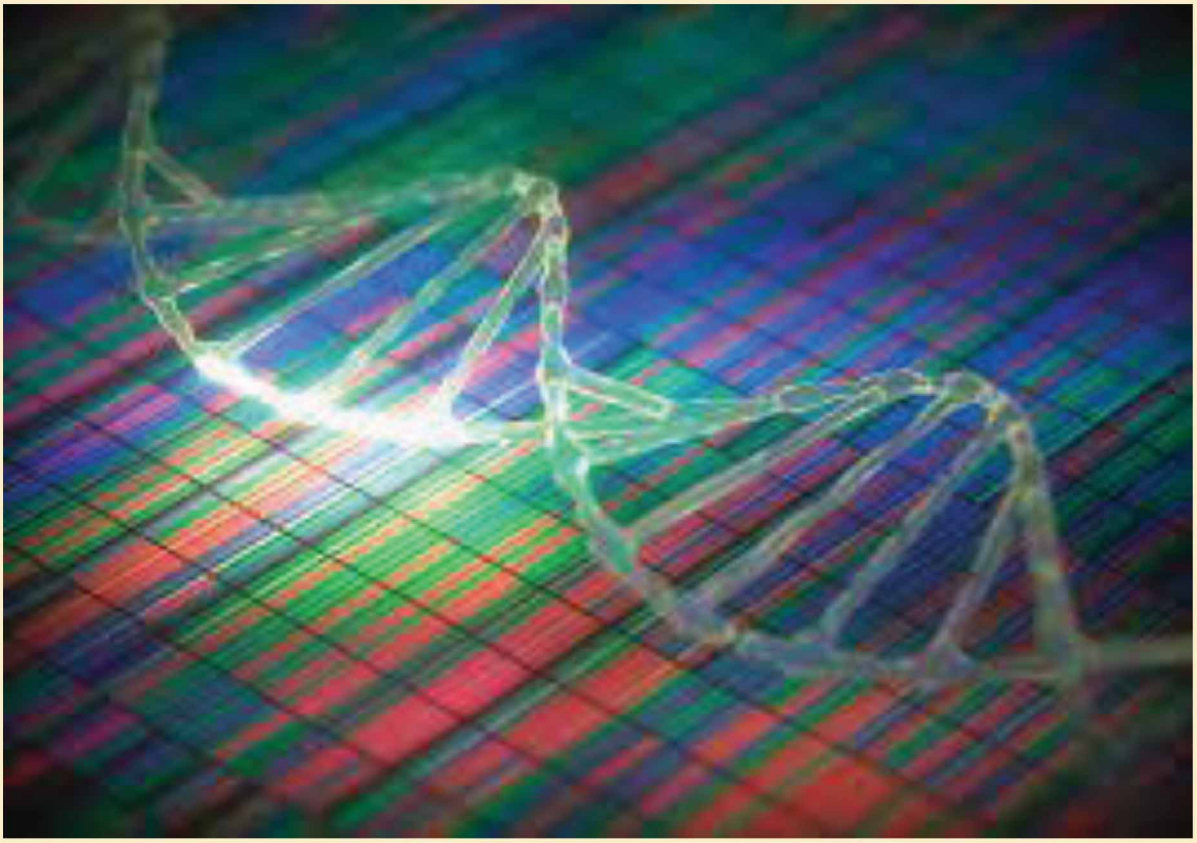
Sujit Das, received "Best Paper award in the First International Conference on Frontiers of Operations Research & Business Studies (FORBS 2018) organized by Calcutta Business School in collaboration with ORSI Kolkata Chapter

We Keep Our Hands On

Five laboratories are meant for curriculum-based laboratory courses. Cognos, Clementine, Oracle, NS3 simulator, MATLAB, Rational Rose, IBM test suit, QualNet are a few to list here among several software available besides open source used in the labs. Several Computational Infrastructure are 8+1 node HPC cluster, High-end servers each worth Rs.40 lakhs are meant for students to do their projects. Department has its exclusive research lab spaces for research in Data Mining, Big Data, Cloud Computing, Internet of Things, Image Processing, Deep Learning. It is well supported by experienced trained technical staff by maintaining servers supporting Microsoft Windows, Linux and VM Ware based servers. Department has uninterrupted power; internet access and servers are accessible from Hostels too. The department's major Academic laboratories are:

- Computing Laboratory
- Data Engineering Laboratory
- Open Source Development Laboratory
- Software Engineering Laboratory
- Wireless and Security Laboratory
- Mini Centre of Excellence - Centre for Big Data

  with 1 crore fund



BIOTECHNOLOGY

The Department of Biotechnology was established in the year 2006 with B.Tech program in Biotechnology with the sanctioned intake of 87 students. It also offers doctoral program in Biotechnology. Recently, the department has proposed to start M.Tech Biotechnology with intake of 20 students from academic year 2020-21. The department has been recently shifted to a new premises "Chemical Engineering and Biotechnology block" with state of art infrastructure facilities exclusively 3 floors designed for Biotechnology department. The Department has highly motivated, experienced and young faculty members carrying out research in key areas of Biotechnology. At present 24 PhD scholars are carrying out their research work under the guidance of faculty in the department. The department has sophisticated instruments such as RT-PCR, HPLC, GC etc.. The department has already executed research projects and at present it has 10 research projects to the tune of 2.3 crores funded by DBT/DST/ICMR/CSIR, Govt. of India.

The faculty of the department has research interest in diversified areas of Biotechnology. The department has proposed two centres of excellence (Centre for Cellular &Omics Research and Centre for Bioenergy & Environmental Research) based on the expertise of the faculty under HEFA.

FACULTY

Dr.R.SatishBabu
Associate Professor & Head
Areas of Research:
Bioprocess Engineering,
Modelling & Simulation

Dr.ParchaSreenivasaRao
Associate Professor
Areas of Research:
Stem Cell Engineering,
Metabolic Engineering.

Dr. P OnkaraPerumal
Associate Professor
Areas of Research:
Bioinformatics&Computational
Biology

Dr.KorrapatiNarasimhulu
Associate Professor
Areas of Research:
Environmental Biotechnology,
Modelling & Simulation

Dr.AmitavaBandhu
Assistant Professor
Areas of Research:
Studies on gene regulation in
Mycobacteria

Dr. B Rama Raju
Assistant Professor
Areas of Research:
Metabolic Engineering, Bio
fuels and Biomaterials

Dr. V. Kohila
Assistant Professor

Areas of Research:
Cancer gene therapy, Marine biotechnology, Bioinformatics

Dr.AsimBikas Das
Assistant Professor

Areas of Research:
Network system biology; Signaling pathways in cancer

Dr.UrmilaSaxena
Assistant Professor

Areas of Research:
Nanobiotechnology and Medical Biosensors

Dr.PrakashSaudagar
Assistant Professor

Areas of Research:
Molecular and Biochemical parasitology

Dr. M Jerold
Assistant Professor

Areas of Research:
Biofuels; Biosorption; Wastewater Treatment.

Dr. P Anbumathi
Assistant Professor

Areas of Research:
Systems Biology; Mathematical Modeling and Simulation

Dr. P Shyam
Assistant Professor

Areas of Research:
Bioinformatics, Systems biology, Next Generation Sequencing,

Dr. D Rathnaprabha
Assistant Professor

Areas of Research:
Plant Biotechnology and Molecular biology,

Dr.K.Divakar
DST-INSPIRE Faculty

Areas of Research:
Biocatalysis& Enzymology, Metagenomics,

BIOTECHNOLOGY

Publications (in peer reviewed journals)

Bhaskar,B.,N.Mekala, and **SreenivasaRao**. (2018). Improved osteogenic differentiation of umbilical cord blood MSCs using custom-made perfusion bioreactor. Biomedical Journal.2018

NadeemSiddiqui, SimranAsawa, BhaskarBirru, **RamarajuBaadhe**, **SreenivasaRao**, "PCL-Based Composite Scaffold Matrices for Tissue Engineering,Molecular Biotechnology,2018

BirruBhaskar,RobertOwen,HosseinBahmaee ,ZenaWally,Parcha**SreenivasaRao**,Gwendolen C Reilly,"Composite porous scaffold of Polyethylene glycol (PEG)/ Polylactic acid (PLA) support improved bone matrix deposition in vitro compared to PLA -only scaffolds" Journal of Biomedical Materials Research,2018

Durthi, C. P., Pola, M., Podha, S., &**Rajulapati, S. B.** (2019). Genetic Algorithm Optimization of L-Glutaminase from novel mutated Bacillus sps. Current Trends in Biotechnology & Pharmacy, 13(1).

Durthi, C. P., Pola, M., Kola, A. K., &**Rajulapati, S. B.** (2019). Screening, optimization of culture conditions and scale-up for production of the L-Glutaminase by novel isolated Bacillus sps. mutantendophyte using response surface methodology. Biocatalysis and agricultural biotechnology, 18, 101077.

Pola, M., **Rajulapati, S. B.,**Durthi, C. P., Erva, R. R., & Bhatia, M. (2018). In silico modelling and molecular dynamics simulation studies on L-Asparaginase isolated from bacterial endophyte of Ocimumtenuiflorum. Enzyme and microbial technology, 117, 32-40

UshakiranmayiManagamuri, MuvvaVijayalakshmi, Mani DeepaIndupalli, Venkat Siva Rama Krishna Ganduri, **Rajulapati, S. B.**, and SudhakarPoda (2018). Improved Bioactive Metabolite Production by Saccharopolysporahalotolerans VSM-2 Using Response Surface Methodology and Unstructured Kinetic Modelling, *Pharmacognosy Journal*,10(5), 833-840.

ChandrasaiPotlaDurthi, **Rajulapati, S. B.**, Aseem Ali Palliparambil, Anand Kishore Kola, ShirishHariSonawane (2018).studies on removal of arsenic using cellulose acetate-zinc oxide nanoparticle mixed matrix membrane, International Nano Letters.

B.Sumithra, **UrmilaSaxena**, **AsimBikas Das,** A comprehensive study on genome-wide coexpression network of KHDRBS1/Sam68 reveals its cancer and patient-specific association, Scientific Reports(Nature), 2019.

AsimBikas Das, Disease association of human tumor suppressor genes, **Molecular Genetics and Genomics, 2019**, 294, 931-940.

VSPK SankaraAdityaJayanthi, **AsimBikas Das**, UrmilaSaxena, Grade-specific diagnostic and prognostic biomarkers in breast cancer, **Genomics, 2019**.

VSPK. SankaraAdityaJayanthi, **AsimBikas Das**, **UrmilaSaxena**, Fabrication of an immunosensor for quantitative detection of breast cancer biomarker UBE2C, **RSC Advances, 2019**, 9, 16738.

R. Matta, B. Shankar, P. Jalapathi, **ShyamPerugu**. Synthesis, Antibacterial Activity, and Cytotoxicity of Newly Synthesized N-Substituted 5, 6-Dimethoxy-1H-indole Derivatives. 2019, 89, 7, 1496–1501.

Parameshwara Chary Jilloju, AllamVinaykumar, **PeruguShyam**, RajeswarRaoVedula. One-pot, Multicomponent Cascade Reaction for the Synthesis of Various Aralkyl/alkylthio-3,5-dimethyl-1H-pyrazolyl-4H-1,2,4-triazol-4-amine and Their Docking Studies. J. Heterocyclic Chem. 2019, 56, 1012-1019.

B. Sonyanaik, B. Sakram, **Shyam P**, P. Madhu, M. Govan. Green Synthesis and Biological Evaluation of Novel Fused 6-(2-Chloro-4-fluorophenyl)-9-arylimidazo[1,2-a][1,8]naphthyridine Derivatives Catalyzed by DABCO.Russian Journal of General Chemistry, 2018, 88(7), 1495-1501.

BIOTECHNOLOGY

SonyanaikBanoth, **Shyam P**, SakramBoda. Green Synthesis of Fused Imidazo [1,2-a][1,8]naphthyridine Derivatives Catalyzed by DABCO under Solvent-Free Solid-State Conditions and Their Biological Evaluation. Journal of Heterocyclic Chemistry, 2018. DOI 10.1002/jhet.3092.

SnehaMunshi, Sandhyaa Subramanian, Samyuktha Ramesh, HemashreeGolla, **Divakar K**, MadhurimaKulkarni, Luis Alberto Campos Prieto, Ashok Sekhar, and Athi N. Naganathan (2019), 'Engineering Order and Cooperativity in a Disordered Protein', Biochemistry, 58, 2389−2397

Ramya Shree B, Sowjanya B, &**Divakar K** (2019), 'Metagenomicbioprospecting of novel oxygen insensitive nitroreductase for degradation of nitro aromatic compounds', International Biodeterioration &Biodegradation, 104737.

Book & Book Chapters

Ramya Shree Boddu and **Divakar K** (2018), Metagenomic insights into environmental microbiome and their application in food/pharmaceutical industry', In Patra JK, Gitishree D and Han-Seung Shin (Eds.) 'Microbial Biotechnology: Application in food and pharmacology', Vol.2, pp.23-38, Springer-Nature pte. Ltd.

Divakar K, Deepa APJ, Panneer SG, Suryia PM, Ashwin K, Nandhini DG, Gautam P (2018), 'Detection of multiple enzymes in fermentation broth using single PAGE analysis', In Kurien, BT, Scofield, RH, (Eds.), Methods in molecular biology – Protein Gel Detection and Imaging: Methods and Protocols, Springer Protocols.

PrakashSaudagar&Divakar K Recent Trends in Nanobiotechnology: Food and Biomedical Applications, Central West Publishing, Australia, (ISBN: 978-1-925823-11-4).

Conference Papers (International)

Dr. R Satish Babu, presented paper titled" Modeling and optimization of bioleaching process to recover heavy metals from spent catalyst" in HERAKLION 2019" 7th International Conference on Sustainable Solid Waste Management.

Funded Research Projects

PrakashSaudagar, DST-SERB (EEQ) sponsored project (Rs. 49 Lakhs)
Rathnapraba D, DST-SERB (EEQ) sponsored project (Rs. 49 Lakhs)

Workshops/FDP/Conferences Organised

Teaching and Learning of Molecular biology and enzymology through hands on experience, TLC-NITW, PMMMTNMTT, MHRD Govt. of India, 18th–23rd September 2018 (Coordinators: Dr.PrakashSaudagar, Dr.Divakar K &Dr. R Satish Babu.

Continuous education program on "Molecular Biotechnology: Tools and Techniques"22nd – 26th October 2019, Sponsored by TEQIP III (Coordinators: Dr.PrakashSaudagar&Dr. Divakar)

National Workshop on 'Modeling, Simulation and Optimization of Bioprocesses', 10-14th December 2018, Sponsored by TEQIP III (Coordinators: Dr. R Satish Babu & P. Anbumathi)

National Conference on Molecular Biotechnology, 4th& 5th January 2019, Sponsored by TEQIP III (Coordinators: Dr.PrakashSaudagar&Dr. Divakar)

Faculty Development Programme (FDP) on Next Generation Sequencing (NGS) and Data analysis through Hands-on experience. 6th – 11th, May, 2019 sponsored by ICT, NIT Warangal (Coordinators: Dr.RamarajuBaadheand Dr.PeruguShyam)

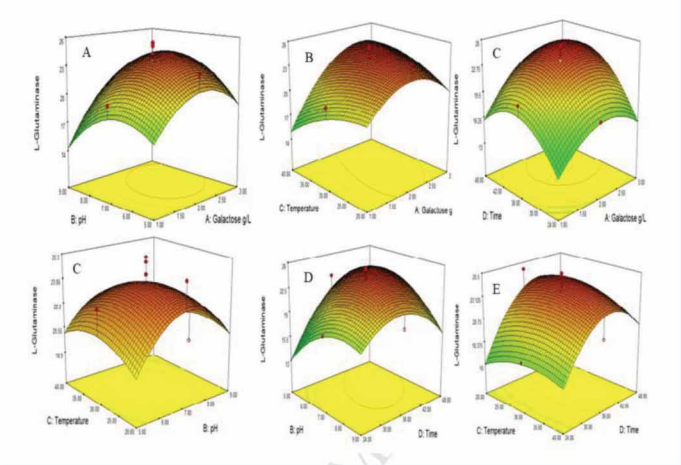
Faculty Development Programme on Statistics and Data Analysis for Engineers and Researchers. 27th May- 01st June, 2019, sponsored by ICT, NIT Warangal (Coordinators: Dr.PeruguShyam and Dr.K Narasimhulu)

Skill development program on "High Performance Liquid Chromatography (HPLC), Gas Chromatography (GC) and FPLC", 15th-20th July, 2019 (Coordinators: Dr.P.SreenivasaRao & Dr.Ramaraju Baadh).

RESEARCH HIGHLIGHTS

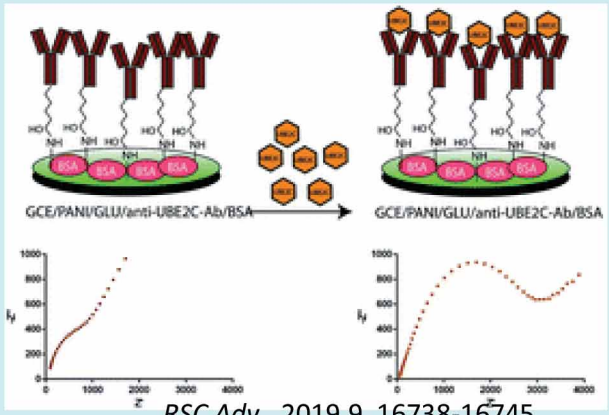
Overlap of protein-protein interactions (PPI) dataset and coexpressed gene of Sam68/KHDRBS1 and processes and pathway enrichment analysis in different cancer: (**A**–**D**) Venn diagram and network figure shows the overlapping genes which coexpress and interact with Sam68/KHDRBS1in KIRP, LUAD, OV and LAML respectively. The bar diagram indicates the process and pathway enrichment analysis of overlapping gene in respective cancer. Logarithmic corrected p-values for significant overrepresentation are shown.

L-Glutaminase is known as the anti-cancer drug to treat anti-leukemic cancer besides its use in food industry for the acrylamide degradation of fried foods. Submerged fermentation was carried out for the production; statistical based experimental designs were employed to optimize the culture conditions and to maximize the L-Glutaminase activity from novel *Bacillus*sps., mutant endophyte isolated from *Ocimumtenuiflorum*.

