

BEACON RAY

(Special Issue-AAPA-2021-2022)



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Director
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WARANGAL - 506 004
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NATIONAL INSTITUTE OF TECHNOLOGY
WARANGAL - 506 004



Dear Friends,
Greetings!

Hope you and all your family members are doing good.

I am happy to know that the academic year 2022-23 has been successfully started and going on well with the support of all the stakeholders. Recently the mid semester examinations have also been completed with the active support of the students, faculty and staff members. The Institute has been doing reasonably well on all fronts in the the academic year 2022-23. The physical mode of the academic activities was resumed in the Institute in the second semester of the last academic year with the receding of the corona waves. It's indeed very happy to recall that our Institute has done exceedingly well in the last academic year's campus placements. A record number of UG and PG students have got with attractive packages and doing exceptionally well to raise the name and fame of the institute. I congratulate the Head, CCPD and his team for this appreciable achievement.

The Institute is giving lot of importance in strengthening the human resources by periodic recruitments in order to improve the status of

Director's Foreword

academic and research outcome of NIT Warangal. In the last academic year 2021-2022, every department has contributed immensely well for the overall growth of the institute (NIRF ranking). The Quality assurance and Academic Audit has conducted the Annual Academic Appraisal Meeting for the academic year 2021-2022 during September 2022. It is observed that every department has obtained reasonably good amount of externally funded R&D projects, patents granted, published many papers in peer-reviewed international journals, and established new research facilities. I am sure these efforts will further improve the status of the Institute.

I congratulate the Editorial Board of the Institute Newsletter "BEACON RAY" for compiling all the details of Individual departments and bringing out this special edition to improve the visibility and peer perspective of our prestigious Institute NIT Warangal. Finally, it is important to note the fact that Academics blended with R&D and Patents is the only way to success for any Institute of Higher learning and our Institute is no exception to this. Financial Self-reliance is going to be the order of the day in the near future. Efforts are being made to develop a strategy in this direction for the all-round growth of the Institute and improve the rankings. Let us all resolve to work hard and take the Institute to greater heights.

With best wishes,

Prof. N. V. Ramana Rao
Director

S. No	Content
1	Strategic plan -2021-2030
3	Department of Civil Engineering
4	Department of Electrical and Electronics Engineering
5	Department of Mechanical Engineering
6	Department of Electronics and Communication Engineering
7	Department of Metallurgical and Materials Engineering
8	Department of Chemical Engineering
9	Department of Computer Science Engineering
10	Department of Biotechnology
11	Department of Mathematics
12	Department of Physics
13	Department of Chemistry
14	School of Management
15	Department of Humanities and Social Sciences
16	Department of Physics Education
17	Center for Career Planning and Development
18	Center for Innovation and Incubation

MEETING OF ANNUAL
ACADEMIC PERFORMANCE
APPRAISAL

2021-22

National Institute of Technology
Warangal
Strategic Plan: 2021-2030

Working Groups

- Data Analytics WG
- Teaching Learning and Resources WG
- Research & Professional Practice WG
- Networking, Outreach and Perception WG
- Alumni Engagement WG
- Graduation Outcomes WG
- Strategic Planning WG

Objectives

- To be transformed as a Globally recognised Multidisciplinary Research Institute.
- To be among top 10 universities in India and top 200 in the world

Targets

- To increase the student strength to 20,000 (10,000 on campus + 10,000 online) by 2030
- To increase the foreign students' enrolment to 20% by 2030.
- To enhance UG Programmes in emerging areas from 8 to 12 by 2030;
- To introduce 5 integrated UG/PG programmes by 2025;
- To introduce 5 multi-disciplinary PG programmes in accordance with NEP 2020 by 2025 and 10 PG programmes by 2030.
- To improve the campus placements to 100% to UG students and at least 75% to PG students.
- To increase the journal publications to 1,500 per annum by 2025 and 2,000 by 2030
- To increase the funded research to Rs 50 crores by 2025 and to Rs 200 crores by 2030
- To increase the number of patents to 50 per annum by 2025 and 100 per annum by 2030
- To involve 80% of faculty in sponsored research, 60% of faculty in industrial consultancy and 40% of faculty in innovation/startup activities by 2030
- To establish Technology Research Park with Industry support by 2025
- To establish 5 Multidisciplinary COEs on emerging thrust areas by 2025 and 10 by 2030.
- To create an Institute Endowment Fund of Rs.100 Crores by 2025 and Rs 500 crores by 2030.

Institutional Restructuring

- To become Research Intensive Multidisciplinary Institute by 2030
- To increase the student strength from 6,500 to 20,000 (10,000 on campus + 10,000 online) by 2030
- To establish Technology Research Park

Academic Programs

- New Bachelors Programmes
- New Master Programmes
- Five year integrated Programmes
- PG Diploma and Certificate Programmes
- Multiple Exit and Entry Options

Teaching and Learning Process

- Developing Teaching Learning Tools
- Developing LMS
- Strengthening IT & Digital Infrastructure
- Virtual Labs

Research & Innovation

- Robust IPR & Start-up Policy
- Interdisciplinary Research
- Publications by UG&PG Students
- Institute Research Advisory Committee
- Research Foundation
- International Mobility
- COEs in thrust areas

Sponsored Research & Industrial Consultancy

- COEs in Emerging Areas with Industry Support
- High Speed Computing Facility
- Technology Research Park

Academic, Industry and Research Collaboration

- Institute and Industry Interactions
- Professors of Practice
- Collaborate with R&D Labs
- Academic Advisory Committee
- Industry Advisory Committee
- Research Advisory Committee

Internationalisation

- 40 Nations – 600 students
- To Enhance cultural and technological exchange
- To establish NITW Study Centres abroad
- To provide international mobility opportunities

Infrastructure and Physical Resources

- eLearning Classrooms with Air Conditioning
- State of the art laboratories
- One studio room for each department
- Married scholars residential quarters
- Digital Library

Human Resources

- TLC
- E&ICT
- Post Docs
- Adjunct/Emeritus Professors
- Chair Professorships

Alumni Relations

- DAAs & Lifetime Achievement Awards
- Alumni help in
 - Nurturing Start-ups
 - Creating Innovation Fund
 - Chair Professors, Endowment Lectures, GMs & Scholarships

Student Placements & Internships

- 100% Placement to UG students
- Min. 75% placement to PG students
- Enhancing Internships

Skill Development

- SIEMENS COE on Industry 4.0
- State of the art skill development centre
- Collaboration with MSME Industry

Governance

- Integrated MIS
- To develop productivity measurement tools (Rubrics)
- E-tools development

Financial Sustainability

- Creation of Endowment Fund
- Executive Development Programs
- Capturing CSR Funds



DEPARTMENT
OF
CIVIL ENGINEERING

NIT WARANGAL

AY 2021-2022

Period of Activity: June 1st, 2021 to July 31st, 2022.



Brief History of the Department, Academic Programs

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 REC s. The department offers an undergraduate and Eight graduate programs in addition to Ph.D. All programs (Except Waste Management Program, which started last year only) 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 centre 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.

Department Vision and Mission

Vision

To be a knowledge nerve center in civil engineering education, research, entrepreneurship and industry outreach services for creating sustainable infrastructure and enhancing quality of life

Mission

M1. Generate a specialized cadre of civil engineers by imparting quality education and training

M2. Attain international standards in teaching, research and consultancy with global linkages

Faculty Details

- TOTAL FACULTY : **49**
- Full Professors : **16**
- Associate Professors: **16**
- Assistant Professors: **17**

ADMINISTRATIVE / CO-CURRICULAR / OTHER ADDITIONAL POSITIONS HELD BY THE FACULTY

S.No.	Name	Designation	Additional Duty	From	To
1	Prof. C.S.R.K Prasad	Advisor to the Director (Corporate Relations & Resource Mobilization)		2019	Ongoing
2	Prof.N.V.Umamahesh	Dean Academics			
3	Prof.M.Chandrasekhar	Dean, Planning and Development			
4	Dr. M. Heera Lal	Associate Dean (Student Welfare)		2019	Ongoing
5	Dr. Arpan Meher	Faculty Coordinator for Ph.D. program in Civil Engineering Department	CED	September 2022	Ongoing
6	Dr. M. Shashi	Warden	Warden Mess-I	July 2020	Ongoing
7	Dr.D.Ravi Prasad	Mess Warden	IFC-B	December 2020	ongoing
8	Dr. K. Gopi Krishna	Warden		July 2020	Ongoing
9	Dr. Venkaiah Chowdary	Vice Chairman (Admissions)		February 2021	Ongoing
10	Dr Arif Ali Baig Moghal	Coordinator, Minority Cell		May 2021	Ongoing
11	Dr. T.P.Tezeswi	Member, NIRF Committee	Member, Institute Information Advisory Committee	2017	Ongoing
12	Dr.Chinthala Sumanth	Coordinator Ek Bharat Sreshth Bharat Club		February 2020	Ongoing
13	Dr Umesh B	Warden, 1K Block A	Warden, 1K Block A	Jan 2021	Ongoing

Non-Teaching Details

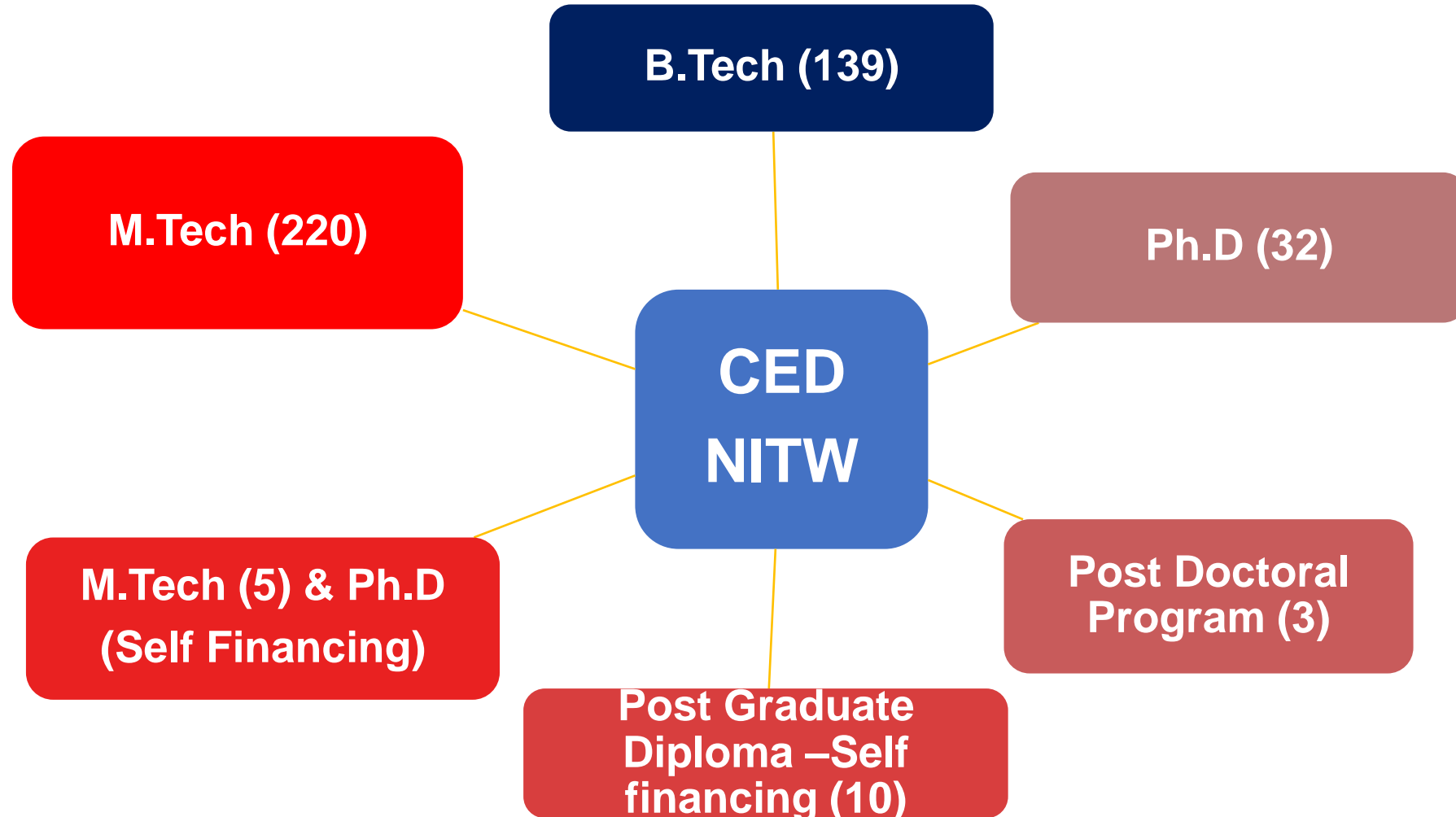
- Technical Staffs: 10
- Ministerial & Supporting Staff : **03**
- Daily Wages and Outsourcing Staff: 05

Academic Programs

S.No.	Program	Year of Start	Initial Intake	Current Intake	Accreditation
1	UG: B.Tech. in Civil Engineering	1959	60	139	5 years
2	M.Tech. Geotechnical Engineering Structures	1964		30	5 years
3	M.Tech. Water Resources Engineering	1964		30	5 years
4	M.Tech. Engineering Structures	1967		30	3 years
5	M.Tech. Transportation Engineering	1968		30	5 years
6	M.Tech. Remote Sensing & GIS	2000		20	5 years
7	M.Tech. Environmental Engineering	2004		20	5 years
8	M.Tech. Construction Technology	2008		30	2 years
9	M.Tech. Waste Management	2021		20	---

Avg. 3 yrs SFR = 17.86

Programs offered



New Academic Programs : Effective from AY 2021-22

PG Diploma Courses

- ONE-YEAR PG DIPLOMA in Prefabricated Construction
- ONE-YEAR PG DIPLOMA in Engineering Structures
- ONE-YEAR PG DIPLOMA in Transportation Engineering
- ONE-YEAR PG DIPLOMA in Water Resources Engineering
- ONE-YEAR PG DIPLOMA in Geo-Technical Engineering
- ONE-YEAR PG DIPLOMA in Environmental Engineering
- ONE-YEAR PG DIPLOMA in Remote Sensing and GIS
- ONE-YEAR PG DIPLOMA in Waste Management

M.Tech Self-Financed Courses

- Engineering Structures
- Geo-technical Engineering
- Transportation Engineering
- Water Resources Engineering
- Remote Sensing & Geographic Information Systems
- Environmental Engineering
- Construction Technology and Management
- Waste Management

TOTAL SUMMARY OF CREDITS (Semester Wise)

Category	I	II	Total
PCC	13	13	26
PEC	9	9	18
SEM	1	0	01
CVV	0	1	01
Total	23	23	46

Nomenclature:

- Program Core Courses (PCC)
- Program Elective Courses (PEC)
- Seminar(SEM)
- Comprehensive Viva-Voce(CVV)

Ph.D Self-Financed Courses

- Engineering Structures
- Geo-technical Engineering
- Transportation Engineering
- Water Resources Engineering
- Remote Sensing & Geographic Information Systems
- Environmental Engineering
- Construction Technology and Management
- Waste Management

Ongoing Research Projects

S.No.	Project title	Faculty Name	Duration	Funding Agency	Amount (In rupees)
1	Innovative Development of sustainable white clay and graphene based ventilation wall cladding tiles to curtain the heat ingress	Dr. R. Ramesh Nayaka	3 years	SERB - DST	44.12 Lakhs
2	Non-destructive damage detection and damage quantification in composite (HAP) panels	Dr.T.P.Tezeswi & Prof. C.B.Kameswara Rao	3 years	SERB IMPRINT-2	1.33 Crores
3	Performance Evaluation of Emulsified Asphalt and Cement Treated bases	Dr.S.Shankar	03 years	SERB-DST	30.48 Lakhs
4	IWMM- BIS "Integrated Water Management Model for BIS Countries Under Climate Change Scenarios,	PI: Dr. K Venkata Reddy Co-PI: Prof. N V Umamahesh, Prof. Deva Pratap and Dr. M. Shashi (On-going)	3 Years	BRICS-DST	39 Lakhs
5	Real Time Forecasting Floods Using SWAT Model	PI: Dr. K Venkata Reddy Co-PI: Prof. N V Umamahesh, Prof. Deva Pratap and Dr. Y. Navatha (On-going)	2 Years	SPARC-MHRD	81.76 Lakhs
6	Co-Digestion of STP secondary sludge with organic wastes in urban/peri-urban areas; process optimization scale up and field demonstration	PI: Dr. P. Venkateswara Rao Co PI: Dr. M. Srikanth, BITS Goa Dr. Krishna Kumar, CSIR NIIST, Kerala Dr. P. Raman, TERI, Delhi	6 Months	DST	5.00 Lakhs
7	Exploring ecofriendly civil engineering techniques for disposal of plastic waste	PI: Dr. P. Hari Krishna Co PI: Prof. TD Gunneswara Rao Dr. Venkaiah Chowdary	3 Years	NHAI	19.27 Lakhs
8	Short and Medium Range Flood Forecasting System for Godavari River Basin using Ensemble Weather Forecast	Prof. N V Umamahesh & Dr. K Venkata Reddy	3 Years	Monsoon Mission-II Project, Indian Institute of Tropical Meteorology, Pune, MoES	53.95 Lakhs
9	Evaluation of Transit Oriented Development (TOD) and Its Association with Travel Behavior and Gentrification Using Big Data Analytics	Dr B Raghuram Kadali and Dr. SV Subbarao Saladi	3 Years	GITA-DST	44.17 Lakhs
10	A Decision Support System for Climate Change Adaptation of Chain Tank Systems of Semi-Arid Region	PI: Dr. K Venkata Reddy Co-PI: Prof. N V Umamahesh, Dr. M. Shashi, Prof. Deva Pratap	3 Years	DST	35.6 Lakhs

Ongoing Research Projects

S.No.	Project title	Faculty Name	Duration	Funding Agency	Amount (In rupees)
1	Development and Demonstration of Pilot-scale Hybrid Wastewater Treatment System with Hydrodynamic Cavitation and Biosurfactant for Recycling of Textile Effluent	AjeyKumar Patel(CoPI)	3 years	IMPRINT, SERB, New Delhi	41.42 Lakhs
2	Development of Global Vertical Soil Moisture Profile Database using SMAP Data	PI - Dr. Manali Pal	2 years	SERB-SRG, GoI	19.94 Lakhs
3	A study of pedestrian exposure to traffic emissions and consequences to their travel behaviour,	Dr B Raghuram Kadali	02 years	SERB-SRG, GoI	28.26 lakhs
4	A simple and robust non-contact method for rapid structural health monitoring of critical infrastructure using Digital Image Correlation.	Dr. M. Shashi	3 Years	MHRD-IMPRINT, (In Progress)	30.0 Lakhs
5	Determining JH2 constants for UHPC using SHPB,	Dr.T.P.Tezeswi	2 Years	CARS Project- DRDO	17.70 Lakhs
6	Effective Management of Process Slag from PCB Smelting	Dr. P. Ratish Kumar	1 year	CMET, Hyderabad	10.00 Lakhs
7	Performance Evaluation of Emulsion Treated Base Layers in Low Volume Roads; Scheme: TARE	Dr. C. S. R. K. Prasad (Co-PI)	3 Years	DST-SERB, GoI	18.30 Lakhs
8	Development of Trip Generation Manual for Indian Cities.	Dr. C. S. R. K. Prasad, Raghuram Kadali (Co-PI)	1 Year	CSIR-CRRI	8.14 Lakhs