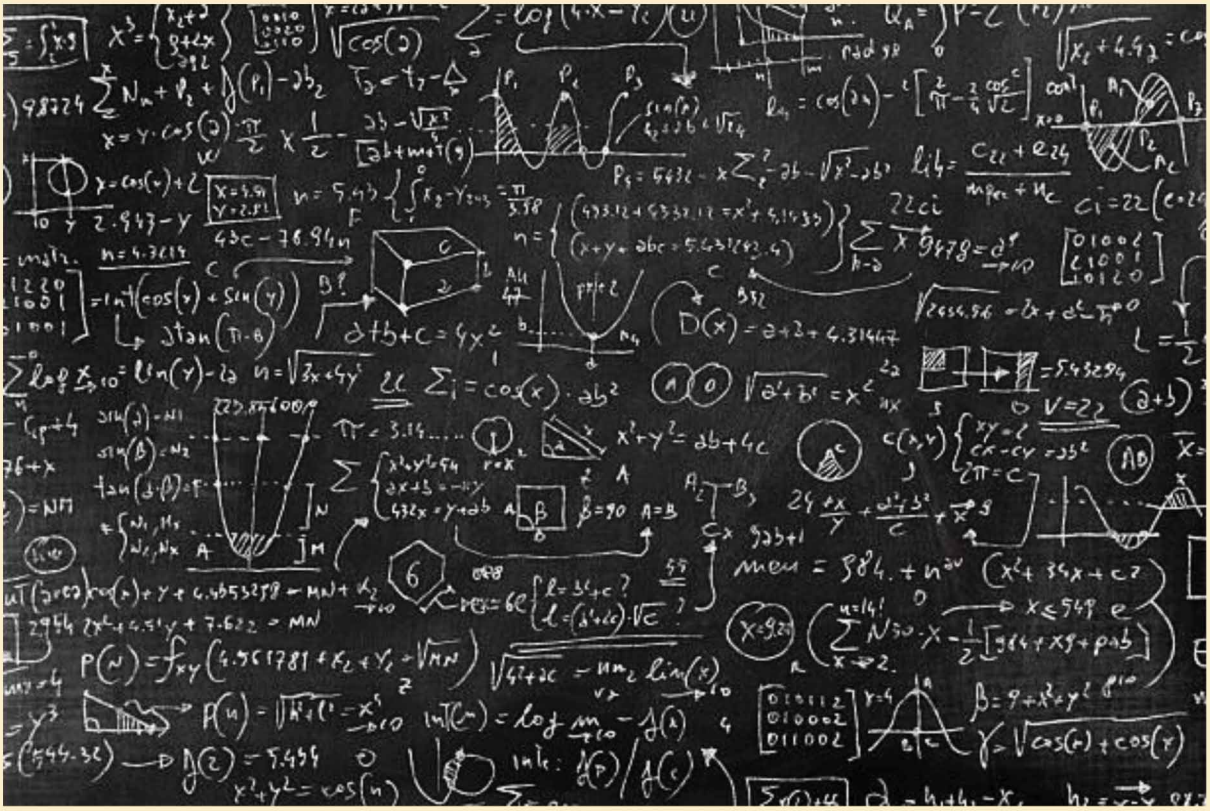


Biocatal. Agri. Biotech., 2019, 18, 101077 16738-6745

An immunosensor was fabricated by immobilizing the capture anti-UBE2C antibody onto a polyaniline (PANI) modified glassy carbon electrode (GCE) through glutaraldehyde crosslinking. The assembly process of the immunosensor was examined using scanning electron microscopy, cyclic voltammetry, and electrochemical impedance spectroscopy. The fabricated immunosensor enabled the detection of recombinant human UBE2C in the range of 500 pg mL^{-1} to 5 µg mL^{-1}. The diagnostic application of the fabricated immunosensor was explored for the analysis of breast cancer cell line MCF-7 cell extract. The immunosensor demonstrated high selectivity for UBE2C. The fabricated immunosensor also exhibited good reproducibility and storage stability.



RSC Adv., 2019,9, 16738-16745



MATHEMATICS

The Department of Mathematics is a highly reputed Department which functions with excellence as its motto. The Department was started in the year 1959 along with other Engineering and Science Departments and has established itself as a dynamic centrefor academic and research activities. The Department offers basic courses in Mathematics for B.Tech. At post-graduate level, the Department offers well-designed diverse courses for all Programmes of M.Tech. M.C.A., M.B.A. and M.Sc. Tech (Engg. Physics) and also offers Open Electives for all PG and Ph.D. Programmes.

The department offers Two (Four Semester) PG programmes namely: M.Sc. (Applied Mathematics) programme and M.Sc. (Mathematics and Scientific Computing) programme.

The Department since its inception in 1959 is known to be an active research centre in Mathematics.The Department offers Ph.D programme in Mathematics on regular basis and also under Quality Improvement Programme (QIP). Number of Ph.D's awarded is 108.

In addition to the regular class room instruction and laboratory course in each semester, seminar and project work are integral parts of both the courses. They inculcate a spirit of practical application of Mathematical Concepts and also instil enthusiasm for research activity. Special emphasis is laid on promoting team spirit and improving the oral communication skills of the students.A rigorous academic schedule, a great emphasis is placed on all-round development of the students.

FACULTY

Dr. Srinivasacharya D
Professor and Head
Research Areas:
Fluid Mechanics, CFD

Dr. Reddy Y N
Professor
Research Areas: Numerical Analysis

Dr. Viswanadham K N S K,
Professor
Research Areas: Numerical Analysis, FEM

Dr. Ramana Murthy J V,
Professor
Research Areas: Fluid Mechanics

Dr. Debashis Dutta
Professor
Research Areas: Operations Research, Mathematical Modeling

Dr. P. Muthu
Associate Professor
Research Areas:
CFD, Bio Dynamics

Dr. Rani, H.P.
Associate Professor
Research Areas: Nonlinear dynamics, CFD

Dr. BenerjiBabu A
Associate Professor
Research Areas:
Geophysical Fluid Dynamics

Dr. R. S. Selvaraj
Associate Professor
Research Areas: Algebraic Coding Theory

Dr. Kurmayya. T
Assistant Professor
Research Areas: Functional Analysis/ Linear Algebra

Dr. Pranitha J
Assistant Professor
Research Areas:
Fluid Dynamics, Heat Transfer, Porous Media

Dr. Ch. Ramreddy
Assistant Professor
Research Areas: Fluid Dynamics, CFD

Dr. D. Bhargavi
Assistant Professor
Research Areas: Fluid Dynamics, Numerical Heat Transfer

Dr. Satyanarayana, E
Assistant Professor
Research Areas: Partial Differential Equations

Dr. Y Sreenivasa Rao
Assistant Professor
Research Areas: Cryptography and IoT Security

MATHEMATICS

Publications (in peer reviewed journals)

YNReddy,KP and DK**:** Accurate numerical method for singularly perturbed differential-difference equations with mixed shifts. Khayyam Journal of Mathematics, 4 (2018), No. 2, pp 110 – 123.

Srinivasacharya, D.and Sreenath, I**:**Bioconvection in a Squeezing flow of a Micropolar Fluid in a Horizontal Channel. Heat Transfer—Asian Research,Vol. 48, pp. 2155-2173, 2019.

Srinivasacharya, D. and Jagadeeshwar, P: Viscous Flow over an Exponentially Stretching Sheet with Hall, Thermophoresis and Viscous Dissipation Effects. International Journal of Advanced Trends in Computer Applications (IJATCA), Special Issue 1 (1), July - 2019, pp. 106-115.

Swamy Reddy, G. and **Srinivasacharya, D.**, Heat and mass transfer by Natural convection in a doubly stratified porous medium saturated with Power-law fluid International Journal of Advanced Trends in Computer Applications (IJATCA), Special Issue 1 (1), July - 2019, pp. 66-69.

Kaladhar, K., Madhusudhan Reddy, K., **Srinivasacharya, D**:Natural convection flow in a vertical channel with inclined magnetic field and Soret effects International Journal of Advanced Trends in Computer Applications (IJATCA), Special Issue 1 (1), July - 2019, pp. 27-31.

Md. Shafeeurrahman and **Srinivasacharya, D**:Radiation effect on mixed convection flow of nanofluid between two concentric cylinders with Hall and Ion-slip effects, Applications and Applied Mathematics - An International Journal, Special Issue No. 4 pp. 82 – 96, 2019.

Srinivasacharya, D. and Jagadeeshwar, P.Flow over an Exponentially Stretching Sheet with Double Dispersion and Convective Thermal ConditionMathematical Modelling of Engineering Problems, Vol 6, No 2, pp. 300 – 308, 2019.

Srinivasacharya, D. and Jagadeeshwar, P., Effect of Viscous Dissipation and Thermoporesis on the Flow over an Exponentially Stretching SheetInt. J. of Applied Mechanics and Engineering, Vol.24, No.2, pp.425-438, 2019.

Srinivasacharya, D. and Jagadeeshwar, P., Flow over an Exponentially Stretching Sheet with Hall and Cross-Diffusion Effects,J. Nanofluids, Vol. 8, pp.1592–1600, 2019.

Srinivasacharya, D. and Madhava Rao,G.,Pulsatile Flow of Couple Stress Fluid Through a Bifurcated Artery Ain Shams Engineering Journal, Vol. 9, pp. 883-893, 2018.

Srinivasacahrya, D., Ch. RamReddy, and P. Naveen Effects of Nonlinear Boussinesq Approximation and Double Dispersion on a Micropolar Fluid Flow under Convective Thermal Condition Heat Transfer – Asian Research, Vol 48, pp.414-434, 2018.

Srinivasacharya. D., and Swamy Reddy, G, Mixed Convection On A Vertical Plate Embedded In A Power-Law Fluid Saturated Doubly Stratified Porous Medium Appl. Comput. Math., V.17, N.3, 2018, pp.1-15.

Srinivasacharya, D. and Himabindu, K, Effect of Slip and Convective boundary conditions on Entropy Generation in a Porous Channel due to Micropolar Fluid Flow"Int. J. Nonlinear Sci. Numer. Simul., Vol. 19(1), pp. 11–24, 2018.

Srinivasacahrya, D., Ch. RamReddy, and P. Naveen Double Dispersion Effect on Nonlinear Convective Flow over an Inclined Plate in a Micropolar Fluid Saturated Non-Darcy Porous Medium"Engineering Science and Technology - An International Journal, Vol. 21, pp. 984–995, 2018.

Srinivasacharya, D. and Jagadeeshwar, P.,ffect of Double Stratification, Cross-Diffusion and Hall currents on the Flow over an Exponentially Stretching SheetJournal of Nanofluids, Vol 7(5), pp. 961-973, 2018.

Srinivasacharya, D. and Vijay Kumar PEffect of thermal radiation on mixed convection of a nanofluid from an inclined wavy surface embedded in a non-Darcy porous medium with wall heat flux Propulsion and Power Research, Vol. 7(2), pp. 147–157, 2018.

Srinivasacharya, D. and Jagadeeshwar, P, Effect of Variable Viscosity, Thermal Conductivity and Hall Currents on the Flow Over an Exponentially Stretching Sheet with Heat Generation /Absorption, International Journal of Energy for a Clean Environment, Vol 19 (1-2), pp 67-83, 2018.

Srinivasacharya, D. and Jagadeeshwar, P., Effect of variable properties on the flow over an exponentially stretching sheet with convective thermal condition Modelling, Measurement and Control B, Vol. 87(1), pp. 7-14, 2018.

Srinivasacharya, D. and Himabindu, K., Entropy Generation Due to Micropolar Fluid Flow Between Concentric Cylinders with slip and convective boundary conditions" Ain Shams Engineering Journal, Vol. 9, pp. 245–255, 2018.

Srinivasacharya, D. and Jagadeeshwar, P., Flow Over an Exponentially Stretching Porous Sheet with Cross-diffusion Effects and Convective Thermal Conditions, IJE TRANSACTIONS A: Basics Vol. 31(1), 120-127, 2018.

K. Sreelakshmi, G. Sarojamma and **J. V. Ramana Murthy;** Homotopy Analysis of an Unsteady Flow Heat Transfer of a Jeffrey Nanofluid Over a Radially Stretching Convective Surface Journal of Nanofluids , Vol. 7, pp. 1–10, 2018.

MATHEMATICS

G. Nagaraju, J Srinivas, **J.V.Ramana Murthy**, O.A.Beg and Kadir, Second Law Analysis of Flow in a Circular Pipe With Uniform Suction and Magnetic Field Effects, Journal of Heat Transfer, Jan 2019, Vol. 141 / 012004-1.

T Govinda Rao, **J V Ramana Murthy** and G S Bhaskara Rao, Longitudinal oscillations of a circular cylinder in a micro-polar fluid:case of resonance, Sadhana, (2019) 44:66, pp 1 – 8, 2019.

H.P Rani, V. Narayana, Y. Rameshwar, Mixed Convective flow in a Bottom Heated Lid Driven Cubical Cavity: Energy streamlines and Field synergy Heat transfer-Asian Research, 2019, Vol.48(6), pp.1-15.

H P Rani, Y. Rameshwar and J. Brestenský,Topology of Rayleigh–Bénard convection and magnetoconvection in plane layer, Geophysical and Astrophysical Fluid Dynamics, 2019. Pp.208-221. (IF: 1.533).

H.P Rani, V. Narayana, Y. Rameshwar, Bottom Heated Mixed Convective Flow in Lid-driven cavity flows, Numerical Heat Transfer and Fluid Flow, Lecture Notes in Mechanical Engineering, 2019, pp.597-602.

G. Janardhana Reddy, Bhaskerreddy K., Mahesh Kumar and **H. P. Rani**. Entropy generation for transient Casson fluid past a vertical cylinder with Bejan's flow visualization International Journal for Computational Methods in Engineering Science and Mechanics, 2019, Vol.4(39), pp.1-25.

HP Rani, V. Narayana, Y. Rameshwar, Analysis of Vortical Structures in a Differentially Heated Lid Driven Cubical Cavity, International Journal of Heat and Technology, (2018), 36(2), 548-556.

GJ Reddy, B Kethireddy, Mahesh Kumar, **H. P. Rani**, R S R Gorla, Effect of Prandtl number on non-Newtonian Casson fluid flow past a vertical cylinder using heatline approach Int. J. Applied and Computational Mathematics, (2018), 4(85), 1-19.

GJ Reddy, B Kethireddy, **HP Rani**,Bejan's Heat Flow Visualization for Unsteady Micropolar Fluid Past a Vertical Slender Hollow Cylinder with Large Grashof Number, International Journal of Applied and Computational Mathematics (2018), 4 (1) 39, 1-25.

P.Madasamy, T.V. Krishna Mohan, Andrew Sylvanus, E.Natarajan, **H.P.Rani**, S.VelmuruganHydrodynamic effects on flow accelerated corrosion at 120 °C and neutral pH conditions Engineering Failure Analysis, (2018), 94, 458-468.

A. Benerji Babu, G.Shiva Kumar Reddy and S.G.Tagare Nonlinear magneto convection due to horizontal magnetic field and vertical axisof rotation due to thermal and compositional buoyancy Results in Physics, Vol 12, pp. 2078-2090, 2019.

A. Benerji Babu, N. V. Koteswararao, and G. Shivakumar Reddy Instability Conditions in a Porous Medium Due to Horizontal Magnetic Field.Numerical Heat Transfer and Fluid Flow, 621-628, 2019.

I. Gnana Sudha, **R. S. Selvaraj**, Codes with a Pomset Metric and ConstructionsDesigns, Codes and Cryptography, Vol. 86, No. 4, pp. 875-892, 2018.

K. Appireddy and **T. Kurmayya**Comparison results for proper double splitting of rectangular matrices Filomat, Vol.32, No.6, 2018.

Pranitha J, Suman G V, and Srinivasacharya D, Numerical Study on Mixed Convection in a Power-Law Fluid Saturated porous Medium with Variable properties and Thermophoresis effects via Lie ScalingGroup Transformations, Computational Thermal Sciences, 2018, 10(6), 545-555.

Ch. Ram Reddy, P. Naveen and Srinivasacharya, D:Effects of Nonlinear Boussinesq Approximation and Double Dispersion on Free Convective Flow of an Ostwald-de Waele Power-Law Fluid Along an Inclined Plate Under Convective Thermal Condition Journal of Nanofluids, Vol 7(6), pp. 1247-1257, 2018.

Ch.RamReddy, P. Naveen Analysis of Activation Energy and Thermal Radiation on Convective Flow of a Power-Law Fluid under Convective Heating and Chemical ReactionHeat Transfer - Asian Research, DOI:10.1002/htj.21476 .

Ch.RamReddy, P. Naveen, D. Srinivasacharya: Effects of Nonlinear Convection and Cross-Diffusion in a Darcy-Forchheimer Porous Medium Saturated by Micropolar Fluid with Convective Boundary ConditionComputational Thermal Sciences: An International Journal, 11(3):205–218, 2019.

Ch.RamReddy, Ch.Venkata RaoNumerical Study for Mixed Convective Flow of a Radiative Nanofluid Over the Vertical Frustum of a Cone with Arrhenius Activation Energy and Binary Chemical ReactionAdv. Sci. Eng. Med. 10, 952–960, 2018.

Ch.RamReddy, Ch.Venkata RaoNon-Similarity Analysis for Nonlinear Convective Flow of a Nanofluid over the Permeable Wavy Frustum of a Cone with Convective Boundary Condition Journal of Nanofluids, 7(6), 1258-1271, 2018.

Ch. Ram Reddy, Srinivasacharya, D and P. Naveen Nonlinear Convective Flow of Non-Newtonian Fluid over an Inclined Plate with Convective Surface Condition: A Darcy-Forchheimer ModelInt. J. Appl. Comput. Math, Vol. 4, Article No 51, 2018.

Ch. Ram Reddy, Srinivasacharya, D and P. Naveen, Nonlinear Boussinesq Approximation in an Ostwald-de-Waele Power-law Fluid subject to Cross-Diffusion Effects and Convective Thermal Condition, Journal of Nanofluids, Vol.7(4), pp. 766-775, 2018.

MATHEMATICS

Ch. Ram Reddy, Srinivasacharya, D and P. Naveen,Non-Linear Boussinesq Approximation and Cross-Diffusion Effects on an Ostwald-de-Waele Power-Law Fluid Flow with Convective Boundary ConditionAdv. Sci. Eng. Med. Vol. 10, pp. 1–8, 2018.

D. Bhargavi and J. Sharath Kumar Reddy, Analytical Investigation Of Laminar Forced Convection With Viscous Dissipation In Parallel Plate Channels Partially Filled With Porous Material: Constant Wall Heat Flux Journal of Nano Fluids, vol 8, pp.238-251, 2019.

M. Adilaxmi, **D. Bhargavi**, and Y.N. Reddy,An Initial Value Technique using Exponentially Fitted Non Standard Finite Difference Method for Singularly Perturbed Differential-Difference EquationsApplications and Applied Mathematics – An international Journal, Vol. 14, Issue 1, pp. 245 - 269, 2019.

Satyanarayana E Ahmed Mohd and Manas Ranjan Sahoo, Asymptotic behavior of solutions to the diffusion equation Indian J. Pure Appl. Math., 201849: 601-620.

Conferences Conducted

National Conference on Computational Modelling of Fluid Dynamics Problems, January18 – 20, 2019

International Conference on Numerical Optimization in Engineering and Sciences, June 19-21, 2019 under TEQIP-III.

Funded Research Projects

RamReddy, Ch. And Srinivasacharya, D., Numerical treatment of convective transport in non-Newtonianfluids, Sponsored by Counsel of Scientific and IndustrialResearch, NEW DELHI, INDIA, Rs. 10.00 Lakhs.

GIAN Courses Conducted

GIAN course on Separation and instabilities in High-speed Flows, August 06 - 17, 2018 (International Faculty: Prof. JITESH S. B. GAJJAR, Department of Mathematics, University of Manchester, England, U.K.)

Workshops Conducted

STTP on Mathematical Modelling and Numerical Techniques in Engineering and Science, October 9 - 13, 2018.

Continuing Education Programme on matrix computation and numerical techniques in science and engineering, from October 29 -November 2, 2018.

FDP on Scientific Computations with Python, November 20 – 25, 2018.

FDP on High Performance Computing of Computational Fluid Dynamics Problems, December 24 – 29, 2018.

A Five day Workshop on Cryptography & Coding Theory, during January 28 - February 01, 2019.

STTP on Teaching and Learning of Engineering Mathematics using python through Hands-on Experience, March 5 - 10, 2019.

STTP on Numerical and Symbolic Computing, May 27 - 31, 2019.

Books Published

Srinivasacharya, D. and K. Srinivasa Reddy, Numerical Heat transfer and Fluid Flow, (Lecture Notes in Mechanical Engineering), ISSN 2195-4356, ISSN 2195-4364 (electronic), ISBN 978-981-13-1902-0, ISBN 978-981-13-1903-7 (eBook).

Book Chapters

Srinivasacharya, D. and K. Himabindu, Entropy Generation Analysis for a Micropolar Fluid Flow in an Annulus, Lecture Notes in Mechanical Engineering, pp. 9 – 16, 2019.

Madhava Reddy, Ch., **RamReddy, Ch., and Srinivasacharya, D,** Joule Heating and Thermophoresis Effects on Unsteady Natural Convection Flow of Doubly Stratified Fluid in a Porous Medium with Variable Fluxes: A Darcy–Brinkman Model, Lecture Notes in Mechanical Engineering, pp. 103-112, 2019.

Surender O., Lalrinpuia Tlau and **Srinivasacharya, D,** Navier Slip Effects on Mixed Convection Flow of Cu–Water Nanofluid in a Vertical Channel, Lecture Notes in Mechanical Engineering, pp.211-222, 2019

Madhava Rao, G., **Srinivasacharya, D** and Koti Reddy, N., Flow of Blood through a Porous Bifurcated Artery with Mild Stenosis under the Influence of Applied Magnetic Field, Lecture Notes in Mechanical Engineering, pp.233-240, 2019.

Srinivasacharya, D and Jagadeeshwar, P., Effect of Chemical Reaction and Thermal Radiation on the Flow over an Exponentially Stretching Sheet with Convective Thermal Condition, Lecture Notes in Mechanical Engineering, pp.257-266, 2019.

Srinivasacharya, D and Shafeeurrahman, Md., Free Convection of Nanofluid Flow Between Concentric Cylinders with Hall and Ion-Slip Effects, Lecture Notes in Mechanical Engineering, pp. 457-468, 2019

Surender Ontela, Lalrinpuia Tlau, and **Srinivasacharya, D,** Laminar Mixed Convection Flow of Cu–Water Nanofluid in a Vertical Channel with Viscous Dissipation, Lecture Notes in Mechanical Engineering, pp. 637-648, 2019.

MATHEMATICS

Y. Sreenivasa Rao and Nishant Doshi: Secure Threshold Attribute-Based Signcryption with Constant Number of Pairings. Cryptographic and Information Security Approaches for Images and Videos (CRC press), pp. 245-261, 2018.

Talks Given in National/International Conferences

Reddy, Y.N., Numerical treatment of functional differential equations, National Conference on Mathematical Sciences and Applications, July 31, 2018,Osmania University, Hyderabad.

Dutta, D., Some Techniques to Solve Engineering Problems, National Conference on Essence of Mathematics and Engineering Applications, December 15, 2018, KLEF Vijayawada.

Srinivasacharya, D.,Entropy generation in mixed convection flow of nanofluid between parallel disks, National Conference on Recent Advances in Mathematics, December 08-10, 2018, Maris Stella College (Autonomous), Vijayawada, AP.

Srinivasacharya, D.,Adomian decomposition method - motivation, basics and applications, National Conference on Recent Advances and Applications in Mathematics, February 26, 2019, Osmania University, Hyderabad.

Srinivasacharya, D., Mathematicalmodelling of blood flow in a stenosed bifurcated artery, National Conference on Mathematics and its Applications, March 28-29, 2019. Sri Venkateswara University, Tirupathi.

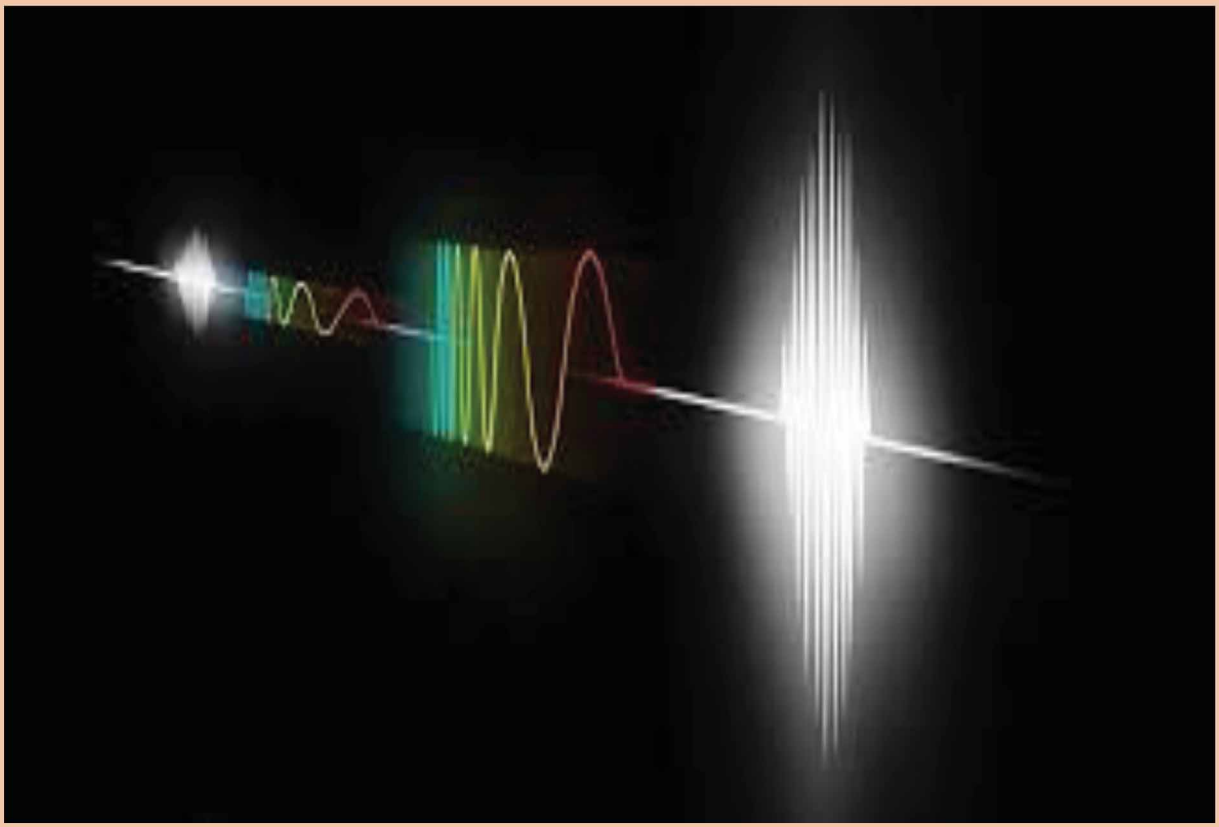
Highlights

Ministry of Human Resource Development has identified the Department as the National Resource Center for Mathematics to conduct Online Refresher Courses for all Mathematics Faculty members of all Institutions in the Country. As a part of this initiative "Online Refresher Course in Calculus" was offered through SWAYAM platform with 40 Video Lectures by the faculty of the Department of Mathematics, 35 reading materials and 5 assignments. Totally 784participants have registered, from universities, colleges, industry, students and non-professionals.

The Department has a full-fledged computational laboratory to meet the requirements of the M.Sc. students, research scholars and the faculty.

The Department has a well-stocked library for immediate reference of the staff and students.

The Mathematics Association of the Department organizes several academic and co-curricular programs like Quiz, Debate, Talent tests etc. for the students of PG programmes.



PHYSICS

The Department of Physics was established in 1960 along with the Regional Engineering College Warangal (RECW), the first among the chain of RECs established by the Government of India to provide state of the art engineering education along with the sense of national integration. The department offers 'Engineering Physics' course to undergraduates of all engineering branches and one post graduate course leading to M. Sc. (Tech.) in Engineering Physics and Ph. D. programme in various fields of applied physics. The department has highly qualified and committed faculty members and all of them have Ph. D. degrees. Faculty members are well recognized and are members of many policy making and advisory bodies and Board of Studies of various universities.

FACULTY

Prof. K. V. G. Reddy
Professor(**Head of the Department**)

Research Interests: Materials Science and Condensed Matter

Prof. L. Ram Gopal Reddy
Professor

Research Interests:
Medical Instrumentation & Super Capacitors

Prof. R. L. N. Sai Prasad
Professor

Research Interests:
Applied Optics & Electronics

Prof. D. Dinakar
Professor

Research Interests: Electronics and Photonic Sensors

Dr. B. Sobha
Associate Professor

Research Interests:
Sensors, Transducers, instrumentation aspects.

Dr. T. Venkatappa Rao
Associate Professor

Research Interests: Materials Science, Electronics Fibre optic sensors

Dr. P. Abdul Azeem
Associate Professor

Research Interests: Glass science, Bio glass ceramics, Nanophoshpors

Dr. P. Syam Prasad
Associate Professor

Research Interests: Glasses for electronic, optical and biomedical applications, magnetic and semiconductor nanomaterials

Dr.Sourabh Roy
Associate Professor

Research Interests: Integrated Optics, Fiber Optics, Nonlinear optics, Photonic crystal waveguides and fibers

Dr. K. Thangaraju
Associate Professor

Research Interests: Organic semiconductors and devices: OLED's, Organic solar cells, Organic thin film transistors (OTFT's)

Dr. D. Haranath
Associate Professor

Research Interests: Photonic materials, Nanomaterials, Luminescence, Mesoporous materials, Sol-gel Technology

Dr. Kusum Kumari
Asst. Professor

Research Interests: Thin Films, Nanomaterials, Carbon Nanotubes, 2D materials, Organic Opto-electronic Devices

Dr. D. Paul Joseph
Asst. Professor

Research Interests: Thin films, Magnetic nanomaterials, Spintronics, Solar cells, Electrochromism, Superconductiviy

Dr. V. Jayalakshmi
Asst. Professor

Research Interests: Liquid Crystals, Photo induced phase transitions, Microfluidics, Confinement & geometric effects

Dr. R. Rakesh Kumar
Asst. Professor

Research Interests: Energy harvesting & storage, Nanogenerators, Nanomaterials, Nanowires growth, Thin films, Gas sensors

PHYSICS

Publications (in peer reviewed journals)

M Gopala Krishnamurthy, D. Dinakar, IM Chhabra, Kishore, NVN Rao Pasalapudi, K. C. Das. Standing wavewave analysis on hemispherical structure for gyroscope applications under review, Journal of Gyroscopy and Navigation, Springer, June 2019.

P. Kishore. D.Dinakar, M. Padmavathi, A novel Intensity Modulated Fiber Optic Loop Vibration Sensor, Journal of Optics, IOP Science, Feb. 2019.

Ashish Kumar, Venkatappa Rao Tumu, Physicochemical properties of the electron beam irradiated bamboo powder and its bio-composites with PLA Composites, Composites, Part B: Engineering 175, 2019, 107098.

Ashish Kumar, T. Venkatappa Rao, S. Ray Chowdhury, S.V.S Ramana Reddy, A green physical approach to compatibilize a bio-based blend for better mechanical, thermal and degradation properties, International Journal of biological macromolecules 121 (2019), 588-600.

Ashish Kumar, T. Venkatappa Rao, S. Ray Chowdhury, S.V.S Ramana Reddy, Optimization of mechanical, thermal and hydrolytic degradation properties of Poly (lactic acid)/Poly (ethylene-co-glycidyl methacrylate)/Hexagonal boron nitride blend-composites through electron-beam irradiation, Nuclear Inst. Methods in Physics Research B 428 (2018), 38-46.

L. Srinivasa Rao, T. Venkatappa Rao, Sd. Naheed P. Venkateswara Rao, Structural and optical properties of zinc magnesium oxide nano particles synthesized by chemical co-precipitation, Materials Chemistry and Physics 203 (2018), 133-140.

Srinath P, Abdul azeem P, K. Venugopal Reddy, Rajkumar S, In vitro bioactivity and degradation behaviour of β-wollastonite derived from natural waste, Journal: Materials Science & Engg. C, 2019.

Srinath P, Abdul azeem P, K. Venugopal Reddy, In vitro evaluation of silver doped wollastonite synthesized from natural waste for biomedical applications, Ceramics International, 2019.

Rajkumar S, P, Abdul azeem, Premilinary biological evaluation of tantalum containing soda lime borosilicate bioactive glasses, Journal of Alloys and compounds, 2019.

H. Uppal, S. Chawla, Amish G. Joshi, D. Haranath, N. Vijayan, Nahar Singh, Facile chemical synthesis and novel application of zinc oxysulfide nanomaterial for instant and superior adsorption of arsenic from water, Journal of cleaner production, 208 (2019) 458.

C. Hari Krishna and Sourabh Roy, Generation of inhomogeneously polarized vector vortex modes in a few modes' optical fiber, Optical & Quantum Electronics, Vol: 1108, 2018.

C. Hari Krishna and Sourabh Roy, Poincare sphere representation for vector vortex modes of few-mode optical fiber, Optical Engineering, 58, 16109-16, 2019.

Onkar N. Verma and Sourabh Roy, High-resolution all-optical imaging of multimode profiles in a saturated absorption medium, IEEE Journal of Quantum Electronics, 55, 8200106-11, 2019.

C. Hari Krishna & Sourabh Roy, analyzing characteristics of spiral vector beams generated by mixing of orthogonal LP11 modes in few-mode optical fiber, Applied Optics, 57, 3853-58, 2018.

Onkar. N. Verma, Sourabh Roy, Microwave Field Controlled Electromagnetically-induced focusing, Japanese Journal of Appl. Phy., 57, 01-01-04, 2018.

R Datt, S Bishnoi, R Gupta, D Haranath, SN Sharma, G Gupta, S Arya, Dual-functional cathode buffer layer for power conversion efficiency enhancement of bulk-heterojunction solar cells, Synthetic Metals 255, 116112, 2018.

S Kaur, AS Rao, M Jayasimhadri, B Sivaiah, D Haranath, Synthesis optimization, photoluminescence and thermoluminescence studies of Eu^{3+} doped calcium aluminozincate phosphor, Journal of Alloys and Compounds, 2019.

R. Rathika, M. Kovendhan, D. Paul Joseph, K. Vijayarangamuthu, A. Sendil Kumar, C. Venkateswaran, K. Asokan, S. Johnson Jeyakumar, 200 MeV Ag^{15+} swift heavy ion beams induced property modifications in Nb_2O_5 thin films by fluence variation, Journal of Physics and Chemistry of Solids, 2019.

R. Rathika, M. Kovendhan, D. Paul Joseph, K. Vijayarangamuthu, A. Sendil Kumar, C. Venkateswaran, K. Asokan, S. Johnson Jeyakumar, 200 MeV Ag^{15+} ion beam irradiation induced modifications in spray deposited MoO_3 thin films by fluence variation, Nuclear Engg. and Tech. 2019.

R. Ramarajan, R. Kovendhan, K. Thangaraju, D. Paul Joseph, R. Ramesh Babu, Facile deposition and characterization of large area highly conducting and transparent Sb-doped SnO_2 thin film, Applied Surface Science, 2019.

R. Rathika, M. Kovendhan, D. Paul Joseph, C. Venkateswaran, K. Asokan and S. Johnson Jeyakumar, Investigation of structural and electrical properties of pristine and 200 MeV Ag^{15+} ion irradiated 3 wt% 'Li' doped WO_3 thin films, Indian Journal of Physics – Springer, 2019.

R. Rathika, M. Kovendhan, D. Paul Joseph, A. Sendil Kumar, K. Vijayarangamuthu,C. Venkateswaran, K. Asokan, S. Johnson Jeyakumar, Effect of 200 MeV Ag^{15+} ion beam irradiation at different fluences on WO^3 thin films, Nuclear Inst. and Methods in Physics Research B, 2019.

Perry W. Ellis, Shengnan Huang, Susannah Klaneček, Jayalakshmi Vallamkondu, Edward Dannemiller, Mark Vernon, Ya-wen Chang,† Paul M. Goldbart, and Alberto Fernandez-Nieves, Defect transitions in nematic liquid-crystal capillary bridges, Physical Review E, 97, 040701(R), 2018.

Jayalakshmi Vallamkondu, Edwin Bernard Corgiat, Gollapelli Buchaiah, Ramesh Kandimalla and P. Hemachandra Reddy, Liquid Crystals: A Novel Approach for Cancer Detection and Treatment, Cancers, 10, 462, 2018.

Talapatra, K. Umadevi, J. Arout Chelvane, J. Mohanty and V. Jayalakshmi, Magnetic Domains in Tb-Fe-Co Thin Films Under Anisotropy Tilt, Journal of Magnetism and Magnetic Materials, 452, 108-113, 2018.

K. Umadevi, A. Talapatra, J. Arout Chelvane, J. Mohanty and V. Jayalakshmi, Influence of substrate temperature driven Magnetic anisotropy on the magnetostrictive behaviour of Tb-Fe-Co thin films, Journal of Magnetism and Magnetic Materials, 466, 333-340, 2018.

K. Umadevi, J. Arout Chelvane and V. Jayalakshmi, Magnetostriction and Magnetic Microscopy Studies in Fe-Co-Si-B Thin Films, Materials Research Express, 5, 036102, 2018.

Publications (in peer reviewed conferences)

Gnyaneshwar Dasi, R. Ramarajan, and Kuppusamy Thangaraju, Improved performance in the agedelectron-only devices based on tris-(8-hydroxyquinoline) aluminum thin film as electron transport layer for OLED Applications, AIP Conference Proceedings 2115, 030211 (2019).

R. Ramarajan, R. Kovendhan, R. Ramesh Babu, K. Thangaraju, D. Paul Joseph, Optimization and Transport Properties of 'Nb' Doped SnO_2 Thin Film as an Alternate TCO Application, AIP Conf. Proc. 2115, 030427-1–030427-4.

Mahantesh Khetri, R. Ramarajan, N. Purusotham Reddy, M. Kovendhan, K. V. Ashish Srivatsav, Bonta Srinivasa Rao, K. Thangaraju, D. Paul Joseph, Stabilization of 5 wt % 'Sb' doped SnO_2 thin film by post oxidation of thermally evaporated metallic layer, AIP Conf. Proc. 2115, 030278-1–030278-4.

Gollapelii Buchaiah, and V. Jayalakshmi, Production of chiral nematic shells with planar anchoring condition, AIP Conference Proceedings 2115, 030051 (2019).

G. Sridevi, Sagarika Bhagade, V. Jayalakshmi, and Sandhya Cole, Synthesis and characterization of $CdSZn_3(PO_4)_2$ nanocomposite via hydrothermal method, AIP Conference Proceedings 2115, 030155 (2019).

International Conference Organized

International conference on advanced functional materials & Devices (ICAFMD – 2019) – 26th – 28th Feb. 2019. – Sponsored by TEQIP-III, DRDO, INSA, BRNS.