Total Research Project Funding : Rs. 6.6011 Crores

Revenue Generated through Industrial Consultancy: 1.52 Cr (June 2021-July 2022)

Consultancy Earnings

Total Earnings of the department (2020-2021) = 1.52 crores

GIAN/SPARC Projects

- Approved : 05
- Organized: **03**
- Summer Winter Schools / Seminars / Short – Term Courses Organized: **3**

Continuing Education Programmes

- Continuing Education Programmes Organized: **16**
- Summer Winter Schools / Seminars / Short – Term Courses Organized: **3**

Faculty development/training activities/STTPs

- Faculty as participants : **08**
- Extention / Expert / Invited Lectures Delivered Elsewhere: **54**
- Conferences / Symposia Sessions Chaired: **05**

Publications

- Peer – Reviewed International Journal Publications : **171** (Scopus/SCI)
Avg. Impact Factor = **3.2**
- Peer – Reviewed National Journal Publications: **7**
- Books : 02
- Book Chapters: **44**

Research Guidance

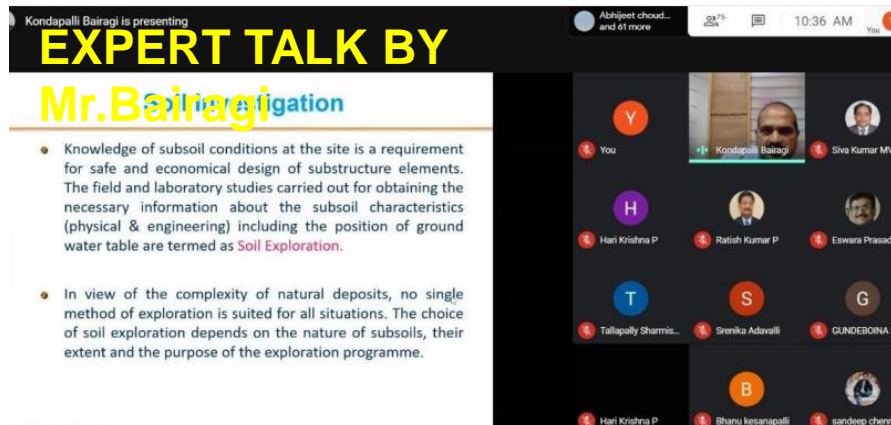
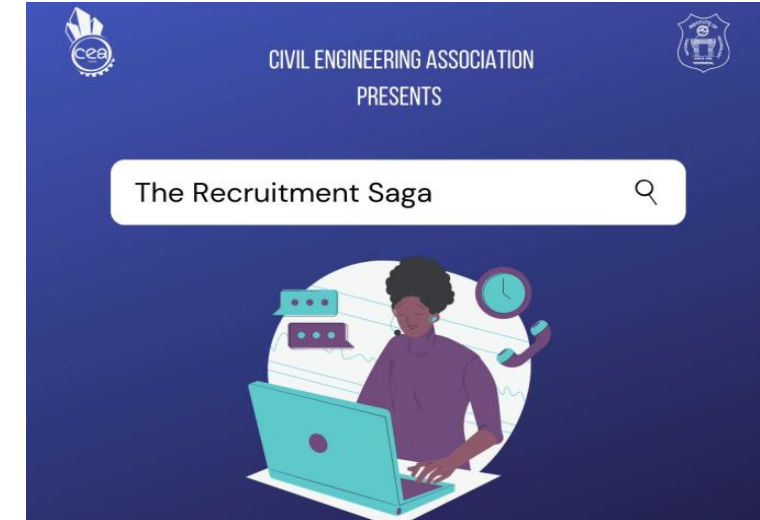
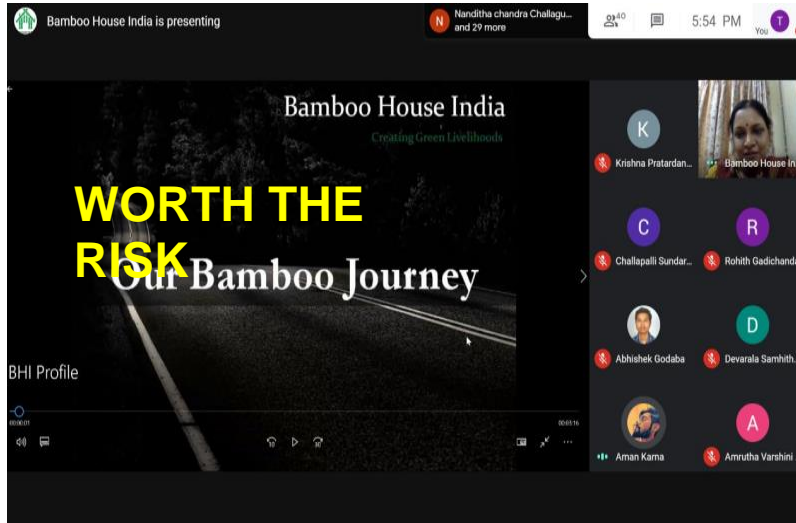
- PhD Granted during AY 2021-22 : **32 per year**
- PhDs Ongoing during AY 2021-22 : **113 + 30**

Number of Students Achievement

S.No	Name	Roll Number	College/ University	Program
1	G Sai Sushanth Reddy	171214	North-Eastern University, Boston	MS
2	Sai Vineet A V S S	171142	State University of New York, Buffalo	MS
3	Chukkapalli Pavani	171235	Texas A&M University	MS
4	Vijaya Sree Pamula	171135	IIT Tirupati	M.Tech
5	Krishnakanth Reddy Karingula	171124	University of Surrey, UK	MSC

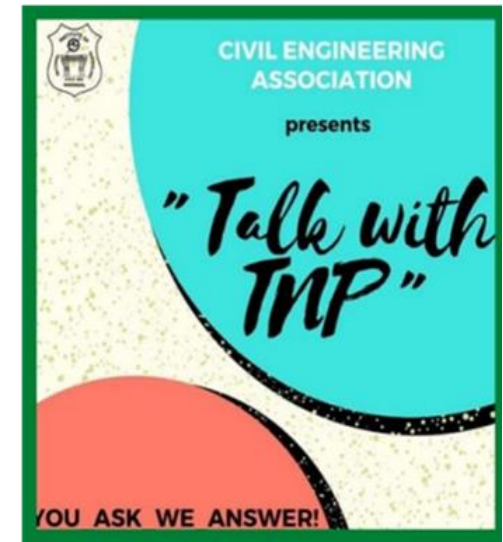
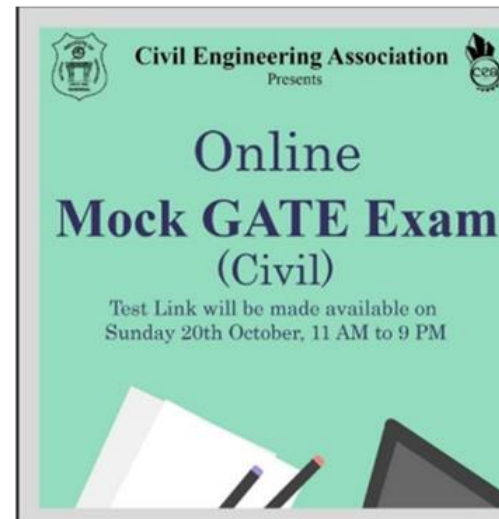
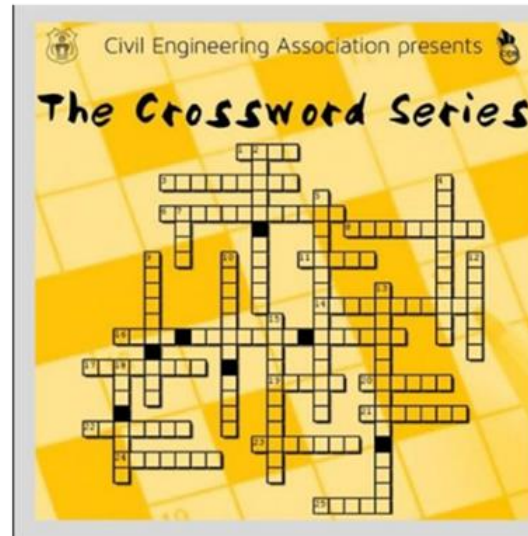
Professional Activities: Civil Engineering Association (2021-22)

- Major CEA activities = 13



Professional Activities: Civil Engineering Association (2021-22)

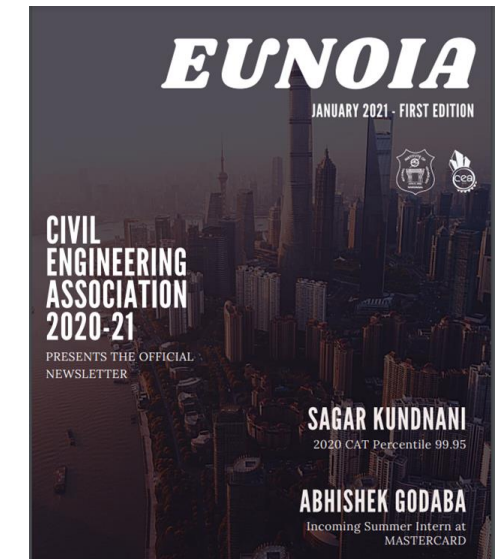
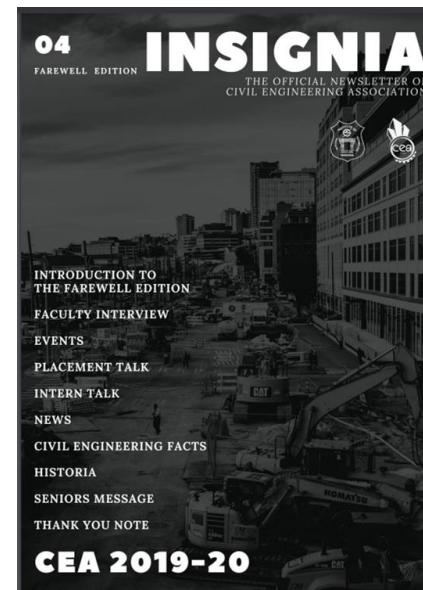
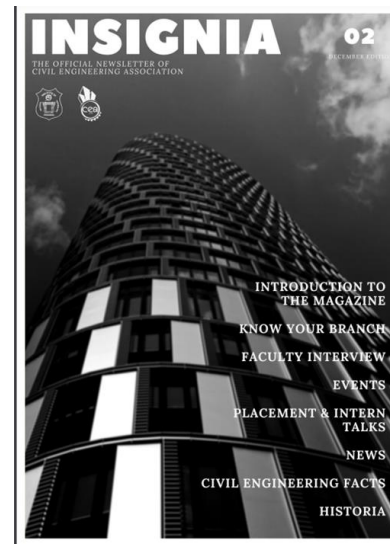
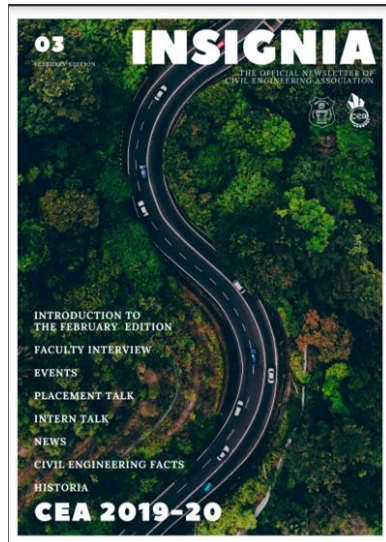
- Major CEA activities = 45



Professional Activities: Civil Engineering Association (2021-22)



Civil Engineering Association Magazines



Professional Student Chapters

- **Indian Geotechnical Society (IGS) Warangal Chapter**
- **The Institution of Engineers (IEI) Student Chapter**
- **Indian Green Building Council (IGBC)**

Student Participation

- **Technical Activities: Technozion**
- **Cultural Activities: Spring Spree, Spic Mcay**
- **Community Service: NSS, NCC, Youth Red Cross, YMCA**
- **Student Clubs: Hobbies, Technical, Fine Arts**

Infrastructural Facilities

Laboratories (10)

- Material Testing Lab
- Fluid Mechanics Lab
- Surveying Lab
- Concrete Technology Lab
- Hydraulic Engineering Lab
- Geotechnical Engineering Lab
- Engineering Geology lab
- Environmental Engg Lab
- Civil Engineering Software Lab
- Transportation Engineering Lab

Lecture Halls (16)

- Seminar Hall : 1 (100 Capacity)
- E-Classroom: 1 (120 capacity)
- UG Class Rooms: 6 (80 capacity)
- PG Class Rooms:8 (30-50 capacity)

Faculty Rooms: 50

Major Equipment Procured : AY 2021-22



Structures & Dynamics Laboratory-Shake Table & Vibration of Beams (TEQIP-III)



Concrete Laboratory- Jaw Crusher (SRIC)



Concrete Laboratory-Segregator (SRIC)



Transportation Engineering Laboratory- Fatigue Testing Machine Test Setup (Plan Grants)



Concrete Laboratory-Creep Testing Equipment (Plan Grants)

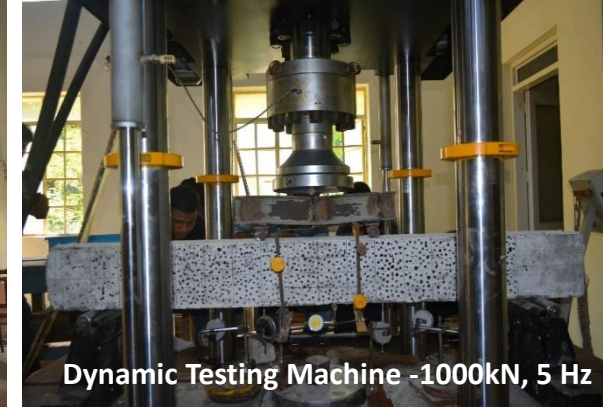


Structures Laboratory- 100 Ton UTM (TEQIP-III)

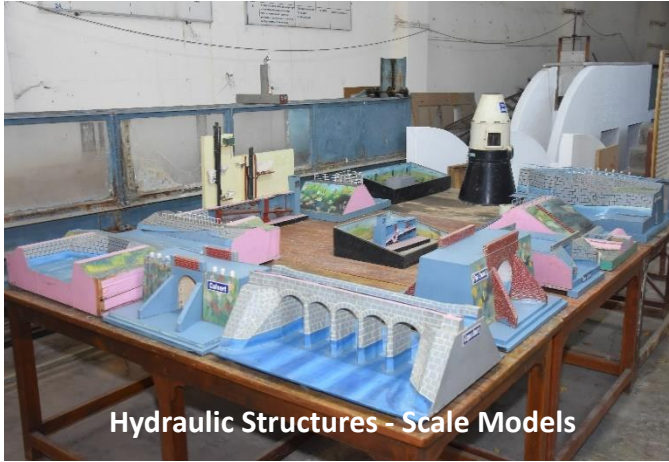


Structures & Dynamics Laboratory- Drop Weight Impact Tester (IMPRINT-2)

Structural Engineering Laboratory



Water Resources Laboratory



Hydraulic Structures - Scale Models



Sediment Transport Channel



Pumps



Francis Turbine - Test Rig



Francis Turbine



Notches



Wind Tunnel



Kaplan Turbine

Environmental Engineering Laboratory



Transportation Engineering Laboratory



Wheel Tracking



Asphalt Mixer



Fume Hood



Roller Compactor



CoreLok System

CoreLok System



Gyratory Compactor



MIST



Hydraulic Repeated Load Test



CBR & Marshall Test



Fatigue Test

Geotechnical Engineering Laboratory



Achievements, Awards, Innovations, Member-BOS

S. No.	Name of the Faculty	Nature of the Achievement/ Award / Innovation	Awarding Year
1	Dr. Venkaiah Chowdary	K.F. Antia Memorial Prize	December 26, 2021
2	Dr. Venkaiah Chowdary	Member, IRC- H2 and H5 Committee	2021 -2023
3	Dr. Venkaiah Chowdary	Member of PCD 06 Bitumen, BIS, New Delhi	2021 -2023
4	Dr Rathish Kumar Pancharathi	Duo-India Fellowship	2021-2022
5	Prof M Chandra Sekhar	State Level Expert Appraisal Committee, MoEF, Govt of AP	From 2021
6	Prof M Chandra Sekhar	Member, Curriculum Revision, AP State Council for Higher Education, Govt of AP	From 2020
7	Prof M Chandra Sekhar	Member of Editorial Advisory Board of Analytical Chemistry Letters	From 2020
8	Dr. D.Ravi Prasad	BOS member for NSRIT, Visakhapatnam	From Jan 2021

Achievements, Awards, Innovations, Member-BOS

S. No.	Name of the Faculty	Nature of the Achievement/ Award / Innovation	Awarding Year
9	Dr Rathish Kumar Pancharathi	Primary Evaluator, Toycathon 2021	2021
10	Dr Rathish Kumar Pancharathi	Member of the IRC B8	2021 - 2024
11	Dr Rathish Kumar Pancharathi	Member of the Building Works Committee (BWC) of the School of Planning and Architecture, Vijayawada, AP	From 2021
12	Dr Rathish Kumar Pancharathi	Member, Evaluation Committee of Japanese Government Monbusho-Mext Research Scholarships	2021-2022
13	Dr Rathish Kumar Pancharathi	Advisory Committee Member, NCCBM, Hyderabad	2021

Student Placements- Companies At a Glance

Students Placed on campus: **B.Tech. 56** **M.Tech. 30**



Accreditation Status

Program	Year of Commencement	Accreditation	Present Intake
B.Tech (Civil Engineering)	1959	2022-2028	139
M.Tech Geotechnical Engineering	1964	2014-2019	30
M.Tech Water Resource Engineering	1964	2015-2020	30
M.Tech Engineering Structures	1967	2022 (In Process)	30
M.Tech Transportation Engineering	1968	2022 (In Process)	30
M.Tech Remote Sensing and GIS	2000	-	20
M.Tech Environmental Engineering	2006	2016-2017	30
M.Tech Construction Tech.& Management	2008	2016-2017	30
M.Tech Waste Management	2020	-	20

Thrust Research Areas

Structural Engineering

- Special Concretes, Prestressed Concrete, Rehabilitation of Structures, Health Monitoring of Structures, Geopolymer Concrete, Structural dynamics and earthquake engineering, Impact and Blast loads, Fracture mechanics and Digital Image correlation etc.

Geotechnical Engineering

- Geotechnical & Geophysical Behaviour of Soils & Rocks; Foundation design, Stability of Earth dams and reinforced earth, Ground Improvement Technique, Geopolymer applications in soil stabilization, Soil dynamics and Seismic hazard analysis

Remote Sensing and GIS

- Remote Sensing and GIS Applications, Rural area, development, Climate change impact on water resources, UAV mapping, Web GIS

Transportation Engineering

- Urban and Regional transportation planning, Land use transportation planning, Pavement material characterization, Mass Transportation and Freight Transportation, Traffic Engineering & Simulation, Transport Economics

Water Resources & Environmental Engineering

- Water Resource system planning, Water shed management, Planning and design of irrigation systems, Waste water treatment plants, Urban Storm water management, Environmental Impact Assessment, Computational Fluid Dynamics

Multi Disciplinary Research

- ANN, Fuzzy logic, Machine Learning, Artificial Intelligent, Block Chain, Big Data Analytics and IoT.