Continuing Education Programmes Organized

Workshop on Applications of Radiation and Radioisotopes in Industries and Materials Science (ARRIM-2018) - 26th -30th Nov. 2018 - Sponsored by TEQIP Phase-III.

A one-week workshop on 'Teaching and Learning of Fabrication of Thin films & Optoelectronic Devices through Hands-on Experience. -3rd -8th July 2018. – Sponsored by TLC of NIT-Warangal.

Five day continuing education programme on Fabrication of Optoelectronic Devices and Sensors - Hands-on Experience – 17th -21st June 2019 - Sponsored by TEQIP Phase-III.

Awards / Recognitions

Dr. Kusum Kumari, Assistant Professor, has visited Renewable and Sustainable Energy Institute, University of Colorado Boulder, USA under the Bhaskara Advanced Solar Energy fellowship Program (2018) sponsored by the Indo-US Science and Technology Foundation (IUSSTF) and Department of Science and Technology (DST), from 31st May 2018 - 30th Aug. 2018, to carryout out research on project entitled "Development of Planar Organic-metal halide Perovskite Solar Cells using Transition Metal Dichalogenide materials".

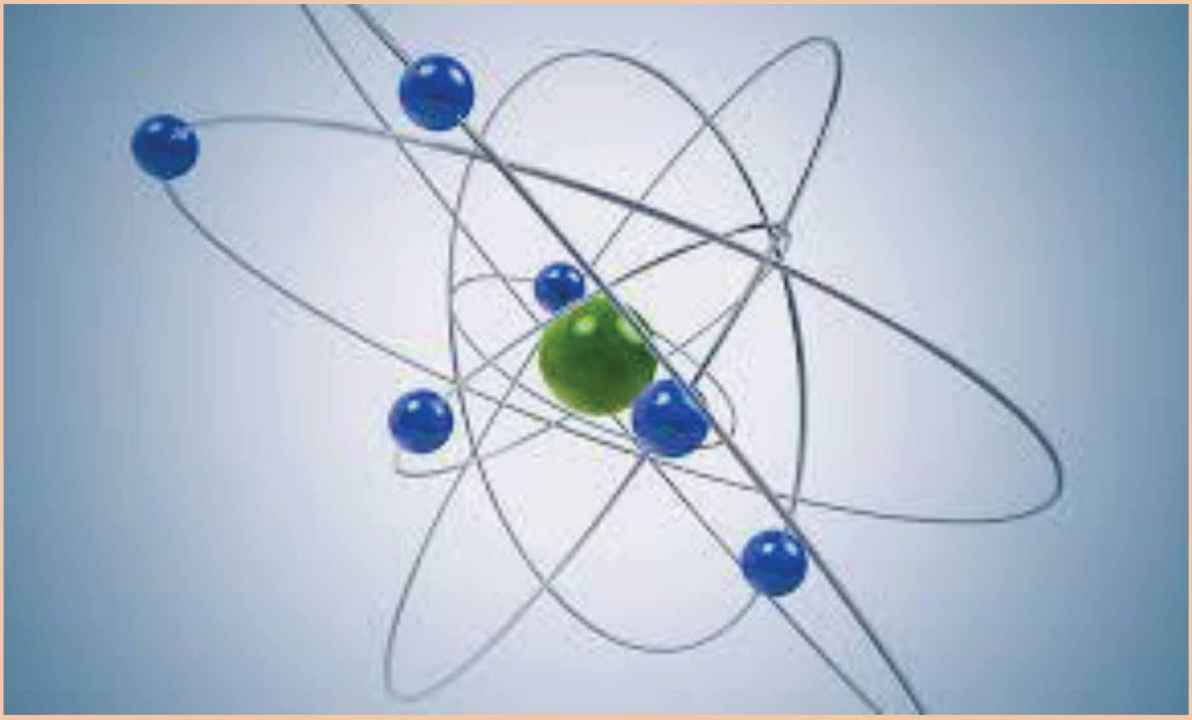
Funded Research Projects

Development of Red-Emitting Long Afterglow Photonic Materials for Strategic Dark Vision Signage Applications, Dr. D. Haranath, RSM-NITW, Rs. 5 Lakhs

Piezo and Pyroelectric Flexible Nanogenerators for Energy Harvesting and Self-Powered Sensor Applications, Dr. R. Rakesh, RSM-NITW, Rs. 5 Lakhs

Development and Characterization of rare earth ions doped borate based plasmonic glasses for LSC's, Dr. K. Thangaraju, Under Collaborative Research Scheme TEQIP-III with Jabalpur Eng. College, Rs. 17.93 Lakhs.

Investigation of Proximity Effect between Mixed ortho-ferrites and YBCO Hetero-structures, Dr. D. Paul Joseph, Under Collaborative Research Scheme TEQIP-III with Jabalpur Eng. College, Rs. 17.93 Lakhs.



CHEMISTRY

The department of chemistry was established in the Year, 1959, as an integral part of the Regional Engineering College Warangal (RECW).Since its inception, the department is greeted as one of the most academically active departments in the Institute. The department housed 15 faculty members, 50 research scholars and 90 M.Sc. students. Department offers chemistry courses to all engineering branches and two years M.Sc. Chemistry with specialization in Organic and Analytical Chemistry. The department has been conducting cutting-edge research in contemporary topics of Organic, Inorganic, Physical and Analytical Chemistry. In the department, various state-of-the-art facilities such as 400 MHz NMR, HRMS, gas chromatography, HPLC, FTIR, UV-vis-NIR, fluorescence, electrochemical workstation, computational chemistry software, etc. are available. So far, department received several extramural research projects worth Rs ~11 crores. As a part of continuing education and outreach activities, department organized national and international Conferences, seminars and workshops. In addition, department is activelyinvolved in science popularization among the school children *via* Inspire programme and society. So far, the department produced 124 Ph.D. students and published over 900 research articles in various well-reputed international and national journals. The department surpasses in teaching, research and graduate students' placement.

FACULTY

Dr. A. Ramachandraiah
Professor
Coordination and Electrochemistry

Dr. K. Laxma Reddy
Professor
Coordination and Environmental Chemistry

Dr. V. Rajeswar Rao
Professor
Synthetic organic chemistry

Dr. K. V. Gobi
Professor
Electrochemical Biosensors, Fuel Cell Electro- catalysts, Molecular Imprinted Materials

Dr. P.V.Srilakshmi
Professor
Bioorganic Chemistry,Drug Delivery/Gene Delivery

Dr. Vishnu Shanker
Associate Professor
Nanocomposite materials, Environmental remediation and photocatalysis

Dr. D. Kashinath
Associate Professor
Organic synthesis, Medicinal chemistry

Dr. Venkatathri Narayanan
Associate Professor
Materials chemistry and catalysis

Dr. Raghu Chitta
Assistant Professor
Organic and inorganic materials, Solar energy, Fluorescent Chemosensors

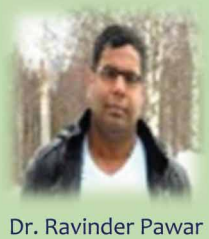
Dr. B. Srinivas
Assistant Professor
Organic synthesis, Supramolecular chemistry, Crystal engineering

Dr. K. Hari Prasad
Assistant Professor
Organic synthesis, Carbohydrate Chemistry

Dr. S. Nagarajan
Assistant Professor
Organic synthesis, Organic materials, Molecular self-assembly

Dr. M. Raghasudha
Assistant Professor
Nano-ferrites, Thin films, nanomaterials, nanocomposites

Dr. C. Jugun Prakash
Assistant Professor
Medicinal inorganic and bio-analytical chemistry



Dr. Ravinder Pawar
Assistant Professor
Computational and theoretical chemistry

CHEMISTRY

Publications (in peer reviewed journals)/Books/Book chapters

Nishtala, V.B., Basavoju, S. $ZnCl^{2+}$Urea, the deep eutectic solvent promoted synthesis of the spirooxindolopyrans and xanthenes through a pseudo-three-component approach, (2019) Synthetic Communications, 49 (18), pp. 2342-2349.

Karuppasamy, M., Vachan, B.S., Vinoth, P., Muthukrishnan, I., Nagarajan, S., Ielo, L., Pace, V., Banik, S., Maheswari, C.U., Sridharan, V. Direct Access to 9-Chloro-1 H-benzo[b]furo[3,4-e]azepin-1-ones via Palladium(II)-Catalyzed Intramolecular syn-Oxypalladation/Olefin Insertion/sp2-C-H Bond Activation Cascade, (2019) Organic Letters, 21 (15), pp. 5784-5788.

Thunga, S., Poshala, S., Anugu, N., Konakanchi, R., Vanaparthi, S., Kokatla, H.P. An efficient Pd(II)-(2-aminonicotinaldehyde) complex as complementary catalyst for the Suzuki-Miyaura coupling in water (2019) Tetrahedron Letters, 60 (31), pp. 2046-2048.

Kummari, S., Kumar, V.S., Satyanarayana, M., Gobi, K.V. Direct electrochemical determination of methotrexate using functionalized carbon nanotube paste electrode as biosensor for in-vitro analysis of urine and dilute serum samples, (2019) Microchemical Journal, 148, pp. 626-633.

Pogaku, V., Krishna, V.S., Sriram, D., Rangan, K., Basavoju, S. Ultrasonication-ionic liquid synergy for the synthesis of new potent anti-tuberculosis 1,2,4-triazol-1-yl-pyrazole based spirooxindolopyrrolizidines, (2019) Bioorganic and Medicinal Chemistry Letters, 29 (13), pp. 1682-1687.

Aneesrahman, K.N., Ramaiah, K., Rohini, G., Stefy, G.P., Bhuvanesh, N.S.P., Sreekanth, A. Synthesis and characterisations of copper(II) complexes of 5-methoxyisatin thiosemicarbazones: Effect of N-terminal substitution on DNA/protein binding and biological activities, (2019) InorganicaChimica Acta, 492, pp. 131-141.

Manchala, S., Tandava, V.S.R.K., Jampaiah, D., Bhargava, S.K., Shanker, V. Novel and Highly Efficient Strategy for the Green Synthesis of Soluble Graphene by Aqueous Polyphenol Extracts of Eucalyptus Bark and Its Applications in High-Performance Supercapacitors, (2019) ACS Sustainable Chemistry and Engineering, 7 (13), pp. 11612-11620.

Arandkar, V., Vedula, R.R. A facile one-pot expeditious synthesis of triazolothiadiazines and anticancer activity, (2019) Phosphorus, Sulfur and Silicon and the Related Elements, 194 (4-6), pp. 533-539.

Vaarla, K., Pavurala, S., Arandkar, V., Vedula, R.R., Toopurani, M.K. Solvent-Free One-Pot Tandem Multicomponent Synthesis of Triazolothiadiazinyl Coumarins and Their Antimicrobial Properties, (2019) Chemistry Select, 4 (19), pp. 5828-5834.

Ramaiah, K., Srishailam, K., Laxma Reddy, K., Reddy, B.V., Ramana Rao, G. Synthesis, crystal and molecular structure, and characterization of 2-((2-aminopyridin-3-yl)methylene)-N-ethylhydrazinecarbothioamide using spectroscopic (1 H and 13 C NMR, FT-IR, FT-Raman, UV–Vis) and DFT methods and evaluation of its anticancer activity (2019) Journal of Molecular Structure, 1184, pp. 405-417.

Alanthadka, A., Elango, S.D., Thangavel, P., Subbiah, N., Vellaisamy, S., Chockalingam, U.M. Construction of substituted imidazoles from aryl methyl ketones and benzylamines via N-heterocyclic carbene-catalysis, (2019) Catalysis Communications, pp. 26-31.

Vinoth, P., Karuppasamy, M., Vachan, B.S., Muthukrishnan, I., Maheswari, C.U., Nagarajan, S., Pace, V., Roller, A., Bhuvanesh, N., Sridharan, V. Palladium-Catalyzed Regioselective Syn-Chloropalladation-Olefin Insertion-Oxidative Chlorination Cascade: Synthesis of Dichlorinated Tetrahydroquinolines, (2019) Organic Letters, 21 (9), pp. 3465-3469.

John, G., Nagarajan, S., Vemula, P.K., Silverman, J.R., Pillai, C.K.S. Natural monomers: A mine for functional and sustainable materials – Occurrence, chemical modification and polymerization, (2019) Progress in Polymer Science, 92, pp. 158-209.

Vaarla, K., Karnewar, S., Panuganti, D., Peddi, S.R., Vedula, R.R., Manga, V., Kotamraju, S. 3-(2-(5-Amino-3-aryl-1H-pyrazol-1-yl) thiazol-4-yl)-2H-chromen-2-ones as Potential Anticancer Agents: Synthesis, Anticancer Activity Evaluation and Molecular Docking Studies (2019) ChemistrySelect, 4 (14), pp. 4324-4330.

Vivekanand, T., Vachan, B.S., Karuppasamy, M., Muthukrishnan, I., Maheswari, C.U., Nagarajan, S., Bhuvanesh, N., Sridharan, V. Diastereoselective ABB′ Three-Component Synthesis of Highly Functionalized Spirooxindoles Bearing Five Consecutive Asymmetric Carbons (2019) Journal of Organic Chemistry, 84 (7), pp. 4009-4016.

Swaminathan, S., Haribabu, J., Kalagatur, N.K., Konakanchi, R., Balakrishnan, N., Bhuvanesh, N., Karvembu, R. Synthesis and Anticancer Activity of [RuCl 2 (n 6 -arene)(aroylthiourea)] Complexes - High Activity against the Human Neuroblastoma

(IMR-32) Cancer Cell Line (2019) ACS Omega, 4 (4), pp. 6245-6256.

Sujatha, K., Vedula, R.R. Multicomponent Efficient Synthesis of New [1,2,4] Triazolo[3,4]thiadiazines (2019) Journal of Heterocyclic Chemistry, 56 (3), pp. 832-838.

Jilloju, P.C., Vinaykumar, A., Shyam, P., Vedula, R.R. One-pot, Multicomponent Cascade Reaction for the Synthesis of Various Aralkyl/alkylthio-3,5-dimethyl-1H-pyrazolyl-4H-1,2,4-triazol-4-amine and Their Docking Studies (2019) Journal of Heterocyclic Chemistry, 56 (3), pp. 1012-1019.

Narsimhulu, M., Anil Kumar, G., Bhargavi, G., Srinivas, B., Hussain, K.A. Synthesis, crystal structure, thermal, photoluminescent and magnetic properties of a new material: Na2[Ni(C2O4)2(H2O)2].6H2O (2019) Journal of Molecular Structure, 1178, pp. 155-161.

Palakeeti, B., Ramesh, T., Reddy, K.V., Konakanchi, R., Rao, P.N., Gobi, K.V. Identification and Characterisation of Rucaparib Degradation Products and Their Comparison with Known Impurities (2019) Chromatographia, 82 (2), pp. 591-604.

Muripiti, V., Brijesh, L., Rachamalla, H.K., Marepally, S.K., Banerjee, R., Patri, S.V. α-Tocopherol-ascorbic acid hybrid antioxidant based cationic amphiphile for gene delivery: Design, synthesis and transfection (2019) Bioorganic Chemistry, 82, pp. 178-191.

Ramaiah, K., Prashanth, J., Haribabu, J., Srikanth, K.E., Venkatram Reddy, B., Karvembu, R., Laxma Reddy, K. Vibrational spectroscopic (FT-IR, FT-Raman), anti-inflammatory, docking and molecular characteristic studies of Ni(II) complex of 2-aminonicotinaldehyde using theoretical and experimental methods (2019) Journal of Molecular Structure, 1175, pp. 769-781.

Munikumari, G., Konakanchi, R., Nishtala, V.B., Ramesh, G., Kotha, L.R., Chandrasekhar, K.B., Ramachandraiah, C. Palladium(II) complexes of 5-substituted isatin thiosemicarbazones: Synthesis, spectroscopic characterization, biological evaluation and in silico docking studies (2019) Synthetic Communications, 49 (1), pp. 146-158.

Sujatha, K., Deshpande, R.P., Kesharwani, R.K., Babu, P.P., Rao Vedula, R. An efficient one-pot expeditious synthesis of 3-phenyl-1-(6-phenyl-7H-[1,2,4] triazolo[3,4-b] [1,3,4] thiadiazin-3-yl)-1H-pyrazol-5-amines via multicomponent approach (2019) Synthetic Communications, 49 (1), pp. 49-55.

Adepu, A.K., Goskula, S., Chirra, S., Siliveri, S., Gujjula, S.R., Narayanan, V. Synthesis of a high-surface area V2O5/TiO2-SiO2 catalyst and its application in the visible light photocatalytic degradation of methylene blue (2019) RSC Advances, 9 (42), pp. 24368-24376.

Nishtala, V.B., Gandamalla, D., Yellu, N.R., Basavoju, S. Synthesis of spirooxindoles promoted by the deep eutectic solvent, ZnCl2+urea via the pseudo four-component reaction: anticancer, antioxidant, and molecular docking studies (2019) Synthetic Communications, 49 (20), pp. 2671-2682.

Hari Mohan, E., Anandan, S., Appa Rao, B.V., Rao, T.N. Neem Leaf-derived Micro and Mesoporous Carbon as an Efficient Polysulfide Inhibitor for Sulfur Cathode in a Li-S Battery(2019) Chemistry Letters, 48 (1), pp. 62-64.

Siliveri, S., Chirra, S., Tyagi, C., Gandamalla, A., Adepu, A.K., Goskula, S., Gujjula, S.R., Venkatathri, N.New Porous High Surface Area, TiO2 Anatase/SAPO-35 Mild Brønsted Acidic Nanocomposite: Synthesis, Characterization and Studies on it's Enhanced Photocatalytic Activity.(2019) ChemistrySelect, 4 (31), pp. 9135-9142.

Gudala, S., Ambati, S.R., Patel, J.L., Vedula, R.R., Penta, S.An Efficient Synthesis of Pyrazolyl-1,2,3-thiadiazoles via Hurd–Mori Reaction(2019) Journal of Heterocyclic Chemistry, 56 (8), pp. 2163-2169.

Muthukrishnan, I., Vachan, B.S., Karuppasamy, M., Eniyaval, A., Uma Maheswari, C., Nagarajan, S., Menéndez, J.C., Sridharan, V.Heterogeneous Amberlyst-15-catalyzed synthesis of complex hybrid heterocycles containing [1,6]-naphthyridine under metal-free green conditions(2019) Organic and Biomolecular Chemistry, 17 (28), pp. 6872-6879.

Poshala, S., Thunga, S., Manchala, S., Kokatla, H.P.In Situ Generation of Copper Nanoparticles by Rongalite and Their Use as Catalyst for Click Chemistry in Water(2018) ChemistrySelect, 3 (48), pp. 13759-13764.

Goud, K.Y., Kalisa, S.K., Kumar, V., Tsang, Y.F., Lee, S.E., Gobi, K.V., Kim, K.-H.Progress on nanostructured electrochemical sensors and their recognition elements for detection of mycotoxins: A review(2018) Biosensors and Bioelectronics, 121, pp. 205-222.

Konakanchi, R., Nishtala, V.B., Kankala, S., Kotha, L.R.Zn(ANA) 2 Cl 2 complex as efficient catalyst for the synthesis of dihydropyrano[2,3-c]pyrazoles in aqueous medium via one-pot multicomponent

reaction: a green approach(2018) Synthetic Communications, 48 (20), pp. 2642-2651.