राष्ट्रीय प्रौद्योगिकी संस्थान वारंगल
National Institute of Technology
Warangal

Department of Electrical
Engineering



Electrical Engineering Department: Annual Academic Performance Appraisal AY 2021-22

Department of Electrical Engineering : History

- *Established in the year 1959 along with the establishment of the institution.*

BTech in Electrical & Electronics Engineering

- The department developed state of the art Infrastructure, from the assistance received in the formative years under UNESCO aid through UNDP and later from MHRD, Govt through several schemes like institutional network scheme (INS) , MODROBS, R& D, thrust area programme and TEQIP phase-I, II and III.
- The PG Programs were started **in the year 1964 coinciding with the 1st outgoing batch of the under graduate** course as UNESCO sponsored Industry-oriented programs.
 - MTech (Power Electronics and Drives)
 - MTech (Power Systems Engineering)
 - MTech (Smart Electric Grid) was introduced in AY 2020-21.
- With the provision of institute fellowships for Ph.D. scholars, the research activity in the Department received a boost.

Department of Electrical Engineering : Current Status

- B Tech program in Electrical and Electronics Engineering.

Current Intake: 175 (JoSAA + (DASA, SII, ICCR))

- M Tech Programs (GATE) Current Intake :
 - Power Electronics & Drives - 33
 - Power Systems Engineering – 32,
 - Smart Electric Grid -30
- M. Tech under QIP and Self-finance is offered .
 - Self finance 5 seats in each specialization
- PG diploma in all MTech Specializations.
- PhD in Electrical Engineering

Faculty Members (34) AY 2021-22:

Professors (12)	
1.	Prof. M. Sydulu (HAG) (Retired on 30 October 2021)
2.	Prof. D.M. Vinod Kumar (HAG)
3.	Prof. D.V.S.S. Siva Sarma (HAG)
4.	Prof. N Subrahmanyam
5.	Prof. B. K. Murthy
6.	Prof. N. Vishwanathan
7.	Prof. V.T. Somasekhar (HAG)
8.	Prof. S. Srinivasa Rao
9.	Prof. M. Sailaja Kumari* (HoD)
10.	Prof. N.V. Srikanth
11.	Prof. Ch. Venkaiah
12.	Prof. B. L. Narasimharaju

Associate Professors (8)			
1.	Dr. S. Porpandiselvi *	4.	Dr. Ch. Ramulu
2.	Dr. P. Suresh Babu	5.	Dr. I. Satish Kumar
3.	Dr. A. Kirubakaran	6.	Dr. Altaf Q. H. Badar
4.	Dr. B. Nagu	7.	Dr. D. Swati *
5.	Dr. G. Siva Kumar	8.	Dr. Palash Mishra
6.	Dr. D. Sreenivasa Rao	9.	Dr. Ram Krishan
7.	Dr A.V. Giridhar	10.	Dr. R. Jeyasenthil
8.	Dr. M. Udaya Bhaskar	11.	Dr. Deepak Reddy P. (Relieved on 2 September 2022)
Assistant Professors (14)		12.	Dr. K. Anil Naik
1.	Dr. Y. Chandrasekhar	13.	Dr. Debasmita Panda*
2.	Dr. T. Vinay Kumar	14.	Dr. Mahamad Nabab Alam
3.	Dr. P. Srinivisan		

Note: * Women Faculty members (4)

Current Faculty Details:

- | | | |
|--|---|-------------------------|
| • Sanctioned Strength | - | 38 (42 with EWS) |
| • Regular Faculty | - | 32 |
| (Professors | - | 11 |
| Associate Professors | - | 8 |
| Assistant Professors | - | 13). |
| • No. of Regular Faculty with Ph.D. | - | 32 |
| • Women Faculty | - | 04 |
| • Adhoc Faculty | - | NIL |
| • Number of other Faculty such as Visiting Faculty, Professor Emeritus, Guest Faculty etc. | - | NIL |

Non Teaching Staff List

Sl. No	ID No	Name Sri	Designation
1	86	G. Veda Prakash	Asst. SG-II (Office)
2	156	A.Nagabhushanam	Technical Asst.
3	956	Ms. Pooja Kurdekar	Technical Asst.
4	181	K. Parasharamulu* Expired on 10/7/2022	Technician SG-I
5	320	T. Veeranna	Technician SG-I
6	258	D. Veeraiah	Technician SG-II
7	232	K. Rajender	Technician
8	220	A. Srinivasu	Technician (UG)
9	300	G. Murali	Technician (UG) (Office)
10	293	K. Rajaiah	Technician (UG)
11	434	K. Venkataiah	Sr. Care Taker
12	933	Sabavath Rahul Naik	Senior Technician
13	940	B.Venu	Senior Technician
14	945	Angali Sai Kumar	Senior Technician
15	991	N. Nagarjuna	Senior Technician
16	924	Mohammed Asifuddin	Technician (Electrical)
17	936	Oddem Praveen	Technician (Electrical)
18	937	Banoth Ravinder	Technician (Electrical)

Patents Published/filed:

1. **Dr. Suresh Babu Perli:** [Australian Patent Publication](#): Title of Invention : A Web-Enabled Smart Home Gateway for Automatic Device and Network Configuration and Automatic System Updates via IoT. Patent number : 2021107349, Date of Grant : 15 December 2021 Publishing Authority : Government of Australia.
2. **Dr. Suresh Babu Perli:** [Indian Patent Publication](#) : Title: Model to Enhance Security and to Improve the Fault Tolerance Publication Number: 26/2022 Publication Date: 01/07/2022.
3. C N Ravi, I **Satish Kumar**, B. Harish, " AOVL- voltage load protection: automatic over voltage under voltage load protection and distribution", File no. 202041045339, 2020 ([Published, Intellectual property in India](#))
4. Ramsha Karampuri, Sachin Jain and **V. T. Somasekhar**, "Minimization of Leakage Current In Transformer-Less Standalone Solar PV Powered Induction motor drive," File no. 201841004256 A, 2018 ([First examination report submitted, Intellectual property in India](#)).

Patents Published/filed:

5. Suresh.L, and **V. T. Somasekhar**, " A Dual DC- Power Supply Based Four - Level Open - End Winding Induction Motor Drive With A Flying Rectifier-Inverter Combination," File No. 201741032892 A, 2017 (**First examination report submitted, Intellectual property in India**).
6. **N. Vishwanathan, S. Porpandiselvi**, Kasi Ramakrishna reddy, "Full-Bridge Soft Switched Driver for LED Based Street Lighting Application," File no. 201641038698, 2016 (**First examination report submitted, Intellectual property in India**).
7. **N. Vishwanathan**, Devara Vijaya Bhaskar, Tanmoy Maity, **S. Porpandiselvi**, " Cyclic on-off Control for a Three-Output Inverter for Induction Cooking Application with Independent Control", File no. 201641030518, 2016 (**First examination report submitted, Intellectual property in India**).
8. N. Rama Devi, **D V S S Siva Sarma**, "Detection of stator incipient faults and identification of faulty phase in three-phase induction motor, Indian Patent Application no: 202241016231. (**Patent filed**).

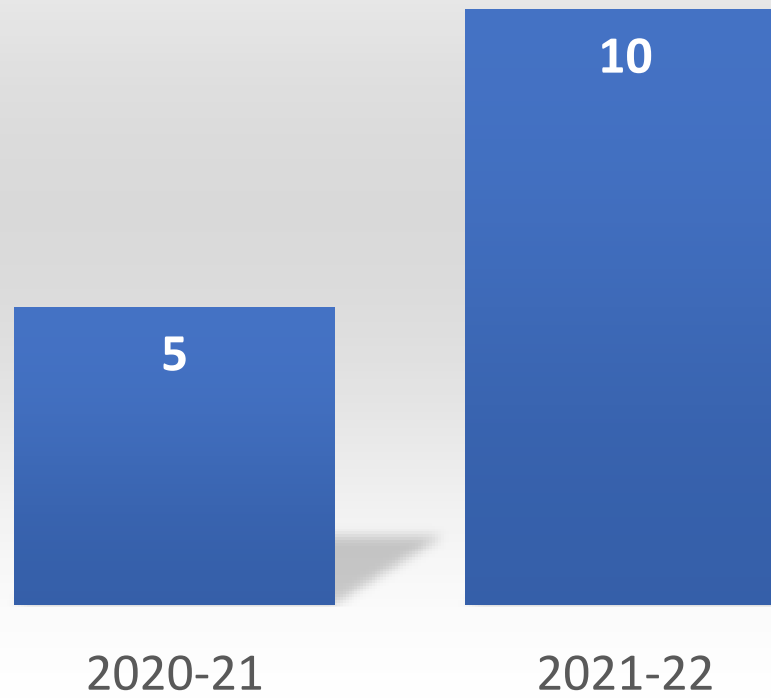
Patents Published/filed:

9. M. Kalyan Chakravarthi, **A.V. Giridhar**, G. Arun Kumar and **D.V.S.S. Siva Sarma**, "LPDA UHF sensor for PD detection in Power transformer" Indian Patent Application no: 202241053188, 2022. (Patent Filed).

BTech III (EEE) student

10. **Tekale Shritej Sahebrao**, "An Intelligent patient emergency management system (IPEMS) based on a central AI decision system (CBAIDS)", Patent number : 2021106870, Date of Grant : 01 December 2021 Publishing Authority : Government of Australia.

Number of Patents Published/filed



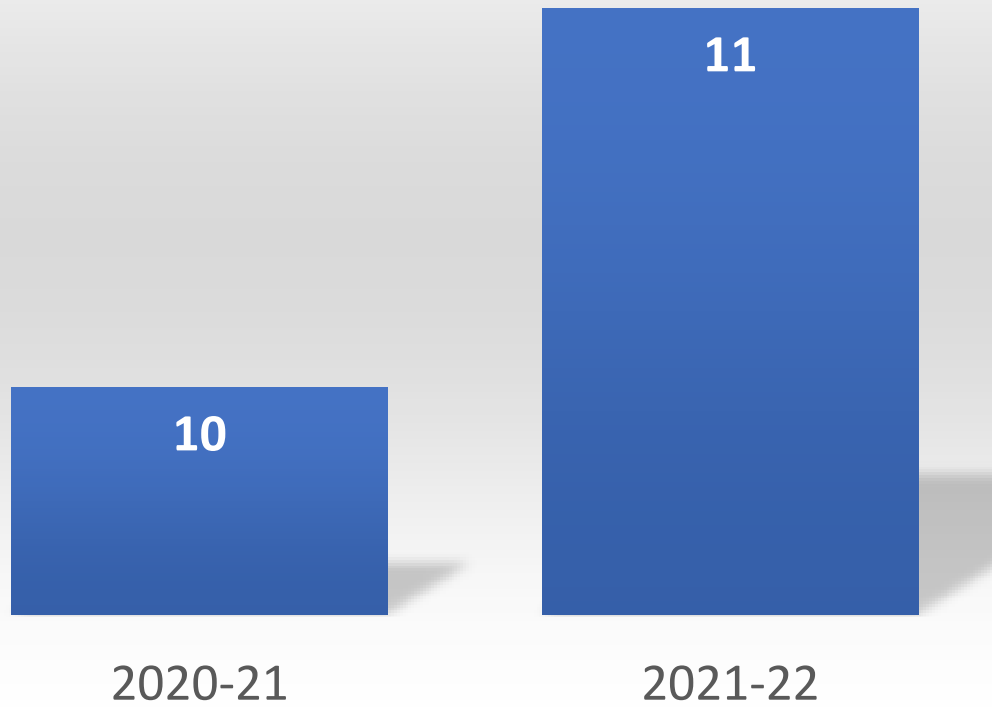
Research Projects AY: 2021-2022

	Total Number	Amount (Rs. In Lakhs)
New R&D Projects Sanctioned	2	62.06
Number of ongoing Research Projects	9	388.81
Number of Projects Completed	5	156.79

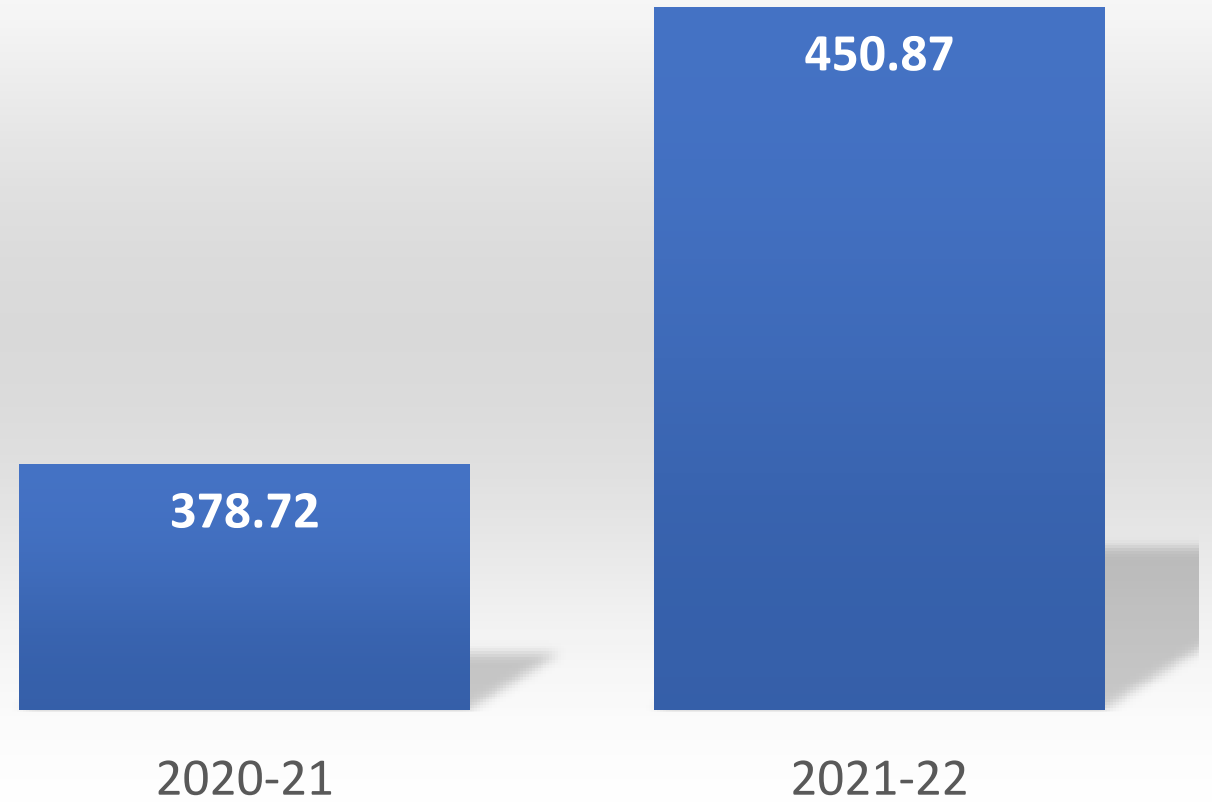
Ongoing Sponsored Research Projects in the AY: 2021-2022

Funding agency	No. of Projects	Amount (Rs. In Lakhs)
SERB	8	230.41
DST-NSM India	1	45.58
IMPRINT	1	79.85
SPARC	1	95.04
Total	11	450.876

Number of Ongoing Sponsored Research Projects



Budget Amount (Rs. In Lakhs)



GIAN /SPARC Projects AY 2021-22:

	Total Number	Amount (Rs. In Lakhs)
Number of new GIAN Projects sanctioned	1	8.52
Number of new SPARC Projects sanctioned	-	-
Number of ongoing GIAN Projects	-	-
Number of ongoing SPARC Projects	1	95.04

Consultancy Project details:

Number of Consultancy projects handled	Amount (Rs. In Lakhs)
2	11.37

1. Prof. Sydulu maheswarapu , Prof. DVSS Siva Sarma , Prof. N. Subrahmanyam, Prof. R V Chalam (Mechanical Dept) Vedhavathi –Lift irrigation-Kurnool- Project, Consultancy-for vetting Electro-mechanical Design Drawings of LIS projects , Govt. of Andhra Pradesh, Rs 5,00,000, from: 02-11-2020 (ongoing).
2. Dr Ram Krishan, Variable Renewable Integration Study for Antigua and Barbuda; Grant: Rs 6.37 Lakhs, March- April 2022, 2 months, completed. Deloitte India
3. Equivalencing project for POSOCO

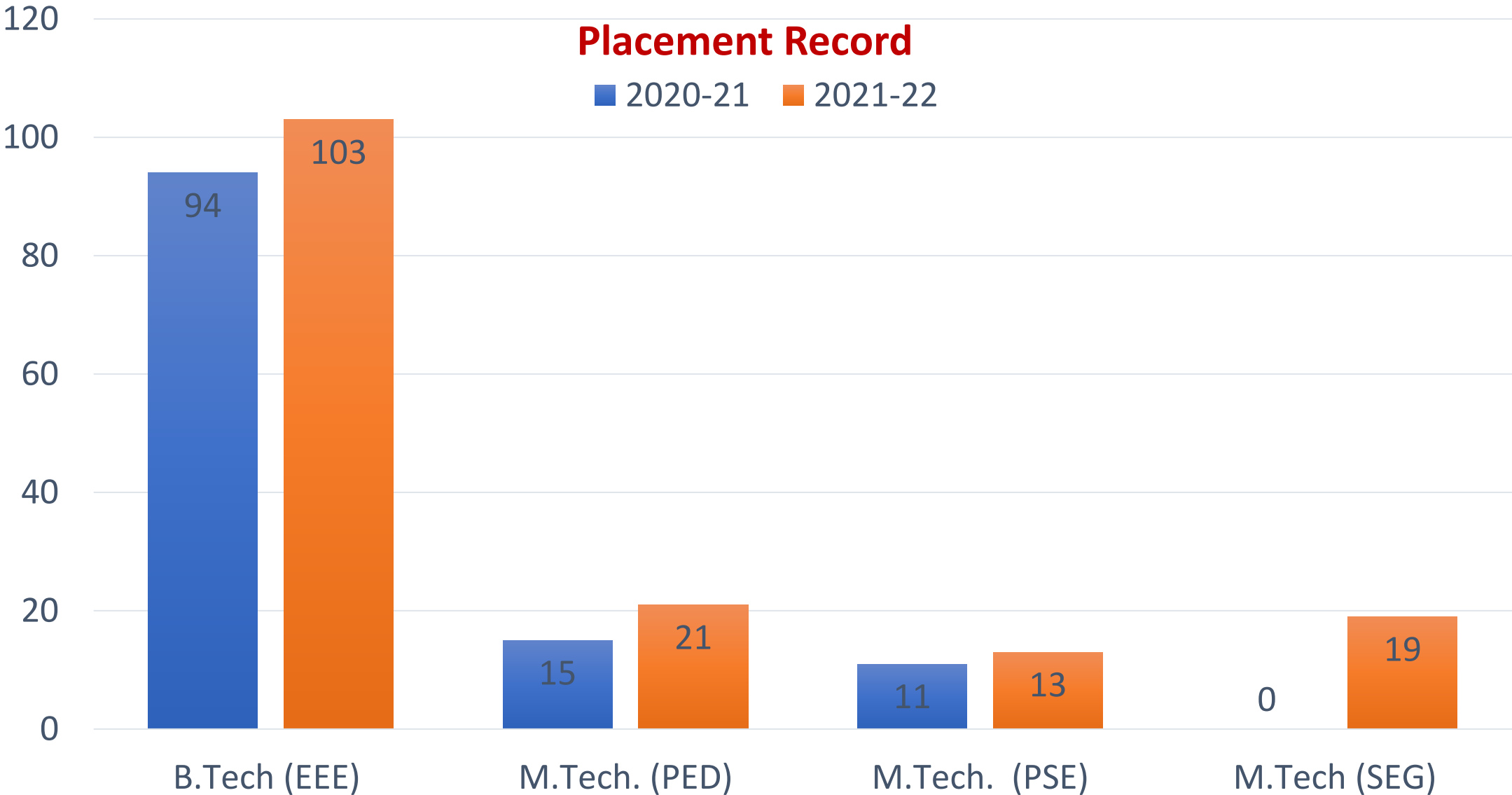
Graduated students' information (AY: 2021-2022)