Devi, E.S., Alanthadka, A., Nagarajan, S., Sridharan, V., Maheswari, C.U.Metal-free, base catalyzed oxidative amination and denitration reaction: Regioselective synthesis of 3-arylimidazo[1,2-a]pyridines(2018) Tetrahedron Letters, 59 (38), pp. 3485-3489.

Rohini, G., Haribabu, J., Aneesrahman, K.N., Bhuvanesh, N.S.P., Ramaiah, K., Karvembu, R., Sreekanth, A.Half-sandwich Ru(II)(η6-p-cymene) complexes bearing N-dibenzosuberenyl appended thiourea for catalytic transfer hydrogenation and in vitro anticancer activity(2018) Polyhedron, 152, pp. 147-154.

Nishtala, V.B., Basavoju, S.Crystal Structure and Molecular Docking Studies of 1-Ethyl-2′-(furan-2-carbonyl)-1′-(furan-2-yl)-1′,2′,5′,6′,7′,7a′-hexahydrospiro[indoline-3,3′-pyrrolizin]-2 one(2018) Journal of Chemical Crystallography, 48 (3), pp. 78-90.

Narreddula, M., Balaji, R., Ramya, K., Dhathathreyan, K.S., Rajalakshmi, N., Ramachandraiah, A.Electrochemical methanol reformation (ECMR) using low-cost sulfonated PVDF/ZrP membrane for hydrogen production(2018) Journal of Solid-State Electrochemistry, 22 (9), pp. 2757-2765.

Konakanchi, R., Gondru, R., Nishtala, V.B., Kotha, L.R.NaF-catalyzed efficient one-pot synthesis of dihydropyrano[2,3-c]pyrazoles under ultrasonic irradiation via MCR approach(2018) Synthetic Communications, 48 (15), pp. 1994-2001.

Konakanchi, R., Haribabu, J., Prashanth, J., Nishtala, V.B., Mallela, R., Manchala, S., Gandamalla, D., Karvembu, R., Reddy, B.V., Yellu, N.R., Kotha, L.R.Synthesis, Structural, Biological Evaluation, Molecular Docking and DFT Studies of Co(II), Ni(II), Cu(II), Zn(II), Cd(II) and Hg(II) Complexes bearing Heterocyclic Thiosemicarbazone ligand(2018) Applied Organometallic Chemistry, 32 (8), art. no. e4415.

Gondru, R., Sirisha, K., Raj, S., Gunda, S.K., Kumar, C.G., Pasupuleti, M., Bavantula, R.Design, Synthesis, In Vitro Evaluation and Docking Studies of Pyrazole-Thiazole Hybrids as Antimicrobial and Antibiofilm Agents(2018) ChemistrySelect, 3 (28), pp. 8270-8276.

Jilloju, P.C., Vedula, R.R.A facile one-pot three-component synthesis of benzylideneamino-3,5-dimethyl-1H-pyrazoles(2018) Synthetic Communications, 48 (14), pp. 1739-1746.

Konakanchi, R., Kankala, S., Kotha, L.R.Zinc-catalyzed multicomponent reactions: Facile synthesis of fully substituted pyridines(2018) Synthetic Communications, 48 (14), pp. 1777-1785.

Katla, J., Hazra, B., Verma, M.S., Palakollu, V., Nagaraju, S., Chandra, M., Kanvah, S.Donor-Acceptor Styrylisoxazoles: Solvatochromism and Large First Hyperpolarizability(2018) ChemistrySelect, 3 (25), pp. 7416-7421.

Thirupaiah, B., Sujatha, K., Rao, V.R.One pot multicoponent synthesis of 4-hydroxy-6-methyl-3-(3 phenylthiazolo [2,3c][1,2,4]triazol-5-yl)-2h-pyran-2-ones(2018) Indian Journal of Chemistry - Section B Organic and Medicinal Chemistry, 57B (7), pp. 960-964.

Pavurala, S., Vaarla, K., Kesharwani, R., Naesens, L., Liekens, S., Vedula, R.R.Biscoumarinyl bis triazolothiadiazinyl ethane derivatives: Synthesis, antiviral activity evaluation, and molecular docking studies(2018) Synthetic Communications, 48 (12), pp. 1494-1503.

Arandkar, V., Vaarla, K., Vedula, R.R.Facile one pot multicomponent synthesis of novel 4-(benzofuran-2-yl)-2-(3-(aryl/heteryl)-5-(aryl/heteryl)-4,5-dihydro-1H-pyrazol-1yl)thiazole derivatives(2018) Synthetic Communications, 48 (11), pp. 1285-1290.

Suresh, S., Reddy, I.A.K., Venkatathri, N.Synthesis of SAPO-16 molecular sieve in non-aqueous medium by microwave method using Hexamethyleneimine as a template(2018) Microporous and Mesoporous Materials, 263, pp. 275-281.

Bheemarasetti, M., Palakuri, K., Raj, S., Saudagar, P., Gandamalla, D., Yellu, N.R., Kotha, L.R.Novel Schiff base metal complexes: synthesis, characterization, DNA binding, DNA cleavage and molecular docking studies(2018) Journal of the Iranian Chemical Society, 15 (6), pp. 1377-1389.

Thunga, S., Poshala, S., Kokatla, H.P.Methyl 2-Nitrosobenzoate: A Simple Dehydrating Agent for the Synthesis of Nitriles from Aldoximes(2018) ChemistrySelect, 3 (16), pp. 4425-4429.

Gondru, R., Saini, R., Vaarla, K., Singh, S., Sirassu, N., Bavantula, R., Saxena, A.K.Synthesis and Characterization of Chalcone-Pyridinium Hybrids as Potential Anti-Cancer and Anti-Microbial Agents(2018) ChemistrySelect, 3 (5), pp. 1424-1431.

Sujatha, K., Vedula, R.R.Novel one-pot expeditious synthesis of 2,4-disubstituted thiazoles through a three-component reaction under solvent free conditions(2018) Synthetic Communications, 48 (3), pp. 302-308.

CHEMISTRY

Paplal, B., Nagaraju, S., Sathish, K., Kashinath, D.One-pot synthesis of 3-hydroxy-2-oxindole-pyridine hybrids via Hantzsch ester formation, oxidative aromatization and sp3 C–H functionalization using FeWO4 nanoparticles as recyclable heterogeneous catalyst(2018) Catalysis Communications, 103, pp. 110-115.

Muripiti, V., Rachamalla, H.K., Banerjee, R., Patri, S.V.α-Tocopherol-based cationic amphiphiles with a novel pH sensitive hybrid linker for gene delivery(2018) Organic and Biomolecular Chemistry, 16 (16), pp. 2932-2946.

Konakanchi, R., Mallela, R., Guda, R., Kotha, L.R.Synthesis, characterization, biological screening and molecular docking studies of 2-aminonicotinaldehyde (ANA) and its metal complexes(2018) Research on Chemical Intermediates, 44 (1), pp. 27-53.

Prasad, Y.S., Saritha, B., Tamizhanban, A., Lalitha, K., Kabilan, S., Maheswari, C.U., Sridharan, V., Nagarajan, S.Enzymatic synthesis and self-assembly of glycolipids: robust self-healing and wound closure performance of assembled soft materials(2018) RSC Advances, 8 (65), pp. 37136-37145.

Ramaiah K, Ramachary M, Ramu G, Munirathinam N, Durgaiah G, Narsmiha Reddy Y &Laxma Reddy K Zn(II), Cd(II) and Hg(II) metal complexes of 2-aminonicotinaldehyde: Synthesis, crystal structure, biological evaluation and molecular docking study InorganicaChemica Acta, 2018, 469, 66-75.

Ramaiah K, Prashanth J, Haribabu J, Sreekanth KE, Venkaram Reddy B, Karvembu R &Laxma Reddy K Vibrational spectroscopic (FTIR, FT-Raman), anti-inflammatory, docking and molecular characteristic studies of Ni(II) complex of 2-aminnicotinaldehyde using theoretical and experimental methods Journal of Molecular Structure, 2019, 1175, 769-781.

Ramaiah K, Sreekanth KE,, Prashanth J &Laxma Reddy K A Combined Experimental (FT-IR) and Computational Studies of 9-Chloroanthracene Asain Journal of Chemistry, 2019, 31, 1332-1342.

Rohini G, Ramaiah K, Aneesrahman K.N, Aryasenan M.C, Bhuvanesh N.S.P. &Laxma Reddy K Biological evaluation, DNA/protein-binding aptitude of novel dibenzosuberene appended palladium(II)-thiourea complexes Applied Organometallic Chemistry, 2018, 32, e4567.

Aneesrahman KN, Ramaiah K, Rohini G, Stefy GP, Bhuvanesh NSP &Laxma Reddy K, Synthesis and characterizations of copper(II) complexes of 5-methoxyisatin thiosemicarbazones: Effect of N-terminal substitution on DNA/protein binding and biological activities InorganicaChemica Acta, 2019, 492, 131-141.

Ramaiah K ,Eswar Srikanth K, Prabhakara Rao K, Laxman naik J, Veeraiah A , Prashanth J &Laxma Reddy K Experimental and theoretical analyzes on structural (monomer and dimeric form), spectroscopic and electronic properties of an organic semiconductor 2,6-dimethoxyanthracene Indian Journal of physics, 2019, 35, 56-65.

Gangada, Suneel; Chakali, Madhu; Mandal, Haraprasad; Duvva, Naresh; Chitta, Raghu*; Lingamallu, Giribabu*; Bangal, Pakriti R*. Excitation-Dependent Electron Exchange Energy and Electron Transfer Dynamics in a Series of Covalently Tethered N,N'-bis(4'-tert-butylbiphenyl-4-yl)aniline-[C0]fullerene Dyads via Varying □-conjugatdSpacers.Phys. Chem. Chem. Phys. 2018, 20, 21352-21367.

Soni, Disha; Duvva, Naresh; Badgurjar, Deepak; Tapta Kanchan; Nimesh, Surendra; Arya, Geeta; Lingamallu, Giribabu*; Chitta, Raghu*. Hypochlorite Mediated Modulation of Photo-Induced Electron Transfer in PTZ-BODIPY Electron Donor-Acceptor Dyad: A Highly Water Soluble "Turn-On" Fluorescent Probe for Hypochlorite.Chem. Asian J. 2018, 13, 1594-1608.

K. Muthusamy, K. Lalitha, Y. S. Prasad, A. Thamizhanban, V. Sridharan, C. U. Maheswari, S. Nagarajan, Lipase-Catalyzed Synthesis of Furan-Based Oligoesters and their Self-Assembly-Assisted PolymerizationChemSusChem 2018, 11, 2453.

Chirra, S., Siliveri, S., Adepu, A. K., Goskula, S., Gujjula, S. R., & Narayanan, V. (2019). Pd-KIT-6: synthesis of a novel three-dimensional mesoporous catalyst and studies on its enhanced catalytic applications. Journal of Porous Materials. https://doi.org/10.1007/s10934-019-00763-5

Chirra, S., &Venkatathri, N. (2018). A novel method of synthesis and a new insight into the vanadium incorporation in three-dimensional mesoporous KIT-6. Materials Research Express, 6(1), 15021. https://doi.org/10.1088/2053-1591/aae45d

Robin Löfgren, Ravinder Pawar, Sven Öberg, J Andreas Larsson The bulk conversion depth of the NV-center in diamond: computing a charged defect in a neutral slab New Journal of Physics, 2019, 22, 053037

Ravinder Pawar and Venkatesan Subramanian Hydrogen bonding interaction of N5H with water:

CHEMISTRY

A first principle calculations Computational and Theoretical Chemistry 2019, 1165, 112560

SaikumarManchala, Lakshmana Reddy Nagappagari, Shankar MuthukondaVenkatakrishnan, Vishnu Shanker Facile synthesis of noble-metal free polygonal Zn2TiO4 nanostructures for highly efficient photocatalytic hydrogen evolution under solar light irradiation International Journal of Hydrogen Energy, 2018, 43, 13145-13157

SeelamRangaswamy Reddy, V. V. Bhanu Prasad, Pawan Kumar, K. Prabahar, Vishnu Shanker, Subir Roy Microwave sintered lead free ferroelectric BZT-50BCT ceramics with higher Curie temperature and improved dielectric properties Journal of Materials Science: Materials in Electronics, 2018, 29, 12451–12456

SR Reddy, VVB Prasad, S Bysakh, V Shanker, N Hebalkar, SK Roy Superior energy storage performance and fatigue resistance in ferroelectric BCZT thin films grown in an oxygen-rich atmosphere J. Mater. Chem. C, 2019, 7, 7073.

SR Reddy, VV Bhanu Prasad, S Bysakh, V Shanker, J Joardar, SK Roy Ferroelectric and piezoelectric properties of Ba0.85Ca0.15Ti0.90Zr0.10O3 films in 200 nm thickness range Journal of the American Ceramic Society 2019, 102, 1277-1286

SaikumarManchala, Lakshmana Reddy Nagappagari, Shankar MuthukondaVenkatakrishnan, Vishnu Shanker Solar-Light Harvesting Bimetallic Ag/Au Decorated Graphene Plasmonic System with Efficient Photoelectrochemical Performance for the Enhanced Water Reduction Process ACS Appl. Nano Mater. 2019, 2, 4782−4792

VenkannaMuripiti, Brijesh Lohchania, Srujan Kumar Marepally and Srilakshmi V. Patri*. Hepatocellular targeted α-tocopherol based pH sensitive galactosylated lipids: design, synthesis and transfection studies. Med. Chem. Commun., 2018, 9, 264-274

DivyaBoosagulla, Sreekanth Mandati, RamachandraiahAllikayala and Bulusu V. Sarada Room Temperature Pulse Electrodeposition of CdS Thin Films for Application in Solar Cells and Photoelectrochemical Cells ECS Journal of Solid State Science and Technology, 2018, 7, 440

Narreddula M, Balaji R, Ramya K, Rajalakshmi N, Ramachandraiah A. Nitrogen doped graphene supported Pd as hydrogen evolution catalyst for electrochemical methanol reformation International Journal of Hydrogen Energy 2019, 44, 4582

Satyanarayana, M., Goud, K.Y., Reddy, K.K., Sunil Kumar, V., Gobi, K.V. Silver nanoparticles impregnated chitosan layered carbon nanotube as sensor interface for electrochemical detection of clopidogrel in-vitro Materials Science and Engineering C, 101, 103-110 (2019).

Goud, K.Y., Satyanarayana, M., Hayat, A., Gobi, K. V., Marty, J. L. Nanomaterial-based electrochemical sensors in pharmaceutical applications Nanoparticles in Pharmacotherapy, 195-216 (2019).

Yugender Goud, K., Sunil Kumar, V., Hayat, A., Gobi, K. V., Song, H., Kim, K.-H., Marty,J.L. A highly sensitive electrochemical immunosensor for zearalenone using screen-printed disposable electrodes Journal of Electroanalytical Chemistry, 832, 336-342 (2019).

S. Manasa, T. Siva, S. Sathiyanarayanan, Gobi, K.V., R. Subasri Montmorillonite nanoclay-based self-healing coatings on AA2024-T4 Journal of Coatings Technology and Research, 15 (4), 721-735 (2018).

Thamizhanban A., Lalitha K., Nagarajan S. (2019) Self-Assembled Soft Materials for Energy and Environmental Applications. In: Rajendran S., Naushad M., Raju K., Boukherroub R. (eds) Emerging Nanostructured Materials for Energy and Environmental Science. Environmental Chemistry for a Sustainable World, vol 23. Springer, Cham

Ongoing Research Projects(2018-2019)

Design, Synthesis and biological evaluation of thiazolidinone-tetrazolopyrimidine hybrid molecules as anti-cancer agents, **Dr. Srinivas Basavoju**, 2017-2020, 15.46 lakhs, CSIR-EMF-II

Hexabenzocoronene as a versatile Template for Integrating Panchromatic Photosensitizer-Cheap Metal Catalyst to a Single Platform: A Novel Class of Cost-Effective Catalysts for Efficient Photo-Driven Water Oxidation, **Dr. Raghu Chitta**, CRG/2018/002661, 44.03 lakhs, DST CRG SERB

iClick reactions for the biorthogonal functionalization of peptides and proteins with transition metal complexes, **Dr. C. Jugun Prakash**, DST/INSPIRE FACULTY/BATCHV/

2013 dt 10/01/2019, 35.0 lakhs, DST

Fabrication of Printable Nanosensor Patch for Direct Detection of Plant Diseases from Nanocellulose Based Polydiacetylene using Molecular Self-assembly, **Dr. S. Nagarajan** and **Dr. C. JugunPrakash**(Co-PI), SPARC/2018-2019/P263/SL dt 31/05/2019, 49.80 lakhs, MHRD-SPARC

CHEMISTRY

Synthesis and Anticancer Activity of Sugar-Based Natural Saffloflavonesides and Their Heterocyclic Analogs, **Dr. S. Nagarajan** and **Dr. AsimBikas Das** (Co-PI), CRG/2018/00138 dt 07/03/2019, 38.06 lakhs, DST-SERB

Metal Flatlands (Atomically Thin Two-Dimensional Metals): Designing, Properties and Applications, **Dr. Ravinder Pawar**, ECR/2018/

002346Dated 18.03.2019, 41.17 lakhs, DST-SERB

N-Heterocyclic Carbene Catalyzed Tandem [2+2] and [4+2] Cycloaddition Reactions: Application in the Synthesis of Bioactive Compounds, **Dr. K. Hari Prasad**, EEQ/2018/001257 dated 08.03.2019, 41.02 lakhs, DST-SERB

Novel glycosylation methods and their application to biologically important molecules, **Dr. K. Hari Prasad**, sanctioned from 30.10.2015, 35.0 lakhs, DST-INSPIRE

N-Heterocyclic Carbene Catalyzed Tandem [2+2] and [4+2] Cycloaddition Reactions: Application in the Synthesis of Bioactive Compounds, **Dr. K. Hari Prasad**, Sanctioned from 31.10.2015, 23.0 lakhs, DST-SERB

Heterocyclic Based Peptidomimetics for Gene Delivery , **Dr. P.V. Srilakshmi**, sanctioned date 20-03-2019, 41.91 lakhs, SERB-DST

Synergistic effects of ionic liquid and nano lubricants on the tribological and rheological properties, Dr. V. Vasu and **Dr. D. Kashinath**, 20 March 2019, 17.64 lakhs

Talks Given in National/International Conferences

Dr. S. Nagarajan, Molecular Self-Assembly: An Elegant Strategy to Construct Advanced Organic Materials, National Conference on Emerging Trends in Chemical Sciences (ETCS-2019), Central University of Jammu, 14-15 March 2019

Dr. Raghu Chitta, Pyrrole Based Artificial Photosynthetic Systems as Light Energy Harvesting Compounds: Syntheses, Photophysical Properties, and Applications, National Conference on Emerging Trends in Chemical Sciences (ETCS-2019), Central University of Jammu, 14-15 March 2019

Dr. D. Kashinath, Chemistry and Life, INSPIRE Camp for School Children, NITW, 18 May 2018

Dr. D. Kashinath Utilization of e-resources, Faculty Induction Program, Central Library, NIT Warangal, 10 April 2018

Dr. D. Kashinath, NIT Warangal Central Library: Print and Digital Learning Resources, Faculty Induction Program, Central Library, NIT Warangal, 13 June 2018

K. Laxma Reddy, Environmental Issues and Challenges, Balaji Engg. College Narasampet, 27-3-2019.

K. Laxma Reddy, Scientific Temper, NIT, Warangal, 22-2-2019

Dr. B. Srinivas Telangana State Science Congress (TSSC-2018) NIT-Warangal 24 December-2018

Dr. S. Nagarajan, Continuing Education Program On advanced soft materials: synthesis and applications (ASM-2018) December 17-21, 2018

Workshops/Symposium and Conferences Conducted

Telangana State Science Congress (TSSC-2018), NIT-Warangal, 24th December-2018

National Symposium on Emerging Trends in Instrumental Methods of Chemical Analysis (ETIMCA-2019) 30-31st January, 2019

Awards / Recognitions

Dr. D. Kashinath - Nominated at State Academic Coordinator for "National Children's Science Congress 2019" for Telangana Government.