Degree	Number of students completed the program	Number of students pursuing Jobs*	Number of students pursuing Higher studies	Number of students into entrepreneurship etc
B.Tech (Electrical and Electronics Engineering)	132	103	-	-
M.Tech. (Power Electronic and Drives)	29	21	-	-
M.Tech. (Power Systems Engineering)	23	13	2	-
M.Tech. (Smart Electric Grid)	20	19	-	-
Ph.D. (Electrical Engineering)	9	9	-	-

* <https://www.nitw.ac.in/path/?dept=/placement>

Placement Record

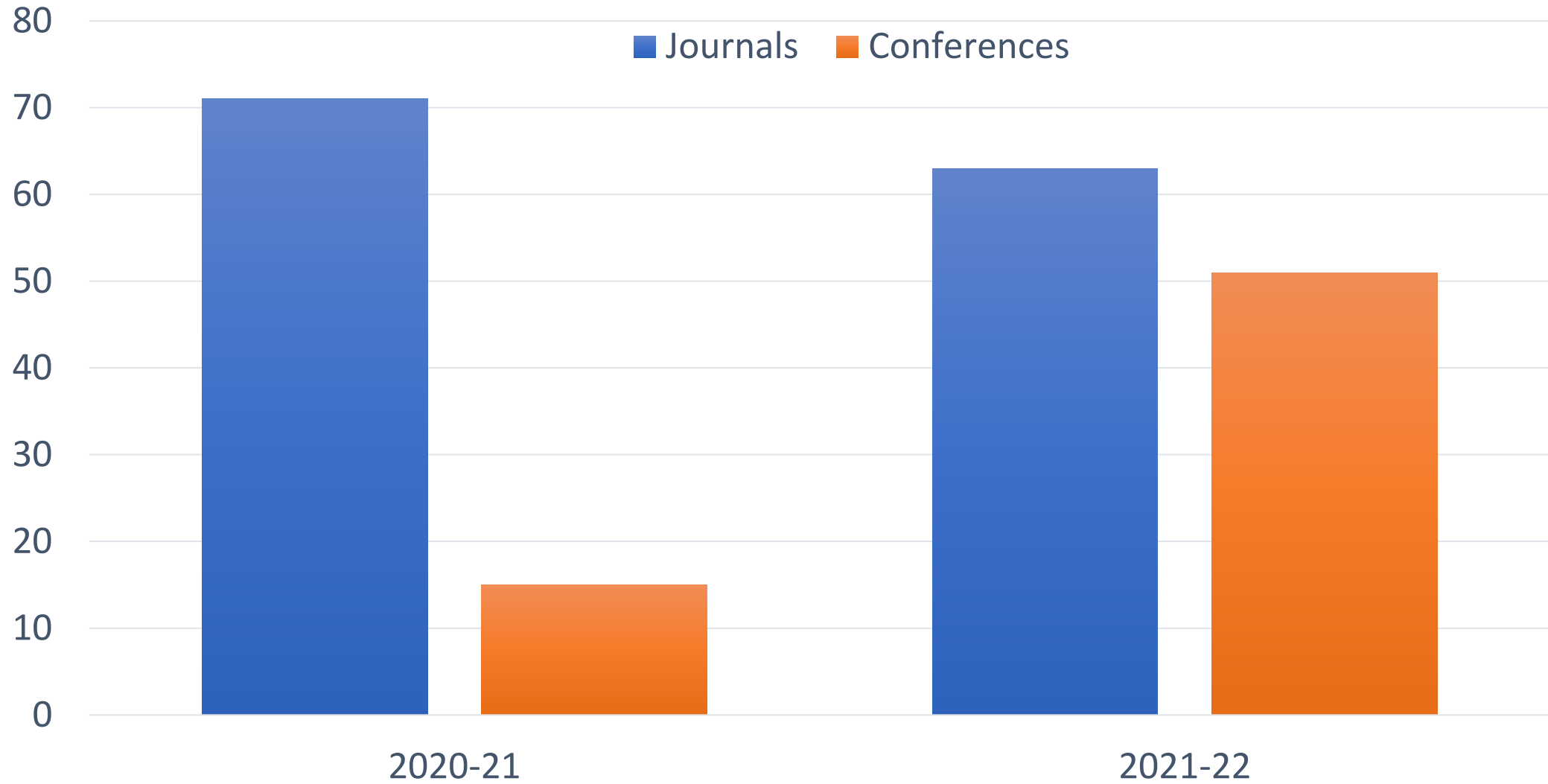
■ 2020-21 ■ 2021-22



Faculty Publications (AY:2021-2022)

	Total
International Journals	63
National Journals	--
Total Journals	63
International Conferences	51
National Conferences	--
Total Conferences	51
Total Publications (Journals +Conferences)	114

Number of Faculty Publications



PhD Research guidance (AY: 2021-2022)

	Total
Number of PhDs Completed during the academic year	8
Number of new students admitted	4+17 = 21 (Full-time) & 2+9= 11 (Part-time) Total=32
Number of PhD students as on June 2022	58 (Full-time) & 23 (Part-time) Total= 81

AY: 2021-2022

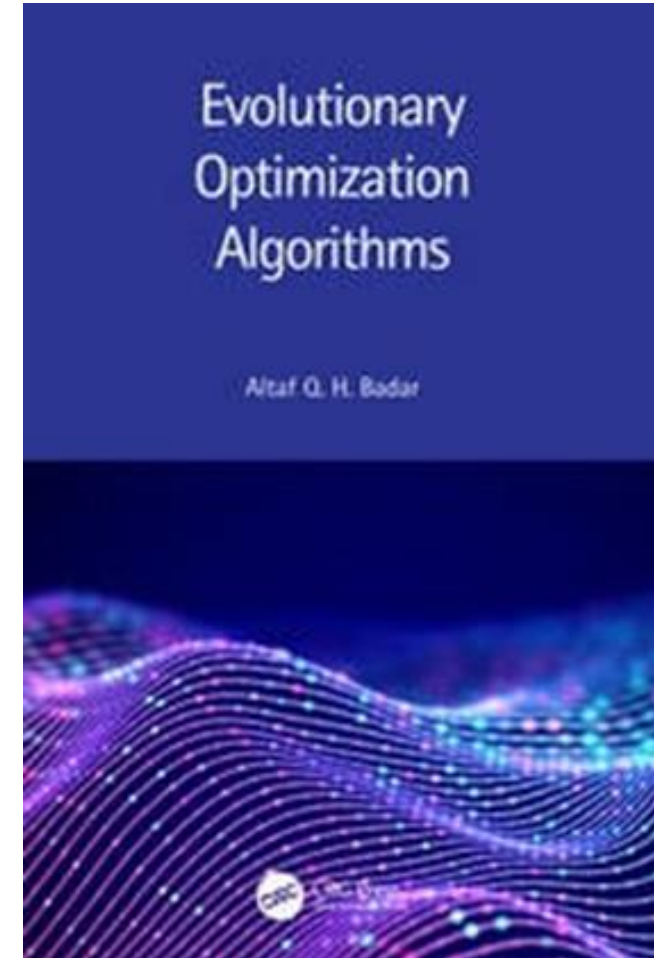
	Total
Number of International visits by faculty members	NIL
Number of Books Written	01
Number of Book Chapters Written	12
Number of other Scholarly publications (Monograms, Hand Books, Codes)	NIL
Conferences organized	NIL
Distinguished guests visited the department	

Books Authored AY: 2021-2022

Dr Altaf Q. H. Badar,



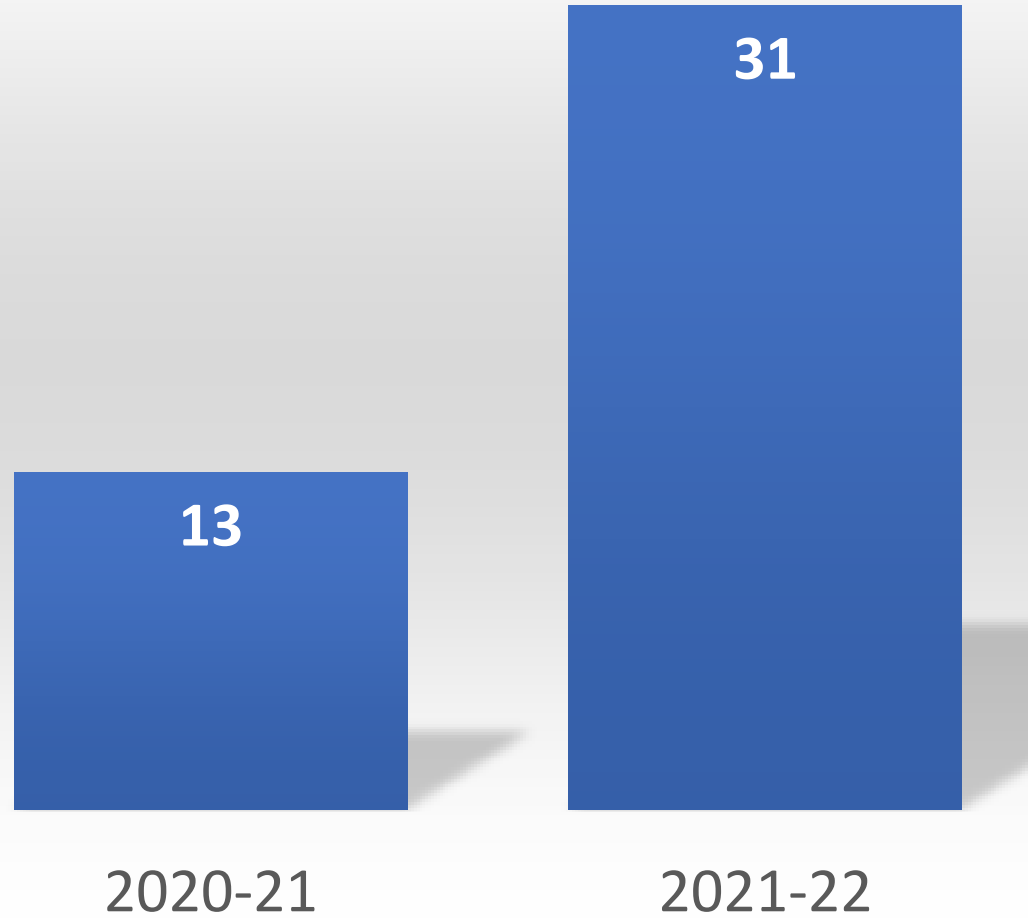
Evolutionary Optimization Algorithms, CRC Press, October, 2021, ISBN 9780367750541 (First Edition).



Workshops/FDPs AY: 2021-2022

Funding agency	No. of Workshops
Teaching Learning Center (TLC)	5
Center for Continuing Education (CCE)	5
Electronics & ICT Academy	15
SPARC	1
DST-SERB	3
AICTE ATAL	2
Total	31

Number of Workshops/FDPs



Distinguished guests visit to the department:

- **Shri Venu Nuguri**, Managing Director & CEO, Hitachi Energy India Limited visited the department on 6th May 2022.
- **Shri. Akilur Rahman**, Chief Technology Officer, Hitachi Energy India Limited visited the department on 6th May 2022.
- **Dr. O.D. Naidu**, Senior Principal Engineer, PG- Grid automation, Hitachi Energy and **Mr. Praveen A.N**, Technical support after sales service, Hitachi Energy visited the department for three days from 19 April 2022 to 21 April 2022.
- **Mr V. Suresh, Executive Director, Mr K B V Ramkumar**, Deputy Manager POSOCO visited the institute for MoU on 10 Dec 2021
- **Mr G. Praveen Kumar**, Manager at Power System Operation Corporation Ltd (POSOCO) visited the department on 5 Feb 2022.

AY: 2021-2022

- **Number of Expert Lectures delivered by the Guests: 6 (EEA)**
- **SEG curriculum based Industry lecture series by Hitachi Energy : 14 hrs**
- **SEG curriculum based guest lectures : 6 hrs**
- **PSE curriculum based Industry lecture series by POSOCO : 17 hrs**

- Number of the Expert Lectures/ Guest Talks/webinars delivered by the Faculty: **99**
- Number of the Department Outreach Activities: **46**
- Number of Students Achievements: **04**

Department Association/Students Club Activities: 2021-2022

Electrical Engineering Association (EEA)

- EEA has conducted over 14 events
 - 04 Interactive, Career & Mentorship events.
 - 2 Industry Expert Lectures .
 - 8 Workshops, Magazines and Experience Series.
- INDUSTRY LECTURE SERIES on topic of “Power System Resilience with Energy and Digital Transformation” by **Shri. Akilur Rahman, Chief Technology Officer for Hitachi Energy India Limited** was scheduled at 3:00 PM on 05-02-2022.
- Webinar on Power Electronics in Mobile Computing by **Smt Samantha Rao, Power delivery architect in Intel, India** on 19-March-2022.

New Laboratories Developed (AY:2021-2022)

Title	Purchase initiated for the amount (Rs. in Lakhs)	Utilization
Embedded system Lab	50.48	B.Tech, M.Tech (PED) and Research Scholars
NITW- Hitachi Energy Smart Electric Grid Lab	80 (Sponsored by Hitachi Energy)	M.Tech (SEG) and Research Scholars
Smart Grid Simulation Lab	34.49	M.Tech (SEG) and Research Scholars

Smart Electric Grid Lab commissioning on 6th May 2022



New Equipment/Software/ Infrastructure developed in the Department (AY:2021-2022)

S. No.	DESCRIPTION	Amount (Rs.)
1	<i>MICRO LAB BOX</i>	4016250
2	HIGH SPEED COMPUTERS	3449450
3	<i>OP 4510 RT SIMULATOR</i>	2650000
4	DESKTOP COMPUTERS FOR EMBEDDED LAB	2237760
5	<i>Solar PV Simulator</i>	1800000
6	<i>High performance Prog Power Source</i>	1600000
7	PSS E SOFTWARE	1456000
8	8086 MP KITS	1248200
9	OP 4500 UPGRADE	1209975
10	<i>LAN HARDWARE</i>	1100000
11	<i>DSO with current probes</i>	950000
12	PSCAD SW	818920
13	8051 MICRO CONTROLLERS	781592
14	PIC DEV SYSTEMS	781116
15	UPS	650000
16	<i>dSpace ACE 1104 system</i>	630000
	Total	2.53 Crore

Awards/ Recognitions/ Achievements of Faculty

- **Dr. Mahamad Nabab Alam**, (#1,02,936) listed in Top 2% Scientists across the world by Stanford University
- Won Best Paper Award in the IEEE International Conference, ICPCCT-2022, held in Raipur in 3-5 March 2022



Prof. V.T. Somasekhar, (#3,48,450) listed in Top 2% Scientists across the world by Stanford University

Awards/ Recognitions/ Achievements of Faculty

Dr. T Vinay Kumar: SERB INTERNATIONAL RESEARCH EXPERIENCE (SIRE) FELLOWSHIP AWARD 2022, 6 months fellowship for 3000USD/month



Best Paper award in IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), 2022, pp. 1-6, doi: [10.1109/CONECCT55679.2022.9865105](https://doi.org/10.1109/CONECCT55679.2022.9865105).



Awards/ Recognitions/ Achievements of Students

- Highest Pay from EEE AMIT JHAKAR (Roll No :182106) - Amazon - **44 Lpa**
- M. Paul, P. Mishra, **Ganesh Reddy K** and A. Pulugurtha, "Evaluating Degradation resistance of Silicone Rubber Nanocomposites using Deep Learning Technique for outdoor high voltage applications," 2022 2nd IEEE International Conference on Intelligent Technologies (CONIT), 2022, pp. 1-5, doi: 10.1109/CONIT55038.2022.9848087.
- P. Mishra, S. Singh and **Ganesh Reddy K.**, "Investigating Liquid Permeation and Drying Behaviour of Silicone Rubber Nanocomposites for High Voltage Insulation Structures," 2022 IEEE 7th International conference for Convergence in Technology (I2CT), 2022, pp. 1-5, doi: 10.1109/I2CT54291.2022.9824244.
- **V. Moni**, M. Mattipalli and A. Q. H. Badar, "Machine Learning Classification Techniques to Predict Directional Change of Energy Prices Using High Dimensionality Reduction," 2022 International Conference on Computer Science and Software Engineering (CSASE), 2022, pp. 247-252, doi: 10.1109/CSASE51777.2022.9759655.

Highlights of the department

Smart Electric Grid Laboratory: Hitachi energy - NITW Smart Electric grid was commissioned on May 6, 2022, in the Department of Electrical Engineering to facilitate the new Mtech

(Smart Electric Grid) program started during AY2020-21 .

- The lab is a joint venture of Hitachi energy and NITW.
- Hitachi energy has contributed to a first phase of Rs 80 lakhs for setting up of the lab and more support in the form of project works, internships and assistance is promised.

Research Capabilities of the Department:

- Thrust areas of Research

Power Systems

Power system stability
HVDC and FACTS Controllers
Distribution system automation
Real Time Control
Soft computing techniques
Deregulation
Protection
Power Quality
Fault Diagnosis
High Voltage Engineering

Power Electronics & Drives

Switch Mode Power Supplies
Modular Power Supplies and Reliability Studies
Power Electronic Drives
DSP Controlled Drives
Wind/Wave Energy Systems
Transient Effects in Drives
SVM Schemes for Multilevel Inverters
Renewable Energy Sources

Smart Electric Grid

Electric Vehicles
Smart Grid Planning & Operation
Smart Grid Communications and Protocols
Smart Grid Resiliency and Cyber Security

Facilities available in these Thrust areas of Research

- Hardware-in loop systems (OPAL-RT)
- Real time systems (dSPACE systems)
- Microcontroller, DSP & FPGA Systems
- Power Electronic Converters
- DFIG, PMSM, BLDC, SRM Drives
- PV Simulator
- Multilevel Inverter Systems
- PSCAD, and NEPLAN software
- 140kV DC High Voltage test set
- Programmable Electronic Load
- High Voltage High Precision Programmable DC Power Supply

In addition to the equipment mentioned above, all curriculum based laboratories have been augmented with latest test and analytic instruments

Vision and Mission of the Department

- **Vision statement for the Department:** To be recognized as an excellent knowledge Hub for high quality educational programs, research and consultancy in tune with the vision of the Institute.
- **Our Mission:** To create high quality Educational environment in which students are prepared to meet the challenges of modern Electrotechnical industry to fulfill the societal aspirations, by equipping them with
 - State of the art technical knowledge
 - Analytical and practical skills
 - Management competence
 - Innovative and creative approach to work

To strengthen interaction with industry through lasting partnership focusing on

- Curriculum development
- Research and Consultancy
- Continuing Education Programs

Short term plans (1 year)

It is being seriously contemplated to launch two new M.Tech. courses in the areas of

Control & Automation

- Syllabus drafting completed
- Automation Association of India, Mumbai (private independent body) under campus connect program to provide automation related lab equipment (on promotion basis)
- Collaboration with Schneider Electric , Chennai to be worked out .
- Collaboration with Forbes Marshall, Pune to explore for automation related products.
- MoU with DRDL, DRDO.

Intelligent Electric Vehicles/ Electric Transportation

- Syllabus drafting in progress, formulated core courses
- To explore possible collaboration with Mercedes Benz, Tata Motors, Hella Automotives.

Short term plans (1 year)

- Establishment of the following state-of-the-art laboratories:
 - ❖ Renewable Energy Systems Laboratory (3 Cr)
 - ❖ Electric Vehicles Laboratory (3 Cr)
 - ❖ A Mini-Electrical Machines Lab for service laboratory courses (3 Cr)
 - ❖ A Hardware-Projects lab to cater to the needs of UG and PG students (3 Cr)
 - ❖ A High-Voltage Laboratory (Generation, Testing, Condition Monitoring, and diagnostics) (5 Cr)

Details of Centres of Excellence (COE): FIVE Year Plan

Center of Excellence on Power Conversion Technologies by EED: This center would be instrumental in developing cutting edge technologies in the areas of

- i. Electric Transportation, ii. Renewable energy Systems, iii. Smart Grid Technologies iv. Energy Storage v. Strategic Planning of Electric Power Systems vi. Applications of AI & ML in Electrical Engineering.

It is envisaged that the equipment acquired by this center would promote research and development in interdisciplinary areas and could promote internal revenue generation. Total budget requirement: **3 crores.**

Planning to start certification courses for practicing engineers/ working professionals in online mode in collaboration with industry/organizations .

Collaboration with Industry:

- Central Power Research Institute (CPRI)
- Power System Operation Corporation Limited (POSOCO)
- Hitachi Energy India Limited
- Power Grid Corporation of India Limited (PGCIL)

MoU between NITW and POSOCO, Bangalore on 10/12/2021



Status of Accreditation:

UG:

- B.Tech (Electrical and Electronics Engineering) Accredited for Academic years 2022-2023 to 2027-2028 (6 years).

PG:

- M.Tech (Power System Engineering) Accredited for Academic years 2015-2016 to 2019-2020 (5 years). Extended by 1year (2020-21)
- M.Tech (Power Electronics and Drives) Accredited for Academic years 2015-2016 to 2019-2020 (5 years). Extended by 1year (2020-21)



Welcome to

Annual Academic Performance Appraisal Meeting

By

Prof. V. SURESH BABU

HEAD

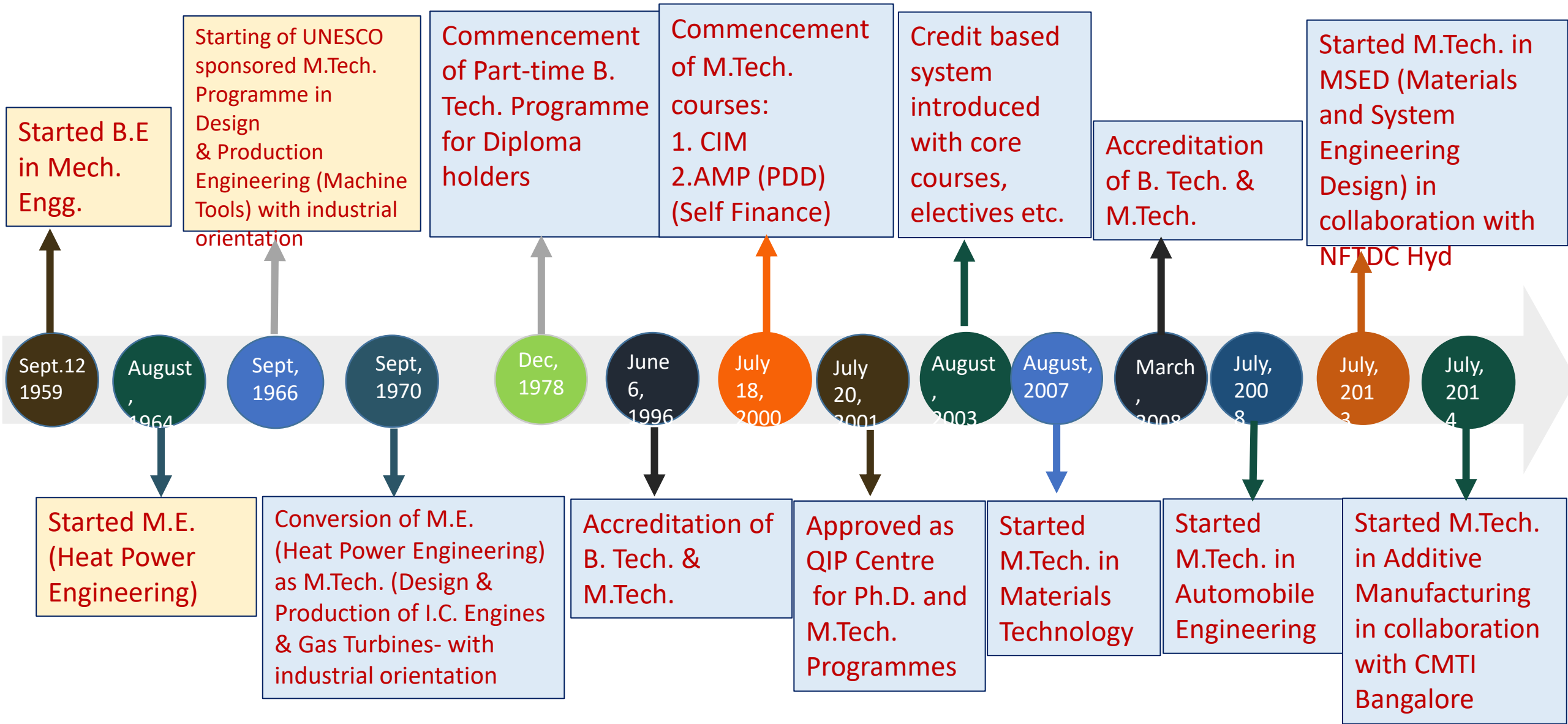
Department of Mechanical Engineering
NIT Warangal

About Mechanical Engineering Department...

- The Department of Mechanical Engineering was established in the year 1959.
- The department presently offers one Under Graduate Program, i.e., B.Tech in Mechanical Engineering with an intake of 160 students
- Offers Seven M.Tech programs (Thermal Engineering, Machine Design, Automobile Engineering, Material System and Engineering Design, Manufacturing Engineering, Computer Integrated Manufacturing and Additive Manufacturing) and Ph.D. programs.
- At present, the Department has **48 regular faculty members** and **01 Professor Emeritus** with research expertise in different specializations of Mechanical Engineering.
- The department has liaison with reputed industries and R&D organizations such as **NFTDC, DMRL, DRDL, DRDO, ARCI, ARDB, CSIR, MNES, BHEL, CPRI, etc.**



Evolution Of Mechanical Engineering Department...



RESEARCH CENTRES

S. No.	Name of the Centre	Amount, Rs. Crores	Funding Agency
1	Centre for Sustainable and Alternate Energies (CSAE)	5.00	TEQIP - II
2	Laser Machining Centre	2.2	FIST



Department Profile (Faculty Information)



Prof. V. Suresh Babu

HOD

Department of Mechanical Engineering
NIT Warangal



Prof. K. Srikanth

Head Design Section

Department of Mechanical Engineering
NIT Warangal



Dr. Subash Chandra Bose

Head Production Section

Department of Mechanical Engineering
NIT Warangal



Dr. G. Naga Srinivasulu

Head Thermal Section

Department of Mechanical Engineering
NIT Warangal



Department Profile (Faculty Information)

Sanctioned Strength : 56

Regular Faculty

Other Faculty

**Professors
(28)**

**Associate
Professors
(4)**






**Assistant
Professors
(16)**

**Professor
Emeritus
(01)**

Total: 49 Ph.D. : 46 M.Tech.: 02





Ph.D. : 01

Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
1	Dr. V. Suresh Babu		Design Engg.	Professor & Head	3+4 (ONGOING)	18
2	*Dr. RV Chalam		Design Engg.	Prof. Emeritus	4	-
3	Dr. K. Madhu Murthy		Thermal Engg.	Professor	6+5 (ONGOING)	58+3 (Books OR Book Chapters)
4	Dr. C. Surya Prakasa Rao		Mfg. Engg.	Professor	3	70
5	Dr. L. Krishnanand		Mfg. Engg.	Professor	2+5 (ONGOING)	10








Department Profile (Faculty Information)






S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
6	Dr. S. Srinivasa Rao		Thermal Engg.	Professor	6+5 (ONGOING)	29
7	Dr. A. N K Rao		Mfg. Engg.	Professor	3+3 (ONGOING)	15
8	Dr. P. Bangaru Babu		Design Engg.	Professor	8+4 (ONGOING)	14
9	Dr. A. Venu Gopal		Mfg. Engg.	Professor	9+3 (ONGOING)	9
10	Dr. N. Selvaraj		Mfg. Engg.	Professor	8+2 (ONGOING)	27



Department Profile (Faculty Information)






S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
11	Dr. K.V. Sai Srinadh		Mfg. Engg.	Professor	5	5+2 (Books OR Book Chapters)
12	Dr. P. Ravi Kumar		Thermal Engg.	Professor	9+1 (ONGOING)	23
13	Dr. G. Amba Prasada Rao		Thermal Engg.	Professor	10	52+2 (Books OR Book Chapters)
14	Dr. R. Narasimha Rao		Design Engg.	Professor	9	46+7 (Books OR Book Chapters)
15	Dr. Adepur Kumar		Mfg. Engg.	Professor	11	78+6 (Books OR Book Chapters)

Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
16	Sri. G.R.K. Gupta		Thermal Engg.	Assoc Prof.	--	-
17	Sri. I. Ashok Kumar Reddy		Mfg. Engg.	Assoc Prof.	--	-
18	Dr. A. Veeresh Babu		Thermal Engg.	Professor	3+7 (ONGOING)	25+3 (Books OR Book Chapters)
19	Dr. Y. Ravi Kumar		Mfg. Engg.	Professor	4+5 (ONGOING)	20+2 (Books OR Book Chapters)
20	Dr. M. Joseph Davidson		Mfg. Engg.	Professor	10+3 (ONGOING)	18+2 (Books OR Book Chapters)








Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
21	Dr. P. Subash Chandra Bose		Mfg. Engg.	Professor	4+7 (ONGOING)	20+4 (Books OR Book Chapters)
22	Dr. V. Vasu		Mfg. Engg.	Professor	5+4 (ONGOING)	11+2 (Books OR Book Chapters)
23	Dr. G. Naga Srinivasulu		Thermal Engg.	Professor	6+6 (ONGOING)	20
24	Dr. P. Vamsi Krishna		Mfg. Engg.	Professor	2+5 (ONGOING)	56+1 (Books OR Book Chapters)
25	Dr. K. Kiran Kumar		Thermal Engg.	Professor	5+6 (ONGOING)	36+1 (Books OR Book Chapters)








Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
26	Dr. V. Rajesh Khana Raju		Thermal Engg.	Professor	4+4 (ONGOING)	41
27	Dr. Srikanth Korla		Design Engg.	Professor	2+4 (ONGOING)	18+1 (Books OR Book Chapters)
28	Dr. Hari Kumar Voruganti		Design Engg.	Professor	3+2 (ONGOING)	13
29	Dr. D. Jaya Krishna		Thermal Engg.	Professor	3+3 (ONGOING)	43
30	Dr. Beera Satish Ben		Design Engineering.	Professor	4+3 (ONGOING)	40+3 (Books OR Book Chapters)








Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
31	Dr. Chandra Mohan, V.P.		Thermal Engg.	Professor	5+5 (ONGOING)	85 +7 (book chapters)
32	Dr. T. Sadasiva Rao		Mfg. Engg.	Asso. Prof.	0+1 (ONGOING)	2+1 (Books OR Book Chapters)
33	Dr. Syed Ismail		Design Engg.	Asso. Prof.	2+7 (ONGOING)	35 + 3 (Book Chapters)
34	Dr. Karthik Balasubramanian		Thermal Engg.	Asso. Prof.	3+3 (ONGOING)	19
35	Dr. Gujjala Raghavendra		Design Engg.	Asst. Prof.	3+9 (ONGOING)	44+13 (Books OR Book Chapters)








Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
36	Dr. Gudipadu Venkatesh		Mfg. Engg.	Asst. Prof.	0+3 (ONGOING)	4+1 (Books OR Book Chapters)
37	Dr. Vijay Kumar Manupati		Mfg. Engg.	Asst. Prof.	0+3 (ONGOING)	40+16 (Books OR Book Chapters)
38	Dr. P. Suresh		Design Engg.	Asst. Prof.	0+2 (ONGOING)	6
39	Dr. Marrapu Bhargava		Mfg. Engg.	Asst. Prof.	0+1 (ONGOING)	6
40	Dr. Chilukoti Hari Krishna		Thermal Engg.	Asst. Prof.	0	17







Department Profile (Faculty Information)

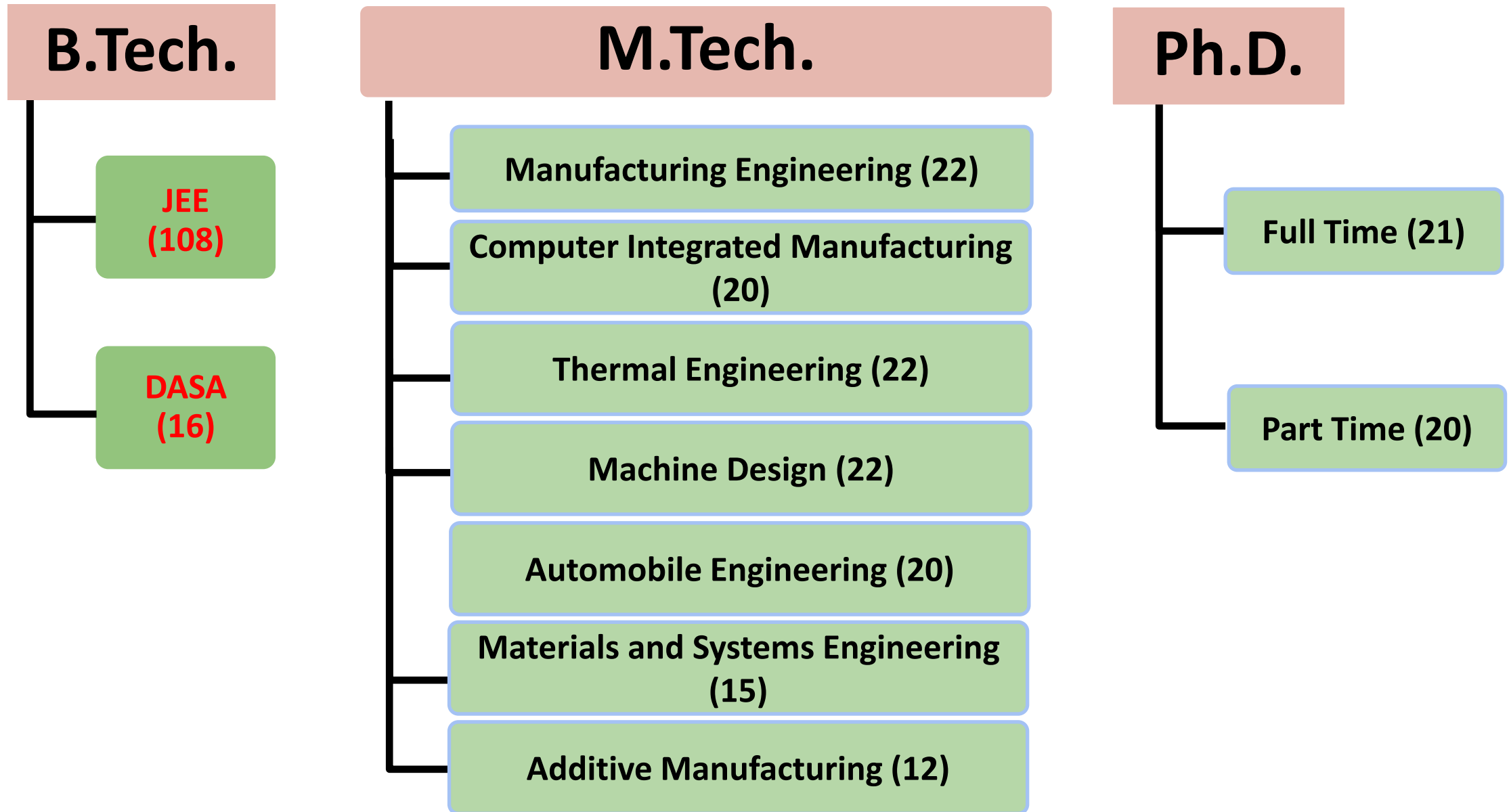
S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
41	Dr. Anant kumar Rai		Thermal Engg.	Asst. Prof.	0+1 (ONGOING)	12
42	Dr. Shivraman		Mfg. Engg.	Asst. Prof.	0+1 (ONGOING)	8+1 (Books OR Book Chapters)
43	Dr. Manjaiah M		Mfg. Engg.	Asst. Prof.	0+1 (ONGOING)	26+1 (Books OR Book Chapters)
44	Dr. Gaurav Kumar Sharma		Design Engg.	Asst. Prof.	0+1 (ONGOING)	4
45	Dr. Satyanand Abraham		Thermal Engg.	Asst. Prof.	0+1 (ONGOING)	10



Department Profile (Faculty Information)

S. No	Name		Area of Specialization	Designation	Ph.D.s Guided	Publications/ Books OR Book Chapters
46	Dr. Gangadharudu Talla		Mfg. Engg.	Asst. Prof.	0+1 (ONGOING)	9
47	Dr. Thamarai Selvan		Mfg. Engg.	Asst. Prof.	0+2 (ONGOING)	3
48	Dr. Prasanth Anand Kumar Lam		Design Engg.	Asst. Prof.	0+1 (ONGOING)	5
49	Dr. Chinige Sampath Kumar		Thermal Engg.	Asst. Prof.	0+1 (ONGOING)	7