Dr. D. Kashinath - Active in outreach programs (educating the school / Jr. College students about the professional courses): Delivered more than 30 lectures during 2018-2019 at various platforms (Schools, Colleges, Teacher Training programs etc.)

Dr. Vishnu Shanker - Resource person for the Center for advance Materials.

Department of Chemistry - Received FIST-first level of support from DST

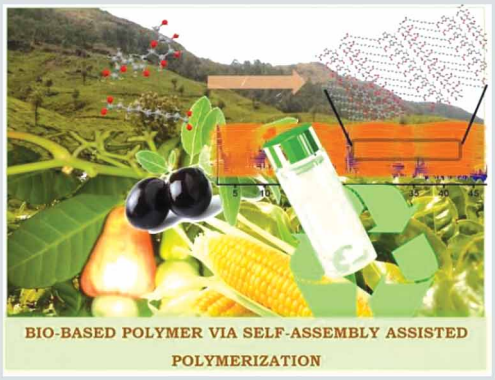
Dr. N. Venkatathri: • Research Ratna Award of the Year 2019, Rula Awards, Trichy, India.

Prof. A. Ramachandraiah - Fellow of Andhra Pradesh Academy of Sciences.

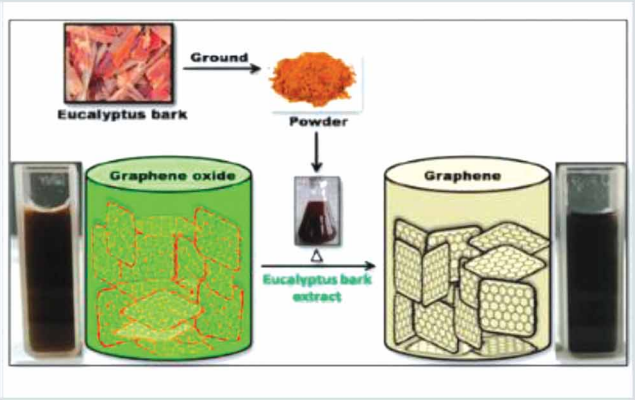
Prof. K. Laxma Reddy - Fellow of Andhra Pradesh Academy of Sciences and Telangana Academy of Sciences.

RESEARCH HIGHLIGHTS

A group led by Dr. S. Nagarajan, NITW has developed a new strategy that promises to help expand the scope for production of bioplastics. The products may find use for a range of applications in medical and food sectors," explained study leader Dr. S. Nagarajan of NIT, Warangal, while speaking to India Science Wire. (K. Muthusamy, K. Lalitha, Y. S. Prasad, A. Thamizhanban, V. Sridharan, C. U. Maheswari, S. Nagarajan*, *ChemSusChem* 2018, 11, 2453. (May 2018)



A group led by Dr. Vishnu Shanker, NITW has developed, in collaboration with Royal Melbourne Institute of Technology (RIMT) in Australia, a safer and much less costly process for synthesizing the super-material graphene using an extract from eucalyptus bark. In this case, the researchers use a chemical extracted from eucalyptus bark containing polyphenols, chemicals found in plants with anti-oxidant properties. The team uses polyphenol compounds from ground-up eucalyptus bark to separate graphene from graphene oxide flakes, in a water-based medium under reflux conditions, where reactants are heated, with vapors cooled into liquids through condensation. The result, say the authors, is 1 to 4 layers of stable, homogeneous graphene. Graphene made with eucalyptus polyphenols can be made at a cost of $US 0.50 per gram, compared to $100.00 a gram with conventional methods. (Manchala, S., Tandava, V.S.R.K., Jampaiah, D., Bhargava, S.K., Shanker, V. ACS Sustainable Chemistry and Engineering, 7 (13), pp. 11612-11620, 2019)



SCHOOL OF MANAGEMENT

Recognizing the need of techno management, the institute has designed a comprehensive MBA program exclusively for engineers. Thus came to light the "School of Management (SOM)" at NIT Warangal in 2000. The MBA program offered by the School of Management is exclusively for engineering graduates. A two-year course runs into 8 quarters. The program has extensive electives in the specialized areas of Marketing Management, Human Resource Management, Financial Management, Operations Management, Information Technology and allied areas of management. Students are exposed to industrial training for a period of eight weeks, after completion of first year and the project work for a period of twelve weeks during their final quarter. The School of Management provides a well-balanced combination of academic and practical business oriented content. The updated curriculum with its wide range of video materials, databases like prowess, case studies, research projects and other tools aim at enhancing the understanding of the business reality and imbibing problem-solving skills. The School has been accredited with Tata Consultancy Services and is having significant placements. The School has fully air-conditioned classrooms with Wi-Fi facility.

FACULTY

Prof. M. Ravindar Reddy

Areas of Interest:
Economics , Agriculture Economics , Rural Marketing

Dr. Padma K

Associate Professor
Areas of Interest:
Economics, Financial Management

Dr. P. Ramlal

Associate Professor
Areas of Interest:
Human Resource Management, Soft Skills, Corporate Training, Performance Management

Dr. V. Rama Devi (HoD)

Associate Professor
Areas of Interest:
Organizational Behavior & Human Resource Management

Dr. G.Sunitha

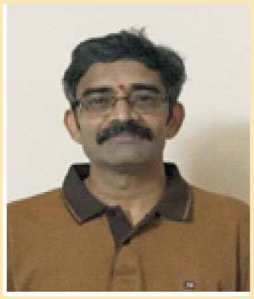
Assistant Professor
Areas of Interest:
Behavioral Finance, Financial Markets

Dr. S. Lakshmi Tulasi Devi

Assistant Professor
Areas of Interest:
Corporate Finance, Risk Management and Financial Econometrics

Dr. Francis Sudhakar

Assistant Professor
Areas of Interest:
Consumer Behavior and Industrial Marketing



Dr. K Lakshminarayana

Assistant Professor
Areas of Interest:
Information Systems, Socio Technical systems and E-Governance

Dr. P Ramachandra Gopal

Assistant Professor
Areas of Interest:
Supply chain Management Sustainability, Operations Management

Publications
(in Peer Reviewed Journals)

Kompella, L. (2019). Role of organizational aspects in requirements engineering processes of a socio-technical system : Insights from E- Governance case studies. *International Journal of Electronic Governance.* Recently Accepted for publication

Kompella, L. (2019). Digital innovation in the public sector: The role of embeddedness in socio- technical transitions. International Journal of Innovation and Technology Management. Recently Accepted for publication.

Kompella, L. (2019). A co-evolution framework towards stable designs from radical innovations for organizations using IT. Journal of Technology Management&Innovation, 14(2).

Kompella, L. (2019). Barriers to radical innovations as stable designs: Insights from an IT case study. International Journal of Innovation Management. 23(05),1950047.

Kompella, L. (2018). Indian IT service industry as a socio-technical transition: A multi-level perspective analysis with case studies. Journal Transition Studies Review, 25(2), 13-35.

M Ravindar Reddy, Neelima K. "A study of stress impact of physical health of bank employees". Journal of Advance Research in Dynamical & Control Systems. 2019, Vol.11, No.5, 118-121. ISSN 1943-023X.

M Ravindar Reddy, Neelima K. "Performance management system implementation in public sector undertakings - with reference to the RSTPS, Telangana", International Journal of Innovative Technology and Exploring Engineering (IJITEE). 2019, Vol.8, NO.7S2, 231-235. ISSN: 2278-3075

Shafi M K M, M Ravindar Reddy, "Viability and Practices of Interest-Free Microfinance in the State of Kerala: An Analytical Study Based on Customers' Perceptions towards Products, Services and Operational Methods". IIMB Management Review. 2019. ISSN 0970-3896

M Venugopal, M Ravindar Reddy, Bhanu Prakash Sharma G. "Impact of Capital Structure on Shareholder Value in Indian Pharmaceutical Industry: An Empirical Approach through Created Shareholder Value (CSV)". Global Business Review. Vol. 19, No.5, Oct 2018 ISSN: 0972-1509

M Venugopal, M Ravindar Reddy, Bhanu Prakash Sharma G. "Competing performance measures in predicting shareholder return of Indian pharmaceutical firms: an empirical evidence". International Journal of Business Excellence. Vol. 18, No. 2, 2019. ISSN: 1756-0047

M Venugopal, M Ravindar Reddy, Bhanu Prakash Sharma G. "Shareholder Value Creation - A Review of the Theoretical and Empirical Literature". Asia-Pacific Journal of Management Research and Innovation. Vol 14, Issue 3-4, 2018. ISSN: 2319510X.

Selladurai Pitchaimuthu, Jitesh J. Thakkar and P.R.C. Gopal, (2019) " Modelling of risk factors for defence airctaft industry using Interpretive s t ructural modelling, interpretive ranking process and system dynamics" Measuring Business Excellence (Accepted for Publication).

Habeeb Syed, K Francis Sudhakar "Analyzing CausalityAmongtheServiceQuality,Custom er Satisfaction and Behavioral Intention Variables with respect to E-Shopping - An Empirical Take", IJOM: Volume 9, Issue 1, Article 3, Aug, 2019.

K Francis Sudhakar , Habeeb Syed ,Amit Sinha , (Mar 2019) " A Study on Recession Marketing using Lean Technology " , International Journal of Management and Applied Science (IJMAS) , pp. 21-24, Volume-5,Issue-3.

P. Ramlal, S.A Mozumder, P. Karthik (2019) paper tittle "Welfare facilities and Worker Satisfaction- A study of Indian Coal Mining Sector" accepted for publication in International Journal of Recent Technology and Engineering (IJRTE) ISSN 2277-3878.

P. Ramlal, G Sivasree and Ankush Gupta (2018), " A case study on the behavior of employees working in leading MNC's (IT/ITES Sector) in India regarding performance appraisal system & proposing a common performance appraisal framework for Indian organizations to lower attrition rate." UPI Journal of Business Management and Computer Applications, ISSN: 2581- 4559, Vol.1, Issue 1. Pg. No.

Publications
(in Peer Reviewed Conferences)

S. A Mozumder, Dr. P.Ramlal (2018) "Theoretical Understanding of Industrial Relations in Indian Organizations" Paper Presented in 4TH Management Doctoral Colloquium organized by VGSOM IIT-KHARAGPUR during 2018

G. Siva Sree, Dr. P. Ramlal, Mozumder, S, A., (2018), "Impact of human resource reputation on organization reputation" accepted in IIM Indore 'CERE 2018'. Conference.

Athulya R, Venkatesh R, Dabar S, Gopal P.R. C. " Process Improvement Through re- engineering: A case of Indian Financial Institutions". 20-22 December 2018 at IIM Kozhikode.

Koushik Mondal, PRC Gopal, Neelakanteswara Rao "Modelling of Two echelon retail supply chain various operating Conditions: A systemDynamics Approach, Proceedings of Ieeeforum International Conference, Bengaluru, India 02nd June 2019.

Habeeb Syed, K Francis Sudhakar "Online Consumer Behavior: A review & future research with respect to online shopping in India", 4th Management Doctoral Colloquium organized by VGSOM - IIT Kharagpur - March 14-15, 2018.

K Francis Sudhakar "Investigating the effect of CRM on customer retention in healthcare industry", IISTEM - Nov 25, 2018.

K Francis Sudhakar "Identification of factors that build customer satisfaction and loyalty in Indian telecom sector", ARSSS - Dec 02, 2018.

K Francis Sudhakar "Investigating young generation behavior and perception towards green products", 3rd international conference on multidisciplinary research (ICMR), Dec 08, 2018.

K Francis Sudhakar " Analysing the responsible factors that build customer satisfaction and loyalty in Indian telecom sector", -3rd International conference on Multidisciplinary Research (ICMR), Dec 08, 2018.

Book Chapters

S. A Mozumder, Dr. P.Ramlal(2018) chapter titled "Industrial Relations Practices to Retain Employees- A Study of Indian Coal Mining Sector" in the book "Strategic Competency Mapping for Talent Management and Retention" published by Bharti Publication, New Delhi. ISBN no-978-93-86608-21-5. Page No-147-153.

S. A Mozumder, Dr. P.Ramlal (2018) chapter tittle "Promoting Organizational Citizenship Behaviour (OCB) In Indian NGOs for Sustainable Development - A Theoretical Framework" published in the book "Emerging Perspectives in Management, Entrepreneurship and Innovation" published by White Falcon Publishing, ISBN - 978-81-938624-3-8, page no.from 92-98

Habeeb Syed, K Francis Sudhakar, "A Review of Antecedents of Online Repurchase Behavior in Indian E- Commerce Paradigm Shift", Handbook of Research on Social and Organizational Dynamics in the Digital Era, IGI Global, July 2019.

Workshops

ICSSR sponsored Two Week Capacity Building Programme for Young Social Sciences Faculty, May 23-June 3, 2019.

Faculty development program (FDP) on Business analytics on 17th to 22nd December, 2018.

Funded Projects

V.Rama Devi, The Role of Social media in Rural Development -A Study in Telangana State, IMPRESS scheme of ICSSR, 2018-2019.

Dr. P Ramlal, as a Co Investigator on 'Employment and Women Issues in Tribal Areas: A Study' Sponsored by UGC

Dr. P Ramlal as a Principal Investigator on'Conducting of Social Impact Evaluation of CSR – CD Activities of NTPC., Ltd, Hyderabad

Highlights

WI-FI Enabled Classrooms

- Analytics Lab
- The School of Management was Accredited by Tata Consultancy Services Frequent Workshops, Corporate - Interactions, Guest lectures
- GD Room, Departmental library

HUMANITIES AND SOCIAL SCIENCES

The Department of Humanities and Social Sciences was formed in 2009 after it was bifurcated from the erstwhile combined Department of Mathematics and Humanities. The department is founded on the conviction that life skills are as important for an engineer as acquisition of technical skills and that courses in Humanities are necessary in order to invest engineering education with purpose and perspective.

The Department has faculty members with excellent academic credentials, guiding PhD scholars in emerging areas of both English language and literature. The department offers research programmes in various popular areas of English Language Teaching (ELT) and modern British and American Literature and welcomes researchers contemplating a PhD in ELT / English literature. So far, 18 PhD degrees have been awarded in different areas in Humanities and Social Sciences.

The Department is trying to strengthen its presence in other areas too, such as Sociology and Industrial Psychology by recruiting faculty in these disciplines. Members of the faculty have been active in organizing conferences/workshops, publishing papers and taking active part in various administrative responsibilities.

Faculty members have published widely in the areas of ELT, British and American literature and several faculty members have won awards for their contribution to academia.

FACULTY

Dr.MRajaVishwanathan
PhD – Osmania University, Hyderabad
Assistant Professor of English and Head
Areas of interest: Bilingual and bilingual education; ideology in language teaching; critical pedagogy; academic writing; genre analysis

DrDSKesavaRao
PhD: Sri Venkateswara University, Tirupathi
Professor of English
Areas of interest :academic writing; materials development; ESP; modern British literature; American literature

DrBSpoorthi
PhD: English and Foreign Languages University, Hyderabad
Assistant professor of English
Areas of interest: English Language Training, leveraging Technology in language learning, curriculum development, task based language teaching/training, social emotional Learning

Dr.KMadhavi
PhD – Osmania University, Hyderabad
Associate Professor of English
Areas of interest : Academic writing skills; Designing task based ESP courses; Multiple intelligences -Visual Literacies; teaching reading and writing using technology; Learner strategies and styles

DrPMadhumathi
PhD – Vellore Institute of Technology, Vellore
Assistant professor of English
Areas of interest: critical pedagogy, materials development; academic writing; Cultural Studies

HUMANITIES AND SOCIAL SCIENCES

Publications (in peer reviewed journals)

M. R. Vishwanathan; *Pronounced ambivalence: R. P. and native speaker norms in the ESL classroom*, Fortell, 39, 2019, 58-68.

M. R. Vishwanathan, *Professional Ethics and Research: The Long Road Ahead* , Kakatiya Journal of English Studies, 38, 2019, 1-12.

Kesava Rao D S , *Ecocriticism in the Present Context* , Kakatiya Journal of English Studies , 37 , 2018, 23-31

D.S. Kesava Rao , *Employability Skill Deficiencies and Strategies to Overcome Them through Computing and Receptive Language Skills*, Kakatiya Journal of English Studies, 38, 2019, 13-17

K Madhavi, 'Transforming the Identity of Women from Tradition to Modernity through Cinema: Towards Gender Equality' in July 2018 in 'Cambridge Scholars Publishing, London.

Publications (Conferences)

K Madhavi Presented a paper on 'Role of Women in Technical Education: Entrepreneurship, Research and Consultancy (RWTE-2019)' on 'International Women's Day Celebrations' , organised as part of Diamond Jubilee Celebrations under (TEQIP-III) during 8-9th March 2019.

P Madhumathi presented a paper on 'Listening Skills: Practice and Testing' at 63rd All India English Teachers Conference on Recent Trends in English Literature and English Language Teaching at SV University, Tirupati, 7 - 9January 2019.

P Madhumathi presented a paper Balancing Personal and Professional Life: Challenges and Issues Faced by Women Working in Technical Roles, National Conference on Role of Women in Technical Education: Entrepreneurship, Research and Consultancy, NIT Warangal, 8- 9 March 2019.

Anitha Priyadharshini and **P Madhumathi** presented a paper on 'Factors Influencing the Life of Women Studying Higher Education in India', National Conference on Role of Women in Technical Education: Entrepreneurship, Research and Consultancy, NIT Warangal, 8- 9 March 2019.

P Madhumathi presented a paper on , Epistles as a Window of Dark Rooms: An Analysis of Letters Written by Mahatma Gandhi from Prison, National Conference on Prion Writing in India: Suppressing Dissent and Generating Consent, Kakatiya University, 27- 28 March 2019

B Spoorthi presented a paper on Barriers to closing the STEM Gender Gap in Two- Day National Conference on 'Role of Women in Technical education, 8th – 8th March 2019, NIT Warangal

B Spoorthi presented a paper on ' Influence of Rehabilitation on Interpersonal Relationships of Juvenile Inmates' in Two Day National Seminar on Prison Writing in India Suppressing Dissent and Generating Consent – 27th – 28th March 2019, Kakatiya University, Warangal

Books

K ,Madhavi., 'English Matters', ISBN- 978-81-907052-2-3, Lorven Publications June 2019.