Research Facilities

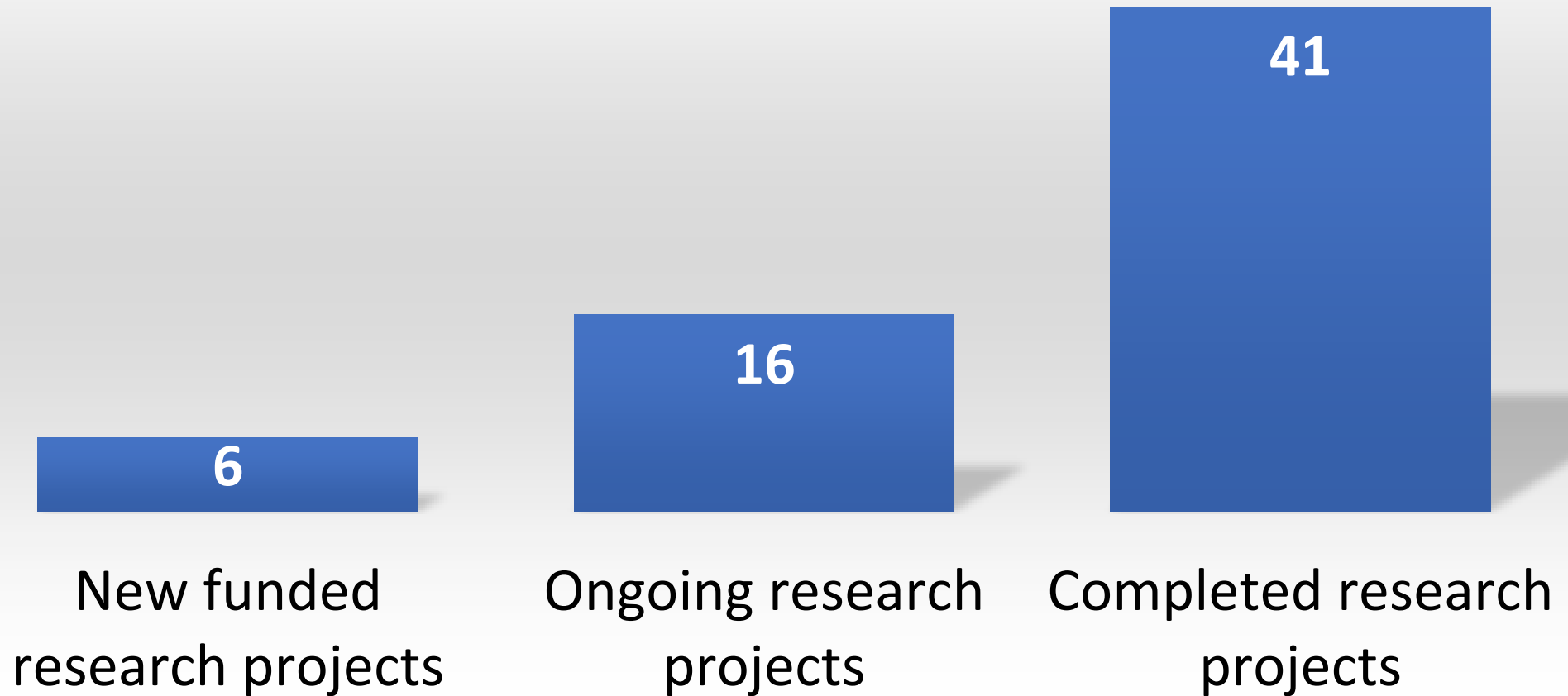
Manufacturing	Design
Metal Cutting and Matrix Composites	Dynamics, Kinematics, Vibrations and Control
Nanofluids & Nano Technology	Tribology, Automobile Engineering
Machining of Superalloys & Ceramic Processing	Smart systems
Additive Manufacturing	Mechanical Characterization of material
Metal Forming	Engineering Design/FEM
Metrology	Thermal
Mechatronics, MEMS & NEMS	Fuel cells & Alternative Sources of Energy
Industrial Engineering & Management	Computational Dynamics
CAD/CAM /CIM & Robotics	I.C. Engines & Automobiles
Optimization	Thermal Systems
Soft Computing & Evolutionary Computation Applications	Alternative Fuels, Emission Control
Materials Processing	

Patents (Patent Filed/Published/Granted)

S. No	Title	Patent No.	Status (Filed/Published/Granted)
1	Suresh Periyannan and K. Balasubramaniam, Ultrasonic waveguide technique for distributed sensing and measurements of physical and chemical properties of surrounding media,	US Patent: 11,022,502 B2. 2021	Granted
2	Suresh Periyannan , K. Balasubramaniam, Integrated Thermocouple Waveguide Sensor System And Method - To Measure Physical Properties Of Waveguide Material And Surroundings	India, 394597 , 2022	Granted
3	Katakam Vishnu Sree Shanthanu and Devanuri Jaya Krishna, A modified refrigeration system for biomedical storage,	Australian, 2021105617	Granted
4	Sushyanth Sridhar, Devanuri Jaya Krishna and, Patri Sreehari Rao, A solar powered cooling chamber for storing farm produce	Australian, 2021105620	Granted
5	Prasanth A. Lam, Vijaya Hanamant Bichakar, Ratul Maity, Mukesh Muthamilan, Hrushikesh C. Prabhu, SHELF ASSEMBLY FOR AN APPLIANCE	US20210372693	Granted
6	A. Manmadhachary, Aditya Mohan Alwala, V. Giridhar Kumar, Y. Ravi Kumar, Implantable Device for Temporomandibular Joint and Method of Production Thereof	US-11351033-B2	Granted



Funded Research Projects (2021-2022)



Research Projects [New Projects Sanctioned in 2021 - 2022]

S. No	Project title	Sanctioned Amount (Lakhs)	Sanctioned Agency
1	Dr. Adepur Kumar/ Dr. Shivraman, Characterization of WAAM Additive Manufacture Component for Electronic Packaging	24.12	DRDL
2	Dr. P. Subhash Chandra Bose / Dr K. Madhumurthy / Dr. C. S. P. Rao/ Dr. N. Selvaraj, Laser Assisted Machining of Ceramic, Ceramic Composites and process Optimization	45.99	DRDO-ARMREB
3	Dr. Y. Ravi Kumar / Dr. S. Srinath / Dr.K.Raghu, Development of 3d printable composite thermal shields using photocure short fibre nano hybrid resins through reactive additive manufacturing process	30.9	SERB
4	Dr.P. Vamsi Krishna and Dr.G. Venkatesh, Performance enhancement of orthopaedic implants with Rotary Ultrasonic Assisted Abrasive Flow Machining (R-UAAFF)	33.63	SERB - CRG

Total Amount from Projects Sanctioned in 2021-22 = 134.64 Lakhs

Research Projects [Ongoing Projects]

S. No	Project title	Sanctioned Amount	Sanctioned Agency
1	Adepu Kumar and K.V. Sai Srinadh , Effect of tool geometry and cryogenic treatment on mechanical properties of friction stir welded AA2014	19.33 Lakhs	ARDB
2	Adepu Kumar , Kishore Kumar babu, Mahesh Kumar, Investigation of interfacial interaction and grain structure development in friction stir welds for dissimilar joining of high strength aluminum to titanium alloys	10.04 Lakhs	DST
3	B Satish Ben , Development of FRP Composites with Crack Arrest and Self-Healing to Maintain Structural Integrity	30.06 Lakhs	DST-SERB
4	G.Naga Srinivasulu (PI), S.Srinivasa Rao and V.Vasu , Experimental Investigations on different Geometrical shapes of Passive Direct Methanol Fuel cell stacks for Low Power Applications	43.24 Lakhs	SPARC
5	G.Naga Srinivasulu (PI), S.Srinivasa Rao, Amba Prasad Rao and V.R.K.Raju , Simulation and experimental evaluation of dual-fuel Homogeneous Charge Compression Ignition Engine by using reactivity fuels	36.78 Lakhs	SPARC
6	G.Naga Srinivasulu (PI), P.V.Suresh and S.Srinivasa Rao , Design and Development of Passive Direct Methanol Fuel cell integrated with liquid electrolyte for Portable Power Applications	19.45 Lakhs	SERB-EMR



Research Projects [Ongoing Projects]

S. No	Project title	Sanctioned Amount	Sanctioned Agency
7	Gudipadu Venkatesh , Manufacturing of Advanced materials using microwave hybrid heating technique	10 Lakhs	MHRD-NITW
8	P. Vamsi Krishna (CO-PI) , National Centre for Development of Advanced Materials and Manufacturing Processes for Clean Coal Technologies for Power Applications	90.81 Lakhs	DST-ARCI
9	P. Vamsi Krishna (PI) , Vibration Assisted Turning for Improving Fatigue Life of Ti6Al4V Aerospace Components	28.6 Lakhs	DST-AMT
10	R Narasimha Rao, Syed Ismail , Insight Development on Tribological Response of Hybrid Aluminum Based Nanocomposites for Transportation sector	40.52 Lakhs	SPARC
11	Srikanth K. , Uday Bhasker M., Modelling and Simulation of Energy Harvesting using Piezoelectric Materials and Super Capacitors	6.75 Lakhs	RCI - DRDO
12	Suresh Periyannan , Ultrasonic Sensors Design and Development for Industrial Application	5.0 Lakhs	MHRD-NITW
13	Syed Ismail , Development of Multi-Scale Textured Piston Ring and Study of its Impact on the Fuel Economy of an Internal Combustion Engine	32.04 Lakhs	SERB

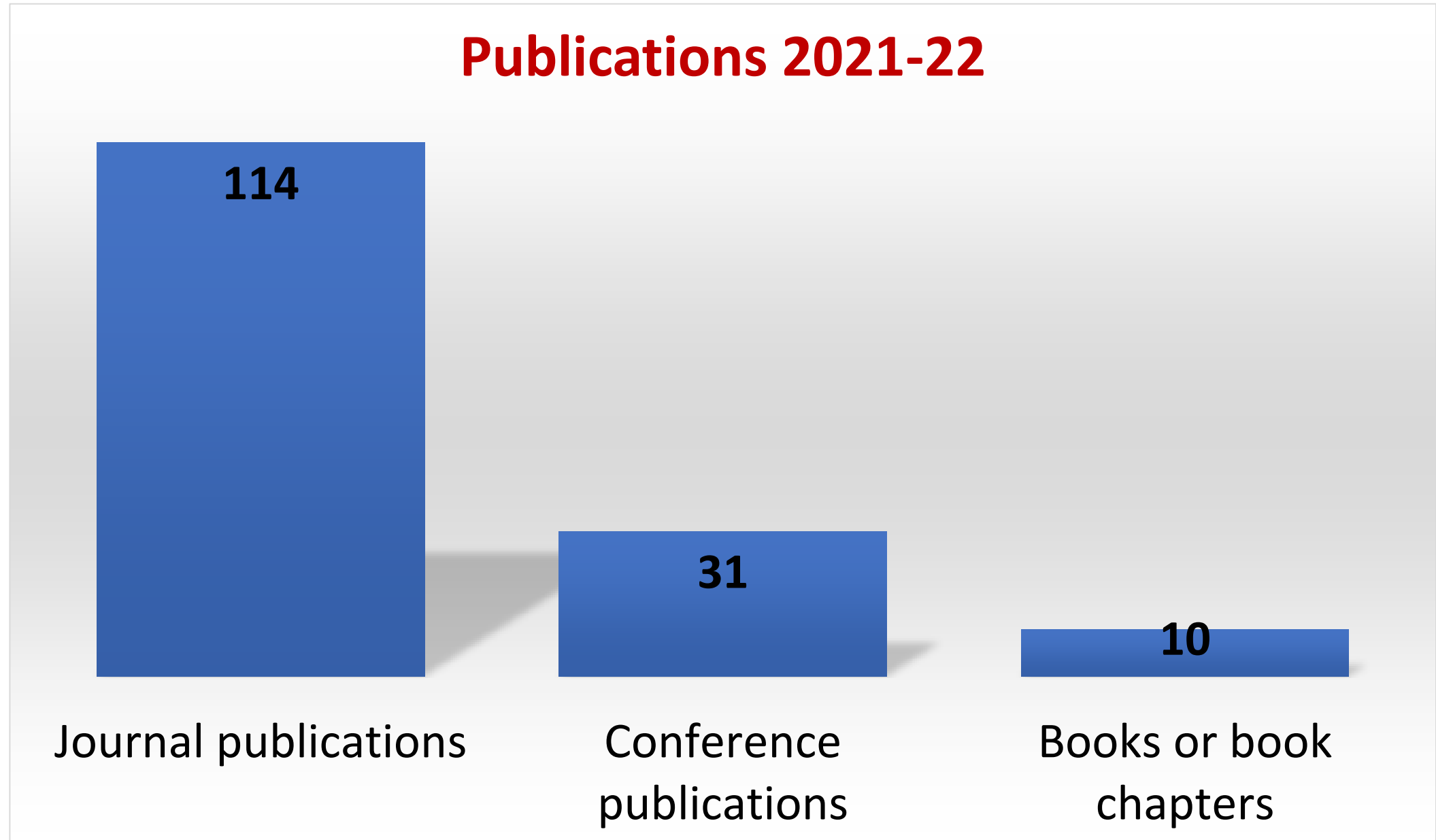


Research Projects [Ongoing Projects]

S. No	Project title	Sanctioned Amount	Sanctioned Agency
14	V.K Manupati , Developing of Telefacturing based distributed manufacturing support system for optimal manufacturing service for Indian small and medium scale enterprises	5.0 Lakhs	MHRD-NITW
15	V.K Manupati , Developing of Telefacturing based distributed manufacturing support system for optimal manufacturing service for Indian small and medium scale enterprises	13.59 Lakhs	
16	V.K Manupati , Artificial Intelligence, Machine Learning and Deep Learning applications in Production and Manufacturing systems	9.0 Lakhs	DST-ICPS

Total Amount of ONGOING Projects = 395.21 Lakhs

Publications 2021-22



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- N. V. Raghavaiah and G. Naga Srinivasulu, Experimental investigations on performance of passive direct methanol fuel cell using Nickel-201 and brass current collector material, *Chemical Papers* 76, 4581–4595 (2022) April 2022, <https://doi.org/10.1007/s11696-022-02200-5> (Springer SCI).
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- Krishna Kishore Mugada, Kumar Adep, Role of scroll shoulder and pin designs on axial force, material flow and mechanical properties of friction stir welded Al-Mg-Si alloy, 2021, 27, 2809-2820.
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- A.Saravana Sundar, T.Vishnu Vardhan, AdepuKumar, Microstructural characterization of aluminium-titanium friction stir welds, 2022, 62, 10, 5845-5849.
- I. Kartikeya Sarma, N. Selvaraj & A. Kumar, A Review on Microstructure and Mechanical Properties of L-PBF 17-4PH and 15-5PH, 2022, 37-53.
- Korra Nagu, Adepu Kumar, Influence of brass interlayer and water cooling on microstructure, mechanical and corrosion behaviour of friction stir welded AA6061-T6 alloy , 2022, 236, 10, 2037-2057.
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- KorraNagu, AdepuKumar, M.V.N.V.Satyanarayana, KethavathKranthi Kumar, V.Uday Kumar, Damping behaviour of submerged friction stir welded AA6061-T6 alloy with addition of brass interlayer, 2022, 324, 132695.
- D Venkata Sivareddy, P Vamsi Krishna, A Venu Gopal, Effect of Thermo-Mechanical Loading on Machining Induced Residual Stresses in Ultrasonic Vibration Assisted Turning of Ti6Al4V Alloy, 2021.
- Puneet C, Krishna Valleti, A Venu Gopal, Low Friction Coefficient Nanocomposite, CrAlSiN/Gradient-CrAlSiCN Coatings for High Speed/Dry Machining Applications, 2021.
- G. Neelima Devi, S. Kumar, T. Sharanya Balaji, Tarun Babu Mangalarapu, S.B. Chandrasekhar, A. Venu Gopal, A. Jyothirmayi, Influence of inter-splat bonding state of cold sprayed IN625 and IN718 coatings on mechanical and corrosion performance, 2022.
- Thoppil, N.M., Vasu, V. & Rao, C.S.P, An Integrated Learning Algorithm for Vibration Feature Selection and Remaining Useful life Estimation of Lathe Spindle Unit, 2022, 24, 1253–1257.
- Thoppil, N.M., Vasu, V. & Rao, C.S.P, Bayesian Optimization LSTM/bi-LSTM Network With Self-Optimized Structure and Hyperparameters for Remaining Useful Life Estimation of Lathe Spindle Unit, ASME Journal of computing and information science in Engineering, 2022, 22, 021012-1 – 12.
- Maurya, U., Vasu, V, Boehmite nanoparticles for potential enhancement of Tribological and EP performance of lubricating oils, Wear, 2022, 499, 204311.
- Maurya, U., Vasu, V. & Kashinath, D, Ionic Liquid-Nanoparticle-Based Hybrid-Nanolubricant Additives for Potential Enhancement of Tribological Properties of Lubricants and Their Comparative Study with ZDDP. Tribol Lett, 2022, 70, 44885.



Publications [International Journal papers]

- Virinchi Krishna Lagiseti, Prasad Reddy A, Chamaiporn Sukjamsri, Vamsi Krishna P Machinability study on AA6061/2SiC/Graphite hybrid nanocomposites fabricated through ultrasonic assisted stir casting, International Journal of Automotive and Mechanical Engineering (IJAME) 2022.
- Khirod Kumar, and P.Vamsi Krishna, Surface integrity and chip morphology in Ti-6Al-4V machining under CO2 cooling with Vortex Tube, International Journal of Surface Science and Engineering, 2022.
- Virinchi Krishna Lagiseti, A Prasad Reddy, and P Vamsi Krishna, Dry sliding wear study on AA6061/SiCp nano and AA6061/SiCp/Gr hybrid nanocomposites, Silicon, 2022.
- G. Kartheek and P. Vamsi Krishna, Design and analysis of different horn profiles using FEM for vibration assisted machining, Multiscale and Multidisciplinary Modeling Experiments and Design 2022.
- Khirod Kumar, and P.Vamsi Krishna, Influence of flow parameters in dual nozzle CO2 based vortex tube cooling system during turning of Ti-6Al-4V, Proceedings of Institute of Mechanical Engineers, part-C: Journal of Mechanical Engineering Science, 2022.
- Meenakshi Devi Parre, T Krishna Murthy, Krishnanand Lanka and P Vamsi Krishna, Numerical Simulation of Friction Stir Welding Process to Investigate the Temperature Distribution in AA7020, The International Journal of Vehicle Structures and Systems, 2021.
- Sanjay Krishna Vihari R, Kartheek Gamidi, and Vamsi Krishna P, Parametric influence on residual stresses in VAT, Materials Today: Proceedings, 2021, 46, 8056-8060.
- Khirod Kumar, Gaurav Mahendra , Abhishek Markandeya, and P.Vamsi Krishna, Design Of Co2 Based Cooling System For Machining Of Ti-6al-4v Using Joule Thomson Effect, Smart and Sustainable Manufacturing Systems 2021, 5(1) 47-64
- Rajasekhar, K., Babu, V. S., Davidson, M. J., & Raghavendra, G. (2021). Formability and densification behavior of two-layered structure powder metallurgical hot-pressed Al-Cu/Al composites during hot-upsetting. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 235(2), 582-593.
- Rajasekhar, K., Babu, V. S., Davidson, M. J., & Raghavendra, G. (2021). Influence of copper addition on corrosion properties and hardness of Al–Cu/Al two-layered-structure composites. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 09544062211034209.
- Shanti Kiran, Z. et al. “Tensile and flexural characteristics of an epoxy-glass composite reinforced with Cloisite 15A nanoclay.” Iranian Polymer Journal 30 (2021): 831 – 841
- Banoth, S., Babu, V. S., Raghavendra, G., Rakesh, K., & Ojha, S. (2021). Sustainable Thermochemical Extraction of Amorphous Silica from Biowaste. Silicon, 1-8.
- Bhargav, M., & Babu, V. S. (2021). Experimental investigation of fiber orientation effect on mechanical and erosive wear performance of TiO2 filled woven jute fiber based epoxy composites. Materials Today: Proceedings, 44, 2617-2622.



Passed out Students Information [2021 - 22]

S.No	Item	Number of Students		
		Completed the degree	Pursuing Higher Studies	Pursuing Jobs [Through Placements]
1	B.Tech (Mechanical Engineering)	149	8	117
2	M.Tech (Manufacturing Engineering)	22	-NA-	11
3	M.Tech (Computer Integrated Manufacturing)	20	-NA-	7
4	M.Tech (Thermal Engineering)	22	-NA-	7
5	M.Tech (Machine Design)	22	-NA-	12
6	M.Tech (Automobile Engineering)	20	-NA-	13
7	M.Tech (Materials and Systems Engineering Design)	15	-NA-	6
8	M.Tech (Additive Manufacturing)	12	-NA-	7



Vemuri Pavan Sai (MS, University of Illinois Urbana-Champaign, USA)



Abdus Samad Hashmy (MS, RWTH Aachen University)



Nitin Bhatia (MS, Northwestern)



Jahnav Rokalaboina (MS, Arizona State)



Gaurav Mahendra (MBA, IIMB)

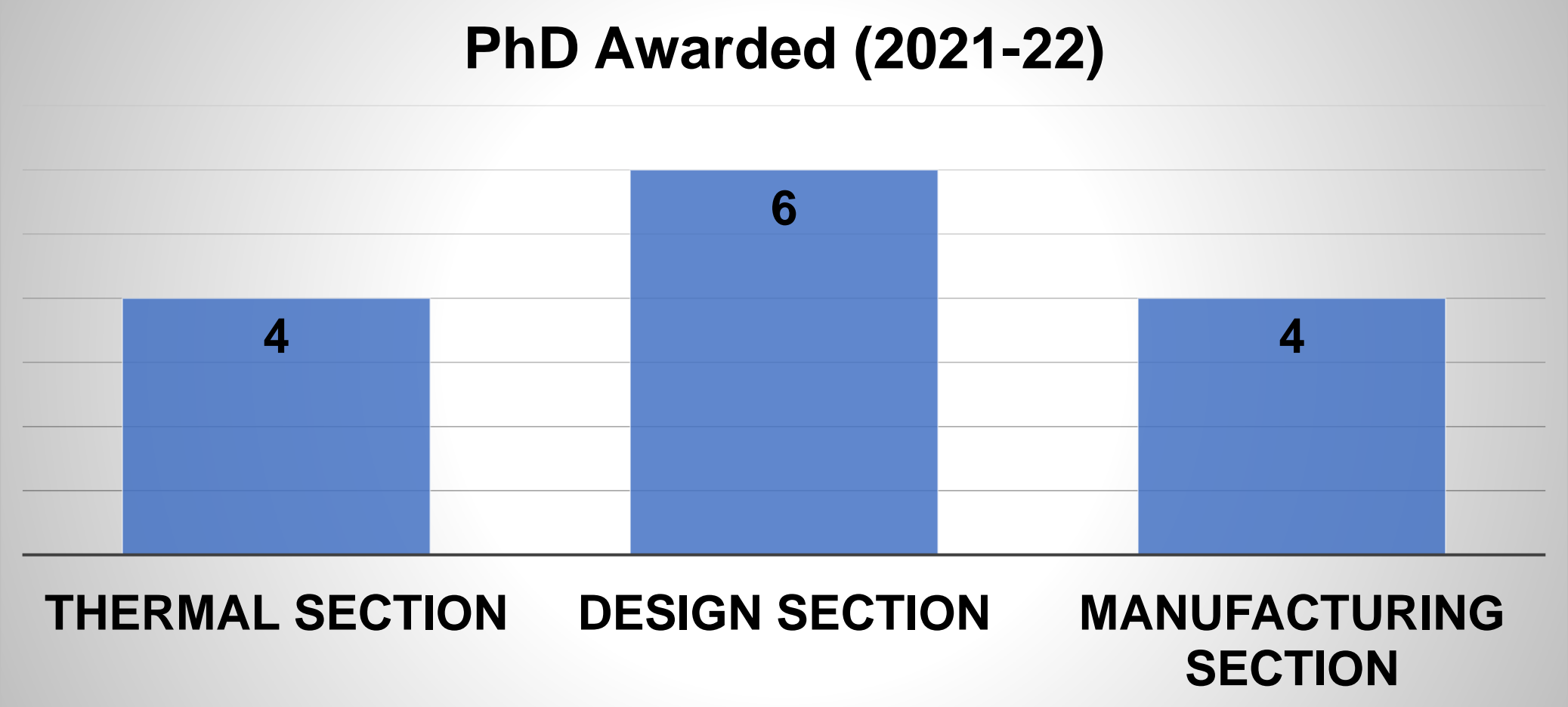


Details of students joined in higher educational institutes/companies

Roll No	Name	Company	Job profile
183125	Gaurang Agrawal	Collins Aerospace	Advanced Tech and Data Analytics
183163	Rohit Chandrahas	Collins Aerospace	Advanced Tech and Data Analytics
203605	Bolelu Ulhas Vilas	VOLVO	After Market
203713	Puvvada Santosh Manikanta	VOLVO	After Market
203651	Adarsh Sharma	VOLVO	After Market
203716	Sombatulla Kalyan Raj	VOLVO	After Market
203668	Raushan Kumar	VOLVO	After Market
203672	Vikram Raj	VOLVO	After Market
203755	Maheshwari Ravulla	VOLVO	After Market
203756	Raviteja Marella	VOLVO	After Market
203519	Talabhaktula Kranti Kumar	VOLVO	After Market
183270	Sparshal Kothari	Fischer Jordan	ANALYST
183114	Avanti Chandratre	Fractal Analytics	ANALYST
183157	Praveen Balajji	Fractal Analytics	Analyst
183256	Pravin Pramasagaran	Fractal Analytics	Analyst
183127	Nikhil Kumar Goli	o9 Solutions	Analyst
183106	Aonirjeeto Goswaami	o9 Solutions	Analyst
183168	Shaik Munazzah	o9 Solutions	Analyst
183160	Rebanta Sarkar	o9 Solutions	Analyst
183255	Pitta deena kanth	o9 Solutions	Analyst
183274	Uday Bhaskar Varada	o9 Solutions	Analyst
183249	Nidhi Verma	o9 Solutions	Analyst
183229	Himanshu Barsinge	o9 Solutions	Analyst
183245	Merrick Anthony Menezes	Deloitte	Analyst
183217	Manas Chodimalla	Deloitte	Analyst
183172	Sumit Agrawal	Shadowfax	Analyst
183224	Gayathri Prasad	Darwinbox	Analyst
183238	Devi Phani Sai Chandra Mouli KUNAPAREDDY	Indxx	Analyst
183201	Akash Dighade	PharmaACE	Analyst/Software
183120	Dhanush Kumaran	PharmaACE	Analyst/Software
183211	Boinapally Anup Rao	PwC India	Associate
183222	Fateen Ahmed	PwC India	Associate

Details of students joined in higher educational institutes/companies

203662	Masabattula Hari Krishna	PwC India	Associate
203572	Lagiseti Virinchi Krishna	PwC India	Associate
203802	Arnav Amiya	PwC India	Associate
203604	Ashwasan Sikdar	PwC India	Associate
203570	Vashisht Kant	PwC India	Associate
183152	Sai Srikar V P N S Pandrangi	Capgemini	Associate Consultant
183147	MIQDAD T	EXL	Business Analyst
183230	Jangam Steven	Genpact	Consultant
183126	Ghanshyam Meena	Genpact	Consultant
183103	Rahul Alexander magapu	Genpact	Consultant
203514	Sahit Chavan	BYJUS	Content DEVELOPER
203670	Mahalpure Tejas Sunil	BYJUS	Content DEVELOPER
203619	Sridurga Balahoju	WabTec	CORE
183220	Dhanyamraju Naga Sai Surya Chanakya	Bajaj Auto	CORE
183116	Chetan Moon	ExxonMobil	CORE
183173	Swapnil Soni	ExxonMobil	CORE
203571	Venkata Narasimha Rao Adapa	Bajaj Auto	Core
203510	Pal Vikas Jitendra Kumar	Bajaj Auto	Core
203567	Shaik Ijazuddeen	Bajaj Auto	Core
183243	Malladi Shanmukha Priya	Bajaj Auto	Core
183273	Hrishikesh Tule	Becton Dickinson	Core
183145	Malvika Singh	ITC	CORE
183208	Sahith Bandi	GE Healthcare	CORE
183150	Natarajan Avinash	Jubilant Foodworks	Core
183252	Parth Galundia	Jubilant Foodworks	Core
183102	Aki Harish	Caterpillar	Core
183268	Shubham Sanjeev Das	Caterpillar	Core
183205	Anumula Shashank	TATA Projects	Core
183264	S.Sumana	TATA Projects	Core
203551	Akanksha Hundekari	GE Healthcare	Core
183176	Neha Vanaparathi	TATA Electronics	Core
183110	Bheri Gowthami Priya	TATA Electronics	Core
203502	Arravaram Lakshman	TCE	Core



Total PhD's awarded in 2021-22 = 14

Total PhD's Registered in 2021-22 = 41

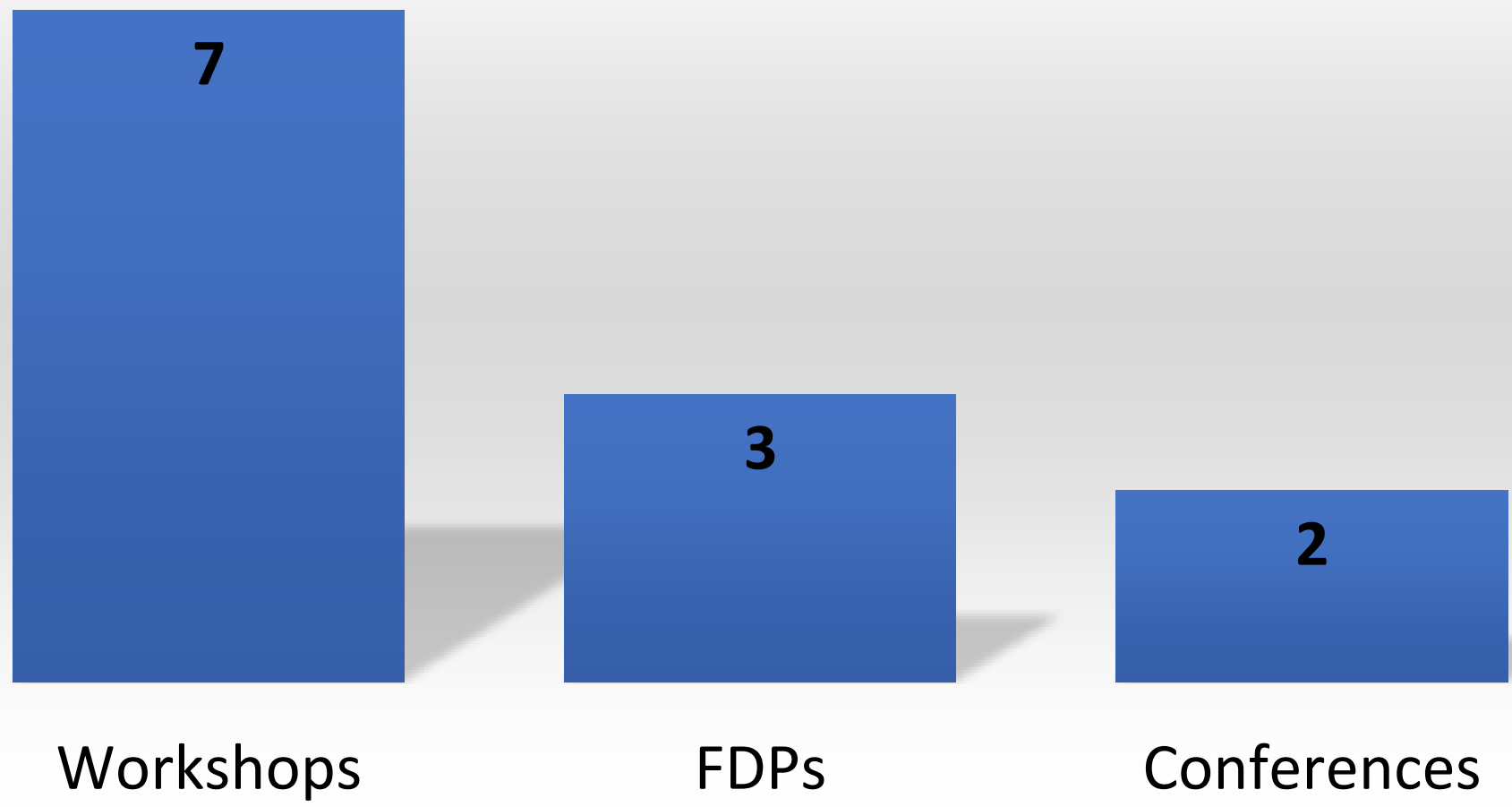


Research Guidance [PhD's Graduated in 2021-22]

Sl. No.	Roll No.	Name of the Scholar	Supervisor name	Title of the thesis	Date of Viva-voce
1	717018	Chadalawada Sri Chaitanya	Dr. R. N. Rao	Mechanical and Tribological Performance of Cenosphere based Syntactic Foams	19.03.2021
2	714133	Viswanadham L	Dr. R. N. Rao	Experimental Investigation on the Dynamic Behaviour of Electronic Mounting Structures in Aerospace Vehicles	25.03.2021
3	717122	Lokesh Kalapala	Dr. D Jaya Krishna	Experimental and numerical investigations of design parameters of a shell and tube latent heat storage unit	07.06.2021
4	715029	V V M J Satish Chembuly	Dr. Hari Kumar Voruganti	Optimization-based Inverse Kinematics and Redundancy Resolution of Hyper-Redundant Robots in Cluttered Workspaces	08.06.2021
5	715034	Muralikrishna Boni	Dr. S Srinivasa Rao and Dr. G. Naga Srinivasulu	Experimental Investigations on passive direct methanol fuel cell integrated with liquid electrolyte layer	09.06.2021
6	715037	G.Arun Manohar	Dr. V. Vasu and Dr. K. Srikanth	Design, Development and Fabrication of a High Redundancey Linear Electromechanical Actuator for Fault Tolerance	11.06.2021
7	701620	E Anusha	Dr. Adepu Kumar	Investigation on the Influence of Different Thermal Processing Conditions in Laser Surface Hardening of Bearing Steel and Bearing Elements	14.06.2021
8	716015	Syam Kumar Chokka	Dr. B. Satish Ben and Dr. K. V. Sai Sreenath	Optimization of process parameters for adhesive bonded joints and Rehabilitation of structures using adhesive bonding	14.07.2021
9	716123	Borgaonkar Avinash Vitthal	Dr. Syed Ismail	Insight Development on Tribological Characteristics of Molybdenum Disulphide-Titanium dioxide as soft composite coating material for machining applications	24.09.2021
10	716124	Venkata Siva Reddy D	Dr. A. Venu Gopal and Dr. P. Vamsi Krishna	Parametric influence on surface integrity of Ti6Al4V alloy in Ultrasonic Vibration Assisted Turning	30.09.2021
11	717022	KOYILADA BANARJI	Dr. Y Ravi Kumar	Processing and Characterization of Directed Energy Deposition Based Additive Manufactured SS 316 and its Composites	01.10.2021
12	716126	Kattela Siva Prasad	Dr. V. R. K. Raju and Dr. S. Srinivasa Rao	Parametric optimization of a DI-CI engine fuelled with butanol/diesel blends for improved performance and emission characteristics	04.10.2021
13	716122	Brundaban Patro	Dr. K. Kiran Kumar and Dr. D Jaya Krishna	Heat Transfer and Pressure Drop Studies of Gas-Solid Flow in Adiabatic pipes using a Variable Gas Property Two-Fluid Model	05.10.2021
14	714124	T Saratchandra Babu	Dr. J. Davidson	Process development and characterization of wire arc additive manufactured components	04.10.2021



Programs conducted 2021-2022



Conference/Workshop/FDPs Organized

S. No	Title	Dates, Month, Year	Organized by	Coordinators
1	COMBUSTION ANALYSIS AND MODERN TRENDS IN I C ENGINES (virtual event)	7-11 February, 2022	Department of Mechanical Engineering	Prof. S. Srinivasa Rao, Prof. G. Amba Prasad Rao and Dr. V R K Raju
2	VSAM 2021 (Vibrations session) Virtual seminar (MNNIT Allahabad)	28-31 May 2021	Department of Mechanical Engineering	Dr.Srikanth Korla
3	1st International Conference on Robotics, Control and Computer Vision (ICRCCV-2022) during February 19-20, 2022, National Institute of Technology Uttarakhand	-02-2022	Department of Mechanical Engineering	Dr Hari Kumar Voruganti
4	Industrial Engineering and Operations Management, (IEOM India -2022)	16 th - 18 th August, 2022	Department of Mechanical Engineering	Prof. V. Vasu and IEOM Team NIT Warangal
5	3D Printing and Design	July 18-24-2022	Mechanical Engineering (DST-SERB)	Dr. Manjaiah M and Prof. Y Ravi Kumar
6	3D printing in Medical Applications	July 25-31 2022	Mechanical Engineering (DST-SERB)	Dr. Manjaiah M and Prof. Y Ravi Kumar
7	Industry 4.0 & Smart Manufacturing furug	Feb 19-26 2022	Mechanical Engineering , E&ICT (NITW)	Prof. V Vasu and Prof. L Krishanand
8	AI, ML and Block Chain Technology in Production and Supply Chain Management.	Apr 25 -30 2021	Mechanical Engineering , E&ICT (NITW)	Dr. Vijay Kumar M
9	Teaching and Learning of Advances in Manufacturing Technologies	Nov 30 – Dec 04, 2021	Mechanical Engineering , E&ICT (NITW)	Dr. M Manjaiah, Dr. Gangadharudu Talla and Prof. A Kumar
10	Advanced Medical Applications of 3D Printing	December 14-18, 2021	NITW (AICTE -ATAL)	Prof. Y. Ravi Kumar
11	Advanced Medical Applications of 3D Printing	December 06-10, 2021	AICTE-ATAL	Prof. Y. Ravi Kumar
12	Mechatronics & MEMS	December 14-18, 2021	AICTE-ATAL	Dr.V Vasu and Dr. Shivraman



Distinguished Guests Visited

- **Dr. Surendra Kumar**, Chairman, Armament Design Mechanism & Ballistic (ADMB) Panel, DRDO (Ex- Director ARDB Pune) has visited **Department of Mechanical Engineering, NITW**, on **October 07th, 2021**.



Placement Information

Course	Branch	Placed	Max. Sal	Avg. Sal.
B.Tech	Mechanical Engineering	117	27.00	10.71
M.Tech.	Thermal Engineering	65	22.34	9.77
	Manufacturing Engineering			
	Computer Integrated Manufacturing			
	Machine Design (formerly PDD)			
	Automobile Engineering			
	Materials & Systems Engineering Design			
	Additive Manufacturing			



Mechanical Engineering Association Activities (2021-22)

- Total MEA activities in 2021 - 2022 = 17

WORKSHOP on Ansys with

Dr. Joel Daniel
Principal consultant
Pythagoras Engineering

Jesu Daniel
FEA Head
Pythagoras Engineering

21.03.2021 4PM VIRTUAL PLATFORM

MEA Presents

DESIGN SMART WITH SOLIDWORKS

SESSION 1 DESIGNING PARTS

27th DEC 3PM

Swapnil | 626 544 9540
Roopa | 630 279 1908

MECHANICAL ENGINEERING ASSOCIATION

PRASHIKSHAN

Mock Group Discussion

Mentors
Dr. Sam Mozumdar
Dr. T Rahul

More information
Prateek Agarwal | 7763939600
Malvika Singh | 9140725212

Register yourself in the given google form

EDITORIAL OPERA

FEB 9-16

TOPICS:

- WHAT COULD HAVE HAPPENED TO JACK MA?
- IS CENSORING/BANNING OF CONTENT ON OTT PLATFORMS JUSTIFIED?