H.P. Rani and **K. Madhavi**, (Eds.) 'Women in Higher Education in India- *Perspectives and Challenges', ISBN-13:978-1-5275-0854-5*, Cambridge Scholars Publishing, UK , June 2018.

P Madhumathi, ' Verbs and Synonyms Word Search', Lambert Academic Publication, Germany, November 2018

Book Chapters

K . Madhavi, 'Sociological and Psychological issues in Manju Kapur's "Difficult Daughters" and "The Immigrant"- A Feminist Approach 'in the book titled 'Post Modern Indian Women Writers in English- Critical Concerns and Trends, Published by Research India Press, New Delhi, ISBN: 978-93-5171-159-9 pp, 84- 98, March 2019.

Workshops

5 day Workshop from 1st – 5th April 2019; *Technical communication Skills: Drafting and presenting research papers,* NIT Warangal, Telangana.

Funded Projects

D. S. Kesava Rao and P. Madhumathi , *Technology Based Strategy Intervention to Enhance Communication Skills of Arts and Science College Students from Rural Telangana*, IMPRESS project awarded by ICSSR, 2019-2021, Rs.10,00,000.

Lab Established

Establishment of **'Advanced English Communication Skills Multi Media Lab'** has been initiated and funding to the tune of 7.5 lakhs under TEQIP-III scheme has been granted for setting up multi media lab. The lab is meant for training students of engineering in various speaking activities, such as group discussions, mock interviews, oral presentations, debates, etc.

PHYSICAL EDUCATION

The Department of Physical Education has a dedicated team of people working hard to increase the overall enthusiasm for sports in the institute and the smooth conduct of the tournaments that occur year round. This system covers every individual in the campus, and ensures that good talent is always spotted.

The department has Indoor (fitness center, wooden flooring for shuttle badminton) and outdoor sports facilities in almost all disciplines, (400mtrs track, flood lit courts, stadium pavilion, synthetic tennis court) except swimming pool. The department will organize intramural competitions branch wise in all the disciplines to give an opportunity to involve more number of student community. The department will provide an opportunity to talented sportsmen and women to participate in the extramural competitions like, Inter NIT sports meet and Inter University sports competitions regularly. The department will organize sports tournaments at our campus regularly. Fitness and conditioning classes were conducted to all first year students regularly during academic year.

S.No.	Dr. P.MadhusudanReddy (HOD)	Dr. R.Dhayanithi	Dr. P.Ravikumar
1	Volleyball	Athletics	Football
2	Tennis	Basketball	Cricket
3	Ball Badminton	Badminton	Chess
4	Kabaddi	Table Tennis	
5	Tennikoit		
6	Throw Ball		
7	Weight Lifting		
8	Swimming		
9	Kho-Kho		

Annual Sports Day celebrations for the academic year 2018-19 was held on 5-04-2019.
The Best Outgoing Sportsman for the year 2018-19 goes in men section to **Mr.Dev Raj Naik**, B.Tech. Final year, EEE. Department , and in Women section to **Miss. G.Shivani**, B.Tech. Final year of Chemical Department.
Best Sports man of the year **Pawankumar Reddy** 4/4 Mech. dept. Best sports women of the year goes to **Agarshika Ramesh**
The Over All Championship in games and sports this year goes to the Department of Chemical Eng.
Individual championship in Athletics goes to **Mr. ALCY COLUMBA** of 4/4 B.tech.
Over All championship in sports and games was secured by ECE department.

Our Institute organized **All India Inter NIT Athletics (M&W) Championship from 22-24 March 2019 & 29 National Conference of sport Psychology from 29-31 March 2019.**

Our institute teams took part in the All India Inter NIT tournaments in Athletics, Badminton, Basketball, Carrom, Cricket, Football, Kabaddi, Kho-Kho, Table Tennis, Tennis, and Volleyball at Warnagal, Nagpur, Rourkela, surathkal, Trichy and Agartala are:

Gold medalists Agarshika Ramesh in Swimming, Imamuddin, suleman,Weight lifting, power lifting and best physique, Runners in chess, Gold medalists Gianthika and Alcy COLUMBA are in Athletics

We also Participated in the National University Games in kabaddi and Volleyball at SRMIST Chennai
We have organized **Intramural sports and games** branch wise in Athletics, Ball Badminton, Badminton, Basket Ball, Carrom, Chess, Cricket, Foot Ball, Kabaddi, Kho-Kho, Swimming, Tennis, Table Tennis, Volley Ball, weight lifting and Best Physique which has given scope for most of the students to take part in these competitions in a festive manner.

24 July - 4 August 2018	Induction programme to the first year students physical activity daily in the morning and evening
15 August 2018	Independence Day celebrations: Physical Displays/Mass Run Friendly sports and games to the students and staff Fruits/prizes were distributed
28 - 31 August 2018	Freshers sports in volleyball kabaddi tennis and ball badminton competitions were organised and prizes/certificates were distributed.

29 Sep. - 1 Oct 2018	Our Institute participated in All India Inter NIT Badminton, Table-Tennis and Yoga Tournament
28-30 September 2018	Our Institute has organised Telangana Engineering colleges Volleyball men and women Tournament both our teams were the Winners
8-12 October 2018	Diamond Jubilee Tournament to the campus community in Volleyball, Tennis, Kabaddi, Kho-Kho and Ball Badminton
25-26 October 2018	Ball Badminton Intramural competitions
29-31 October 2018	Intramural competitions Tennis
31 Oct.-1Nov. 2018	" " " Volleyball
1-2 November 2018	" " " Kabaddi
5-6 November 2018	" " " Kho-Kho
1 November 2018	Volleyball coaching camp to the institute team
9-14 November 2018	Our Institute team participated in the SZIUT Volleyball SRMIST Chennai
10-18 December 2018	Kabaddi coaching camp to our institute team
19-21 December 2018	Our Institute kabaddi team participated in the SZIU at SRMIST
1 January 2019	Coaching camps to volleyball, kabaddi, Kho-Kho and Tennis commences
5 January 2019	Selection trials to weight lifting, power lifting, best physique and swimming will be held.
18 January 2019	
Swimming:	Agarshika Ramesh ECE 2nd year secured 3 - Gold Medals and 1 - Silver Medal
Best Physique:	Suleman Over all Champion Imamuddin - Gold Medal Aabhishek - Gold Medal Gajanand - Silver Medal Vijaykumar - Silver Medal
Weight Lifting:	Suleman ECE final year - Gold Medal
Power Lifting:	Hitesh 2nd year - Silver Medal
24 January 2019	Kabaddi and Kho-Kho (M&W) teams left to participate in the All India Inter NIT tournament held at NIT Rourkela. football team also took part
27 January 2019	Volleyball (M&W) Coaching camp commenced
15-16 February 2019	T.Srihari Memorial state volleyball tournament was held our Institute boys and girls teams secured first place.
18 February 2019	Our Institute Volleyball (M&W) teams left Trichy to participate in the All India Inter NIT tournament. basketball and cricket teams also took part
22-24 March 2019	All India Inter NIT Athletics Championship was organised at our campus.
29-31 March	National Conference of Sport Psychology was organised at our campus.
5 April 2019	Annual Sports Day was organised.
21-06-2019	International Day of Yoga was organised


ALL INDIA INTER NIT ATHLETICS CHAMPIONSHIP
22-24 March 2019

Centre for Automation and Instrumentation (CAI)

Centre for Automation and Instrumentation (CAI) was established at the National Institute of Technology in the year 2005. CAI houses sophisticated analytical instruments which are operated and maintained by dedicated and qualified Technicians. It is an integral part of NIT Warangal. CAI does not operate to compete with any commercial laboratories but, it has a vision, "to be amongst the top Analytical Instrument Laboratories in the world".One of the main objectives of CAI is to provide facilities of sophisticated analytical instruments to scientists and other users from academic institutes, R&D laboratories and industries to enable them to analyze samples for R&D work.

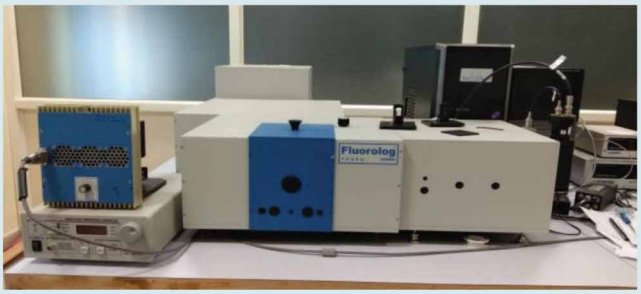
Dr.A.Seshagiri Rao
Faculty In-Charge

MAJOR ANALYTICAL INSTRUMENTS

Instrument Name	Usage
 X-Band Electron Spin Resonance (ESR) Spectroscopy Make: JEOL, JAPAN, Model: JES-FA100	Measurement of species that contain unpaired electrons (Free radicals, transition metal complexes, Molecular structure, Valence electron wave functions, Electron transport, Crystal & ligand field splitting, Relaxation properties, Molecular motion, Reaction mechanisms and Reaction kinetics, odd-electron molecules, rare earth ions etc.)
 Liquid Chromatography-High Resolution Mass Spectrometry (LC-HRMS) Make: Agilent Tech., Model: Q-TOF 6230	Molecular structure of petroleum components, industrial products, pharmaceuticals, bio molecules can be judged. Purity of the finished chemical industrial products be established. Separation and Identification of Organic Liquid Mixtures; Petroleum Products; Drugs and Pharmaceuticals; Cell Biology.
 Inductively Coupled Plasma Optical-Emission spectroscopy (ICP-OES) Make: Agilent USA, Model: 700 Series ICP-OES	Ultimate Absolute Chemicals Composition of Materials(Cements, Water Samples, Polymers, Minerals, Chemicals, Alloys). This technique is used for quantitative and qualitative determination of the metals and metalloids in the following sample.

UV-Vis NIR Spectrophotometer
Make: Agilent Tech., Model: Cary 5000 USA

Used in analytical chemistry for the quantitative determination of different analyzes, such as transition metal ions, highly conjugated organic compounds, and biological macromolecules. Spectroscopic analysis is commonly carried out in solutions but solids and gases may also be studied. The electronic transitions and band-gaps of semiconductors, thin-films, etc. can be determined. Electronic structures of polymers, complexes, bio molecules, materials, pharmaceuticals and other products can be evaluated.



Fluorescence Work station
Make: Horiba, USA, Model: Fluorolog-3-21

Molecular and solid state Fluorescence emission can be monitored and quantum lifetime measurements can be evaluated. Materials in all states and biological samples can be investigated.Band Gap of Semiconductors, Non-Linear Optical Parameters of materials, Biochemical Assaying can be done.

Circular Dichroism-Optical Rotatory Dispersion (CD-ORD) Spectrometer
Make: Bio Logic Czech, Model: MOS-500

Non-linear optical materials, enantiomeric compounds, biochemical express themselves in Optical Rotatory Dispersion and Circular Dichroism. Any subtle change in their structural or molecular profile would be reflected in their CD Spectra. Can be used to analyse Molecular Chirality; Enzymes; Protein Folding; Foods and Beverages; DNA Binding and Active Sites.

Universal Testing Machine (UTM)
Make: JinAhn Testing, Model: WDW-100 S

It can be used to perform many standard tensile and compression tests on materials, components, and structures. Physical and mechanical attributes of metals, alloys, finished solid products, etc. can be studied. Aforesaid tests can also be performed under sub-zero (-100°C) and high-temperature (up to 1000°C) conditions.

Centre for Advanced Materials (CAM)

Dr. P. Subhash
Chandra Bose
Faculty In-Charge

Centre for Advanced Materials (CAM) was founded in the year 2007 to encourage and enhance the quality of inter-disciplinary research in the Institute. The centre hosts a number of facilities that are used for synthesis, processing and characterization several advanced materials (e.g., Shape memory alloys, Bulk Metallic Glasses, Titanium alloys and Advanced steels , Sensors, Energy harvesting materials, Biomaterials, Opto-electronics material, Nano-materials etc.,). Potential applications of these materials are in consumer goods, automotive and aerospace applications and so on. To strengthen further the research activities the procurement of state of the art equipment is underway, which not only cater the research needs of the Institute faculty but also to the Institutions/ Academia/Industry around Warangal.

Research equipment in CAM

VACUUM ARC RE-MELTING FURNACE

THERMAL EVAPORATION UNIT

PLASMA CLEANER

MUFFLE FURNACE (1800°C)

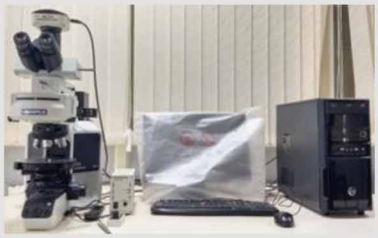
MUFFLE FURNACE (1500°C)

MUFFLE FURNACE (1700°C)

DIFFERENTIAL SCANNING CALORIMETER(Model: Perkin Elmer, Make: DSC 8000)
Max. Temp.: 700 oC

THERMO-GRAVIMETRIC & DIFFERENTIAL THERMAL ANALYZER (Model: STA 2500 Regulus, Make: NETZSCH)
Max Temperature – 1600°C

IMPEDANCE ANALYZER/HIGH PERFORMANCE DIELECTRIC SPECTROMETER



TRINOCULER POLARIZING MICROSCOPE
(Model: Olympus, Heating stage: 600oC)

LINKAM HOTSTAGE
(established by Physics Department and sponsored by SERB)

DR - UV – VIS SPECTROPHOTOMETER
(established by Physics Department and sponsored by SERB)

MICROPULLER
(established by Physics Department and sponsored by SERB)

UV SPOT LIGHT CURING SYSTEM

MICROFORGE
(established by Physics Department and sponsored by SERB)

TEACHING LEARNING CENTRE (TLC)

Prof. A.RAMACHANDRAIAH
Professor-in-Charge

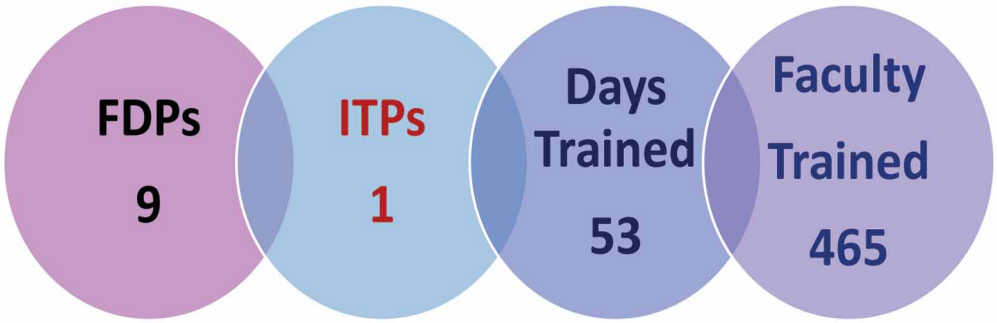
The Teaching Learning Centre (TLC) was established at NIT Warangal under the MHRD's "Pandit Madan Mohan Malaviya Mission on Teachers and Teaching (PMMMNMTT) at on outlay of Rs. 9.63 Cores in 2016. Since then, TLC has been organizing a host of activities such as Faculty Development Programmes (FDPs), Development of Teaching Learning Materials, and Conducting Workshops on Pedagogy and Thrust areas of Science and Technology etc. Under this Scheme, a separate building has been built exclusively for the TLC activities, with the state-of-art training facilities that include a studio for production of video and e-lectures, training halls, seminar halls, a computer lab for developing on-line courses and other learning resources, learning spaces for facilitating interaction among various stake holders. One of the important objectives of the Centre is to conduct Faculty Development Programmes (FDPs) for the aspiring, newly inducted and in-service faculty in science, engineering, social sciences disciplines in higher education in pedagogy, use of ICT in teaching. FDPs are also conducted in inter-disciplinary and emerging areas of Science and Technology like Nano-materials, 3D printing, Internet of Things Artificial Intelligence, Big Image Data Processing using Machine Learning Algorithm, Design of Flexible Pavement Design, Internet of Things, Artificial Intelligence Techniques for Smart Grid Applications, Chemical Spectroscopy, Water Resources Engineering, Fabrication of Thin films and Opto-electronic devices, Engineering Mathematics Using Python, Molecular Biology and Enzymology, etc. Other activities of the TLC include preparation of print and e-learning materials, offering on-line courses, curriculum design, carrying out research in educational technology, pedagogy, evaluation techniques and integrating ICT into teaching-learning process. Many senior and young faculty of NIT Warangal are associated with this Centre as Core-Team members. Details of the upcoming FDPs and other information related to TLC are displayed in the Institute website: https://www.nitw.ac.in/tlc

MAJOR ACHIEVEMENTS OF TEACHING LEARNING CENTRE

- ✓ The Centre has so far conducted 50 Faculty Development Programs (FDPs) and 3 One Month Induction Training Programs (ITPs) and trained about 2500 faculty members drawn from various institutions of Higher Education across Country have been benefitted on modern Pedagogy, Use of ICT in Teaching and also subject based instructional methods.
- ✓ TLC has organized 2 Faculty Development Programmes especially for Women Faculty in Higher Education during the months of January and June, 2019 and trained 121 Faculty Members drawn from various parts of the Country.
- ✓ 26 Faculty Members of NIT Warangal belonging to different departments are involved in developing 16 teaching learning materials which include online courses,

- ✓ e-lab manuals, video lectures and instructional aids.
- ✓ The Teaching Learning Centre is now operating all its business from the new TLC Building named as Pandit Madan Mohan Malaviya Teaching Learning Centre, NIT Warangal.
- ✓ Feedback from the trainee participants is consolidated for each training programme and the feedback is highly rated (>95%).
- ✓ It is the only TLC in the country to have conducted three one-month Induction Training Programmes (ITPs) for the Newly Recruited Faculty of Higher Education.
- ✓ The FDPs and ITPs conducted by TLC have made significant impact on the faculty members and enabled them to use ICT and Student-centered teaching methods at their respective Institutions.

Figures showing the above given data



RASHTRIYA AVISHKAR ABHIYAN (RAA)

The National Technology Warangal (NIT Warangal or NITW) has been chosen by the Ministry of Human Resource Development (MHRD) and its Ministry of Education and Literacy as one of the three mentoring Higher Education Institutes (HEIs) in the State of Telangana under its flagship programme, the Rashtriya Avishkar Abhiyan (RAA).

Prof. A. Ramachandraiah
Nodal Officer

Major Activities of RAA @ NITW

- The RAA Project at NIT Warangal has conducted two one month Summer Internship Programs for Bright Students of Telangana State under the theme "Mentoring and Hand-Holding of School Education System in Northern Telangana Through RashtriyaAvishkar Abhiyan" in association with SCERT, Telangana State for more than 100 INSPIRE and ATAL Tinkering Laboratory students.
- First Batch of Summer Internship held during 4th May – 2nd June, 2018 for 50 Students at NIT Warangal.
- Second Batch of Summer Internship held during 1st May – 30th May, 2019 for 60 Students at NIT Warangal.
- Teacher Sensitization Workshops for 400 School Teachers in 4 Sessions has been organized during the dates 11th, 19th, 20th and 23rd January, 2018. These programs aimed at following objectives:
- RAA Project also offered Campus Visit to various School Students to provide interaction with Faculty and students of NIT Warangal in order to inspire them towards Higher Education with zeal and innovative students.
- About 80 Students from Kendriya Vidyalaya High School, Madikonda visited the NIT Warangal Campus on 25th July, 2019.
- Around 100 Students from Sai Vikas High School, visited the NIT Warangal Campus on 8th February, 2019.

Unnat Bharath Abhiyan

Dr. G. Sunitha

Nodal Officer

A Memorandum of Understanding was made by Indian Institute of Technology, Delhi and National Institute of Technology, Warangal as a participating Institute on 10th April 2017.

- UnnatBharathAbhiyan Committee of National Institute of Technology, Warangal was formed.
- A cluster of five villages Kannur, Marripalligudem, Vangapally, Kamalapur, Kaniparthy of KamalapurMandal in Warangal Urban District were adopted.
- A Household and Villagesurvey was conducted about Education, Agriculture, Sanitation, Drinking Water Facilities, Medical Facilities, Roads, Rain Water Harvesting, Solid and Liquid Waste Management, Drought management in the adopted villages five villages (Kannur, Marripalligudem, Vangapally, Kamalapur, Kaniparthy) in KamalapurMandal
- Implemented Swachhta Mission ensuring No open defecation in the adopted villages of Kannur, Marripalligudem, Vangapally, Kamalapur, Kaniparthy.

Activities in 2019

- Attended First meeting to discuss the roles and responsibilities of Regional Coordinating Institutes under Unnat Bharat Abhiyan& Memorandum of Understanding is signed on 6th March 2019
- Attended a Two Day National Conference on Rural Immersion Management at Mahatma Gandhi National Council of Rural Education, Hyderabad.
- Attended a Three – Day National Workshop on Technology Outreach as an enabler for Inclusive and sustainable Development at IIT Delhi.
- Attending as a Guest of Honour for a Three Day workshop on Rural Engagement conducted by one of the Participating Institutes, Sri Venkateswara Degree College, Suryapet.
- Planning to distribute cloth bags to each household and collect back plastic bags that are used by them under "plastic-free-village" Campaign in the adopted villages.
- Planning to conduct a workshop on Swachh Campus and Rural Immersion for Participating Institutes in the month of October, 2019.
- Planning to conduct Rural Immersion Program in the adopted villagesof Kannaram, Kannur, Marripalligudem, Shambunipally, Vangapally.

CENTRE FOR EDUCATION TECHNOLOGY

Centre for Educational Technology (CET) at NIT Warangal was established in the year 1987 with the main objective of improving instructional methods in engineering education in order to and make learning more effective. Since then, it organized a large number of continuing educationprogrammes, seminars for both newly inducted and in-service teachers in engineering institutions.

Developments at CET-NITW

- Moodle Server: Learning Management System was developed at CET-NITW for managing and making learning more effective.
- Virtual Lab Server: Virtual lab Server was developed at CET-NITW for effective understanding of lab experiments and use of lab equipment effectively.
- FOSS Lab: Free & Open Source Software lab was established to bring in awareness and use of free and open source software to learn and share what we learn with others.

K L V Sai Prakash Sakuru
Faculty In-charge

Faculty Development Programs/Student workshops / Guest Lectures

S.No	Title of the Programme
1	Phase-II of Induction Training Programme for Newly Recruited Assistant Professors of NIT Warangal
2	Current Trends in Teaching Methods and Strategies in Higher Education (CTTMSHE-2019) *Exclusively for Women Faculty*
4	Pedagogy and ICT in Higher Education *Exclusively for Faculty of* Vaageswari College of Engineering, Karimnagar
5	Teaching and Learning Methods for Outcome Based Engineering Education *Exclusively for Faculty of* Balaji Institute of Technology and Science Narsampet
6	Internet of things-hands on Matrusri Engineering College, Saidabad, Hyderabad

INTERNAL COMPLAINTS COMMITTEE

Dr. B.Lakshmi,

Chairperson

In accordance with the instructions of Department of Personal & Training, Internal Complaints Committee has been constituted in the Institute under "Prevention of Sexual Harassment of Woman at Workplace (Prevention, Prohibition and Redressal) Act, 2013".

The main objectives of the committee are

1. To take necessary steps to prevent sexual harassment of women/students in the Institute campus.
2. Provide safe environment for the women at work/study place.
3. Conducting of awareness programs.

The cell has received a few complaints from girl students and the same have redressed.

The cell has taken all preventive steps to ensure safety and security of girl students and women employees of the institute to avoid recurrences of such instances. In this context, the ICC has organized the following events during March 2019:

a) Self-defense tactics by Swasakthi Team, Warangal Police Commissionerate to protect themselves from attacks by intruders.

b) Activities of SHE team, Warangal Police Commissionerate to give moral support to girl students and women employees for protecting themselves from eve teasing and harassment.

c) Guest Lecture by Gynecologist to address common health issues and necessary care to be taken for maintaining health


International Women's Day
8th March,2019
2019


International Women's Day
8th March,2019


International Women's Day
8th March,2019
2019


International Women's Day
2019


International Wom


International Women's Day
8th March,2019
2019


International Women's Day
8th March,2019
2019

SC & ST Cell

Dr A Benerji Babu
Coordinator SC & ST
Cell & Liaison officer

The SC/ST Cell, a statutory body has been constituted by the Ministry of Human Resource Management (MHRD), Government of India (GOI) in the erstwhile Regional Engineering College (REC) Warangal to safeguard the interests of the SC/ST students and employees of the Institute as per the instructions of MHRD, GOI from time to time.

The cell functions

- As a Grievances Redressal Cell for the grievances of SC/ST students and employees and renders them necessary help in solving their academic as well as administrative problems.
- It functions to promote higher education among the SC/ST or weaker communities that are suffering from economic, social and educational deprivations.
- It continuously monitors and evaluates the reservation policies and other programs intended for SC/STs by the GOI for their effective implementation at NIT Warangal.
- It suggests the follow-up measures to the administration of the Institute for achieving the objectives and targets laid down by MHRD, GOI for the empowerment of SC/STs.

PROGRAMS ORGANIZED BY SC/ST CELL THROUGH SC/ST SUBPLAN:

(1) Conducted a two day workshop on **RESERVATION POLICIES AND ROSTER FORMULATION (RPRF-2018)"** to be held during 19-23 November, 2018 for the SC/ST and other research scholars of NIT Warangal through SC/ST Sub plan, MHRD, GOI

(2) Conducted a two day workshop on **RESEARCH METHODOLOGY AND SCHOLARLY WRITING SKILLS** (RMSWS) for the SC/ST and other research scholars of NIT Warangal GOI during 21th Jan 2019- 25th Jan 2019 through SC/ST Sub plan, MHRD,– There was an overwhelming response from the participants and everybody has derived maximum benefit out of the workshop.

(3) Conducted a two day workshop on **SOFT SKILLS** for the SC/ST and other research scholars of NIT Warangal GOI during 04 - 05 February, 2019through SC/ST Sub plan, MHRD,

(4) Conducted **GATE-2018** coaching classes for the final B.Tech SC/ST and other Students of NIT Warangal during 07-12-2018 to 07-02-2019 through SC/ST Sub plan, MHRD, GOI- **Quite a good number of the students secured better ranks.**

(5) Conducted **"TECHNICAL SKILLS" to be held,** SC/ST and other Non-teaching Staff of NIT Warangal during 28 – 30 May, 2019 through SC/ST Sub plan, MHRD, GOI- **Quite a good number of the students secured better ranks.**

(6) Conducted **CSIR-2018** coaching classes for the final year MSc (Mathematics, Physics and Chemistry) SC/ST and other Students of NIT Warangal during 07-12-2018 to 07-02-2019 through SC/ST Sub plan, MHRD, GOI- **Quite a good number of the students secured better ranks.**

(7) Conducted Pre PLACEMENT TRAINING PROGRAM **(PPTP)** for the final year B.Tech, M.Tech, MSc, MBA and MCA and other PG Students of NIT Warangal during 13th May 2019- 6thJuly 2019 through TEQUIP Grants with association with SC/ST coordinator – **The percentage of SC/ST students placed into public and private sector units got improved.**

Highlights:

- Free Gate coaching for B.Tech/M.Tech/MSc
- Two months summer Pre-placement Training Programme for B.Tech/M.Tech/MCA/MSc/MBA
- 2K Run for Caste free INDIA
- Quiz, Elocution, Essay writing and Make your constitution on the occasion of Ambedkar jayanthi

Cell for the welfare of Other Backward Classes(OBC)

Dr. V. V. Mani
Coordinator

Other Backward Classes (OBC) Cell has been setup in this institute with the purpose to empower OBC students and staff. This cell takes responsibilities in monitoring implementation of Reservation Roster, any other grievances of the members of the communities. It also takes special interest in facilitating financial support to students from government agencies and other sources. It also entrusted several responsibilities by coordinating training programmes for students, teaching and non teaching staff of the institute.

Student Activities

NIT Warangal has been an incredible stepping stone for holistic development of students. TECHNIZION AND SPRINGSPREE are the two main fests of the institute planned and executed by the students. The new initiatives that were recently introduced include Youth Fest, Ayodhan and the Induction Program for the freshers.

SpringSpree

SpringSpree, the flagship annual cultural festival of NIT Warangal is one of the largest cultural fests of South India. Spring Spree'2019,the 33rd edition of the fest, was celebrated with the theme "Kalakshetra".

E-Summit

E-Summit, organized during 12th -14th of April 2019, is the first ever-entrepreneurial festof NIT Warangal. An initiative by E-cell NITW, which aims to provide a platform for the students across the country to come together, pitch their business ideas in front of investors, gain knowledge on how to transform an idea into a start-up.

Youthfest

National Youth Day Celebrations 2019(Youth Fest) were held in the campus during January 6-12, 2019, with the main objective of empowering students and exposing them to the life and teachings of Swamy Vivekananda.

Motivational Workshop for students from Government Schools from undivided Warangal District

As a society outreach initiative, a motivational workshop, exclusively for the students of Government Schools in Warangal, was organised on 09-01-2019. About 1890 students belonging to over 100 schools have participated in the workshop. About 200 guide teachers accompanying the students have also attended. All the participating students were given 3 books along with a workshop kit

Mega Blood Donation Camp

A Mega blood donation camp was held on 08-01-2019 in the NIT Campus, in association with Warangal District administration and Red cross society, a record number of 1124 students including faculty have participated in the blood donation camp. In recognition of huge blood donor turnover in the camp an award of appreciation was given by the Governor of Telangana.

Ayodhan 2019

The 2nd edition ofAyodhan was held during the last week of April 2019. With nine competitions in eight sports held over a span of four days, Ayodhan'19 got participation from various colleges in and around Warangal who fought tooth and nail for glory leading to quarters, semis and finals.

STUDENT CLUBS

Our student clubs numbering over 30 have been the centers of activity for innovation, entertainment and society outreach. These clubs have been the workhorses for organizing the Youth Fest. The News and Magazine Committee has brought out the Institute Magazine " PULSE", this year, after a long gap of several years.

Induction Program for First Year B.Tech Students

The second edition of two-week induction program for first year B. Tech students was held during 24th - 4th August 2019, to acclimatize and expose freshly admitted B. Tech students to various facets of campus life and prepare them to realize their full potential.

Art Exhibition - Induction Program

Technozion

Technozion-18 is the annual celebration of engineering science and technology organised wholly and solely by core team consisting of 37 members in 10 departments and a student coordinator Narendra Reddy and 400 plus subcores , workforce and event managers under the guidance of Faculty advisor Prof M Sailaja Kumari . Thus Technozion 18 upheld the enthusiasm and provided a great technical platform for the young engineering population , and the resulting magnificent ideas from it.

The numbers speak for themselves , started in 2006 , Technozion has become one of the largest technical fests in South india, hosting over 50 different events , guest lectures , 14 workshops in various fields of technology and many different activities . Apart from its own students , Technozion 18 has become home to more than 4600 participants from all pockets of the country

Meticulously planned events divided into categories like department events , general events , and spotlight events . All events attracted a huge number or participants . All the events are designed spectacularly by event managers with the help of faculty members which provided fun filled technical knowledge. Spotlight events like jahaaz, hover mania, Avion E , wreckage were the main highlights for the fest .

Modern day workshops made Technozion 18 a hard miss event. 14 workshops in all fields of technology conducted by corporate tech giants like Microsoft , IBM etc in the fields of Artificial intelligence , Robotics , Machine learning , Ethical hacking , image processing Neural computing, workshops on eco friendly environment like Solar and smart energy system boosted the technical knowledge of participants

Enticing guest lectures and video conferences by the greats in various fields made Technozion 18 a extravagant event. Henry Throop - Senior scientist , Planetary Science institute, Washington DC who was also a part of NASA New horizons mission delivered an amazing lecture on space technologies .Other noticable speakers of Technozion 18 are Marek Gazdzicki - High energy Nuclear physicist , Ramakrishna janaswamy, Rahul Kaushick, Karthik Vigneshwar, Angshuman Ghosh, Chandra Pinapala . A huge participation and enthusiam was seen for these lectures and added a spectaculation to Tz18

Technozion 18 also encouraged cultural events from the students of Nit Warangal . Musical show organised by Music club , NIT WARANGAL has gone a long way and made the crowd feel amazed , PROSHOW by Bollywood model and singer JONITA GANDHI stood as the key attraction of Tz 18 . Many more attractions like game dome, marvel mayhem , mortal combat , virtualize are also present

Technozion 18 has also taken part in great initiatives with the motive of helping and motivating the society like pledge the challenge , Respect her , innovate and induce , Bio Ganesha Blackout bane , plantation raised awareness among the students and public.

Thus Technozion 18 was a huge success like never before in all the aspects.


TECHNOZION 18
INAUGURAL


PGC
NITW


PGC
NITW


ENCONTRO

NATIONAL CADET CORPS

Dr. Uday Bhasker
NCC Care Taker

NCC aims at inculcating a sense of patriotism and national pride in students. In addition it helps in physical fitness and also promotes all round personality in the students. Adequate facilities exist in the Institute for regular parades firing, training "obstacle course" and organizing camps. At present our Institute is having NCC student strength of 100.

Social Service Activities of NCC:

NCC has adopted community development activities with the aim of imbibing amongst cadets selfless service to the community, dignity of labour importance of self help, need to protect the environment and to assist weaker sections of the society in their upliftment. This was envisaged through programmes involving

1. Tree Plantation
2. Blood Donation
3. Visit of old age homes
4. AIDS awareness Rally
5. Disaster Management
6. Anti Drug/Tobacco awareness rally

National Service Scheme

Dr. B. Srinivas
NSS Coordinator

Dr. T. Vinay Kumar
Programme Officer

The NIT Waragal, Telangana state has 02 NSS Units with 200 volunteers from all branches of the engineering.The NSS volunteers of NIT Warangal were actively participated in NSS activities during the year 2018-19. The NSS activities included Plantation of Ornamental Plants, Sanitation programmes, Awareness programme, Blood Donation programmes, Clean and Green programmes, SwatchhBharath Programmes, Social Awareness Programmes etc.

- **Total No. of volunteers enrolled in 2018-19 are 200.**

S.No.	Activity	Place at which the programme conducted	No. of Volunteers involved	Remarks
1.	Sapling plantation programme	NITW, Mogilicherla village	75	---
2.	Mega Blood Donation Camp	NITW	80	1,124 units of blood were collected.
3.	Health check-up (Medical Camp)	Mogilicherla village, Warangal district	60	480 villagers have benefited
4.	Social Awareness	NITW	80	Essay writing, elocution and Craft making events were conducted
5.	Voter ID registration camp	NITW	65	200 members were benefited
6.	Online awareness programmes	NITW, on not-wasting food and menstrual health awareness.	55	Several students were benefited
7.	Awareness rally conducted on Energy conservation	From NITW to Collectorate	95	---
8.	Paper collection drive	NITW	88	the generated funds were donated to Orphanages in the form of books, pens etc.
9.	State Level Children's Chekumiki Science Festival, January 5-6th 2019 conducted by Jana VignanaVedika (JVV)	NITW	45	The volunteers were participated in and served the students from all over the Telangana state in conducting and organizing the science exhibitions.

Orphanage visit on the occasion of Diwali

During the Youthfest 2019, a Mega Blood donation camp organised by student's council, NITW in association with NSS, NITW.1,124 units of blood were collected.State Level Award Received For Organizing Mega Blood Donation Camp on 08.01.2019 from Governor Sri. E.S.L. Narasimhan

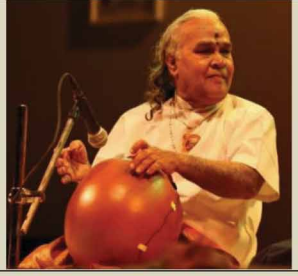
Health check-up camp in Moghilicherla village: Doctors from Kakatiya Medical College (KMC) and NSS coordinator NITW are giving awareness on the Medical camp.

We volunteered for State Level Children's Chekumuki science festival.

SPIC-MACAY: VIRASAT 2018

SPIC-MACAY NITW chapter has been functioning in the campus for the past 35 years without any discontinuity in its programs. It has been conducting **Lec-Dems** and **festival** series all these years. It has hosted world famous artists like Pandit Hari Prasad Chaurasia, Birju Maharaj, Ms Swapna Sundari, Pandit Jasraj and dance forms like Koodiyattam, Mohiniyattam, Kuchipudi etc. SPICMACAY conducts these programmes to sensitize the students about the Indian art and dance forms. Coinciding with the Diamond Jubilee Celebrations, the SPIC-MACAY Heritage Club conducted a week long cultural festival 'Virasat – 2018' starting from 10th Oct to 13th Oct, 2018.

Prof. N.V.Ramana Rao, Director inaugurating the Vidwan T H VikkuVinayakram Ghatam concert as part of Virasat – 2018.

Date	Artist	Bio-Data	Art form	
08-10-2018	Pt. Vishwamohan Bhatt	Grammy-winning Hindustani classical music instrumentalist who plays the Mohan Veena (slide guitar)	Mohan Veena	
09-10-2018	Smt. Manjusha Kulkarni-Patil	Hindustani classical music vocalist belonging to Gwalior gharana, awarded with Pandit Jasraj Gaurav Puraskar, Ustad Bismillah Khan award and many more	Hindustani Vocal	
10-10-2018	Naya theatre	Brainchild of Habib Tanvir and his wife MoneekaMisra and comprised of regular Nacha artists from his home state of Chattisgarh who perform in physical nacha style in Naya Theatre's productions of Shakespeare, Brecht and Sanskrit classics, as well as fresh interventionist plays written by Habib Saab.	Theatrical play	
11-10-2018	Smt. Rama Vaidhyanathan	An Indian Bharatnatyam artist who was selected in Sangeet NatakAkademi award	Bharat natyam	
12-10-2018	Sri Sikkil C. Gurucharan	One among the foremost performing artist who featured in 35 game changers under age of 35 list of India Today and is an 'A' rated All India Radio artist	Carnatic music	
13-10-2018	Vidwan T H VikkuVinayakram	Grammy Award–winning Indian percussionist. He plays Carnatic music with the ghatam, an earthen pot and has also been conferred with Padma Shri and Padma Bhushan awards by GoI	Ghatam	

EACH ONE PLANT ONE- MIYAWAKI MINI FOREST