For queries contact:
Munazzah-9381246345
Jwalika-9676757948

EXCITING PRIZES ARE AWAITING

MECHANICAL ENGINEERING ASSOCIATION presents

IMAGINEER

Unleash your Engineering mind

from Feb 15-28

Exciting prizes to be won!!
For Further Information:
Avinash: 9600190811

MECHANICAL QUIZ

Exciting prizes to be won

11 AM
SUN, 18th APRIL
PLATFORM: GMEET

For Queries Contact:
Kapil: 73861 71120
Karthik: 94936 07549

SCREWS LOOSE

A GENERAL QUIZ

07.FEB 5PM

FOR MORE INFORMATION
ANKIT | 79837 62106
KAPIL | 73861 71120

MECHANICAL ENGINEERING

MOCK GATE

2021

LINK WILL BE ACTIVE FROM
01 FEB | 5PM
TO
02 FEB | 5PM

FOR QUERIES CONTACT
R RAJA ANIRUDH
8331062842

"Success is the sum of small efforts, repeated day in and day out." -Robert Collier

Mechanical Engineering Association Activities (2021-22)

MEGA INVITATION

Department of Mechanical Engineering cordially invites you to

Inaugural Ceremony

of
Mechanical Engineering Association 2020-2021

Chief Guests
Prof. Pramod M. Padole Prof. C.S.P. Rao
 Director, VNIT Nagpur Director, NIT AP

Guests of Honour
Prof. N.V. Ramana Rao Prof. J.V.R. Murthy
 Director, NITW Dean Student Affairs, NITW

Prof. Adepur Kumar
 Head, MED, NITW, will preside over the function

Dr. A.Veeresh Babu Dr. G.Raghavendra
 Faculty Advisor Treasurer
 MEA MEA

On **08/12/2020, Tuesday at 5 PM on Microsoft Teams**

Theme of the Meeting:
NEP 2020-Relevance to Mechanical Engineering

MEGA DOUBTS?

MEAs got your back
 Resolve any course nightmares with your seniors
 Exclusively for 2nd year students

9:55AM | 2nd OCT

More Information
 Lavish Garg | 966 626 4486
 Malvika | 914 072 5212

MECHANICAL ENGINEERING ASSOCIATION PRESENTS

FIND YOUR JAM

24th Oct | From 6 pm onwards

More Information
 Lavish Garg | 9666264486

Mechanical Engineering Association

Presents

ABHYAAS

Online Test
 (Logical+Verbal+Technical)

Mock Internship for 2nd Years
 Mock Placement for 3rd Years

23rd Nov | Monday

More information
 Ankit Shukla | 7983762106
 Aditya Sharma | 9799873177

MEGA presents

CODE MAX

MATLAB

ROUND-1: PRELIMINARY QUIZ
 Objective type questions based on basic syntax, semantics, and functions.

ROUND-2: DEBUGGING CONTEST
 Pieces of code need to be debugged in order to get appropriate output.

ROUND-3: CODING CONTEST
 MATLAB coding for simple engineering and mathematical problems.

Register using the link below:
 Timings, dates, and links to participate will be sent to the registered emails.
 Students can participate individually or in a team of two.
 The second and third rounds will occur through email. Participants must submit the codes by the deadline announced.

PRIZE MONEY WORTH 12000

For Further details, Contact:
 Swapnil Sani | 6265445540 Anup Rao | 9381398883

Mechanical Engineering Association 2020-2021

KNOW YOUR BRANCH

12.12.2020 5PM MS Teams

Swarnna | 6388 252 652
 Ankit | 79837 62106

MEGA Anime and Comics club in collaboration with MEA Presents

CREATION SCAPE

an exciting event to awaken the mangaka in you!

WIN UPTO RS.10K

OPEN TO ALL BRANCHES & YEARS

ANWAN | 771 500 0561
 SIDHIKA | 712 488 3339

MEGA MESHERS 2020

Sometimes too late is just in time

10.01.2021 4:30PM

Varnal | 6304 356 081
 Roshan | 96444 91693

MEGA CROSSWORD SERIES

Launching on 31st Jan

WIN EXCITING PRIZES

DM your answers to @mea_nitw @MEA_NITW

LORD OF MEMES

YUSS!! MEA'S MEME MAKING CONTEST

NEW WEEK NEW THEME
09.11-06.12

LIRSH | 966 626 4486

MEGA OVERSEAS EDUCATION?

Statement of purpose Workshop

With Vivek Shastry Masters at UC San Diego

On 27th April 2021 5PM

MECHANICAL ENGINEERING ASSOCIATION PRESENTS

MATLAB WORKSHOP

23 RD OCT, 2020 5 PM - 7 PM

For Further information..
 Munazzah : 9381246345
 Roopa : 6302791908

Mechanical Engineering Association presents

MOCK INTERNSHIP AND PLACEMENT

17th May to 19th May

MEGA Presents

DESIGN SMART WITH SOLIDWORKS

SESSION 2 ASSEMBLY, SURFACE DESIGN & TOOLBOX

17th JAN 3PM

Singhal | 1426 364 9548
 Raag | 1430 279 7908

MEGA AUTO QUIZ

21st May 2021

More information
 Kapil Ojha | 7886711320
 Aditya Sharma | 9799873177

What's inside **Coca-Cola** factory?

Virtual tour with **Sushil Kumar Yadav**
 2016-2020

Buckle up on 10th April 3pm

DRAFT '21

Draft your thoughts about your branch.

Open To All Branches | Exclusively For Freshers

For queries contact: Siddhika 7024893939 Anup 9381398883

Mechanical Engineering Association 2020-21

RESUME WRITING WORKSHOP

The Ultimate guide to write a resume that lands you a job

04.10 2020 4PM

More information
 Chanakya | 911 030 0206
 Praveen | 638 396 6489



Annual Academic Performance Presentation



Department of Electronics & Communication Engineering
National Institute of Technology Warangal
22nd Sept 2022

Prof P. Sreehari Rao
Head, Dept. of ECE

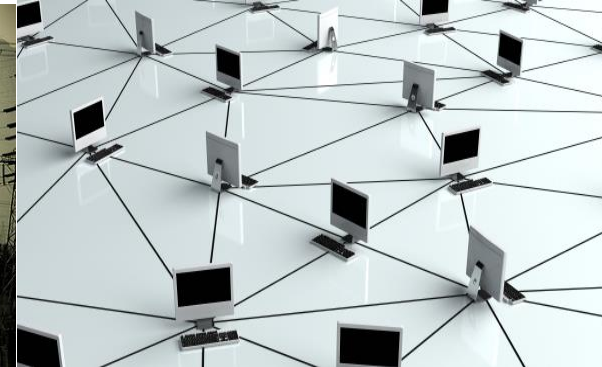
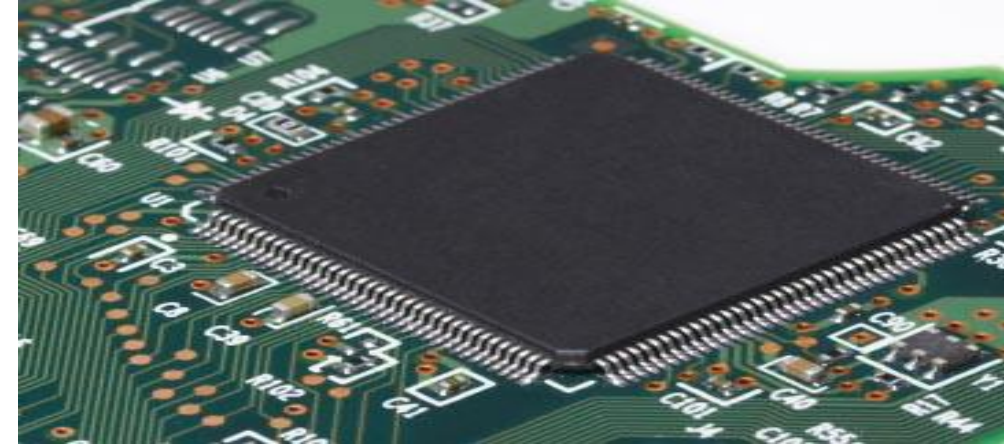
Arunkumar Dr
Dept IIAC Coordinator ECE

Organization

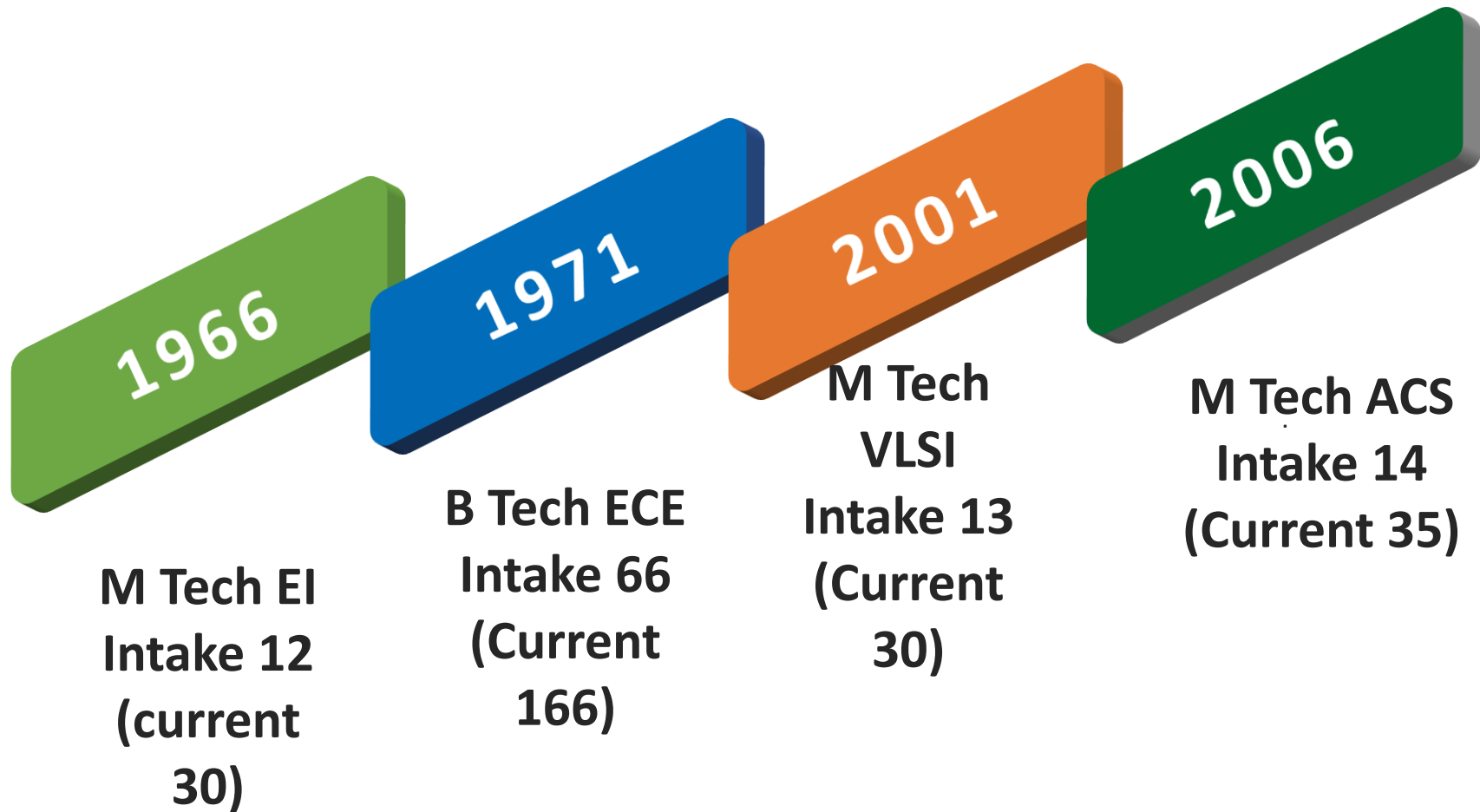
- ✓ *Department Profile/History*
- ✓ *Faculty Details, Non teaching staff*
- ✓ *Significant Achievements of Faculty, Students*
- ✓ *Details of the programmes being offered by the department*
- ✓ *Patents*
- ✓ *Projects, gian, sparac*
- ✓ *Consultancy and other details*

DEPT PROFILE

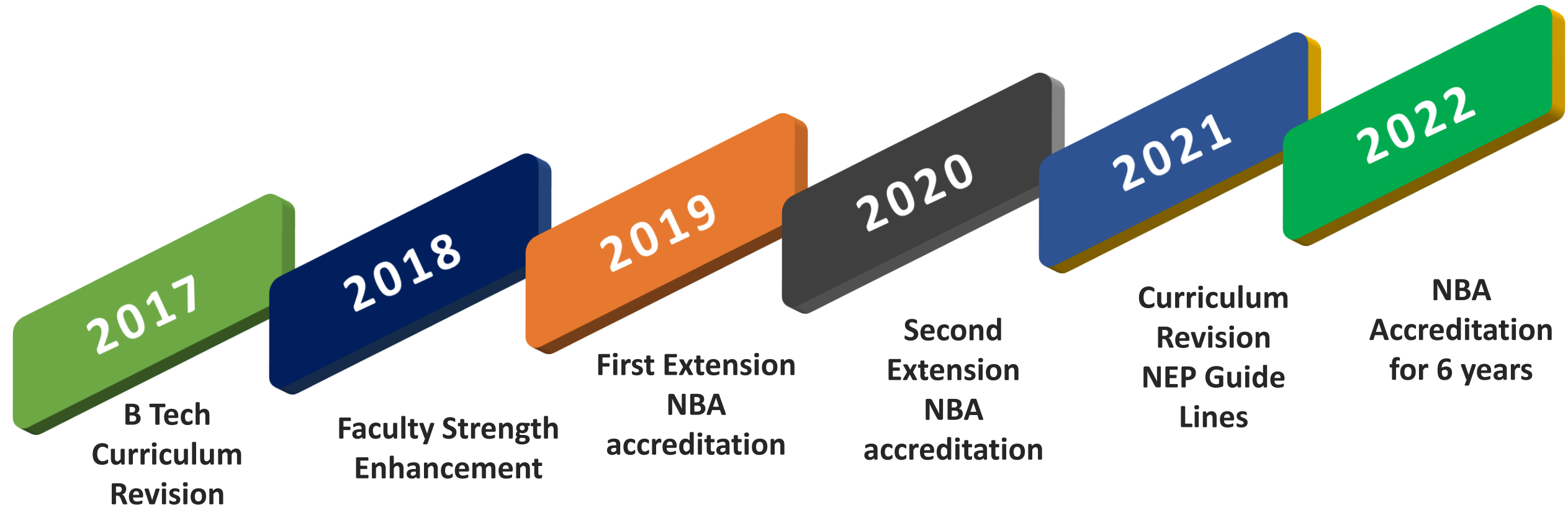
- Electronics and Communications Engineering is about
 - Electronic components,
 - Integrated circuits
 - Microprocessors
 - Consists of design, fabricate, test, maintain and supervise the manufacture of electronic equipment
- Key role in
 - Computer hardware
 - IT
 - Electrical
 - Communication systems etc..



Department MILESTONES



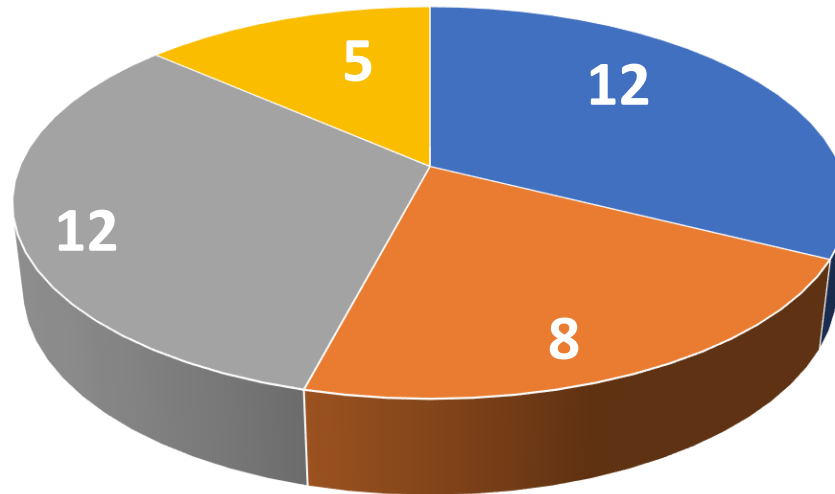
Department MILESTONES



ECE Dept has bagged the bid to conduct IEEE International Symposium on Smart Electronic Systems (IEEE – iSES 2022) in Dec 2022

Faculty Strength sanctioned 48

Faculty Strength (37)



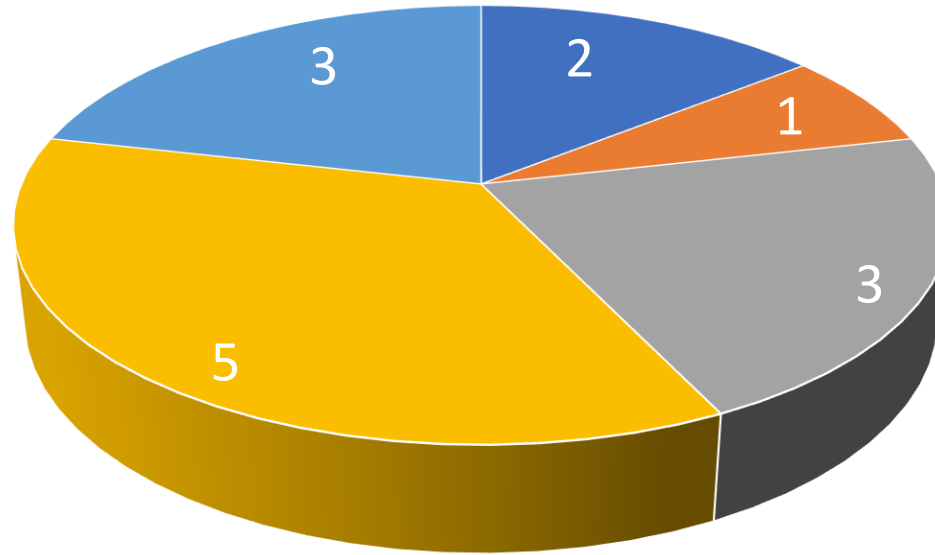
Faculty with PhD: 32

Women faculty : 9

- Professors
- Associate Professor
- Assistant Professors Grade-I
- Assistant Professors Grade-II

Technical and Academic Staff: 14

Technical and Academic Staff



- Technical assistants
- Technician SG-II
- Senior Technician
- Technician
- Office staff

SIGNIFICANT ACHIEVEMENTS OF FACULTY

Name of the faculty	Achievements
Prof. PSreeharRao	Best paper award (IFIPIOT 21), Reviewers of SNCS, TPC Member IEEE ISES 21, Review Committee member for DRDO project, RCI, Ministry of Defence
Prof.T. Kishore Kumar	Review Committee member for DRDO project, RCI, Ministry of Defence, NBA accreditation expert team member
Prof.D. Vakula	Best poster paper award for “Compact Complementary Symmetric Ring Resonator Band Stop Filter for Ku band applications” Wireless Antennas and Microwave Symposium 2022, 5-8 June 2022, NIT Rourkela, Orissa
Prof.S Anuradha	Best paper award (International conference on systemics, cybernetics and informatics, pentagram research centre (p) limited, Hyderabad, India)
Prof.J Ravikumar	Associate Editor "MECS International Journal of Image, Graphics and Signal Processing(IJIGSP)" Hongkong ISSN: 2074-9074(Print), ISSN: 2074-9082 (Online) Associate Editor for International Journal of VLSI Design Tools & Technology (JoVDTT), India Top 2% listed researcher as listed by world scientific society
Sri SKLV Saiprakash	Best paper award
Sri M VRaghudh	Best paper award
Dr K Prakash	Best paper award (2021 International Scientist Awards on Engineering, Science, and Medicine, Bangalore, India)
Dr Ekta Goel	Editorial board member IJSSN
Dr Amarjit Kumar	TPC Member and session chair for IEEE MTTS IMaRC 2021 Best research paper award in AICTE sponsored international conference ICNGTSW-2022 organized by R.M.K. engineering college , Chennai, April 2022

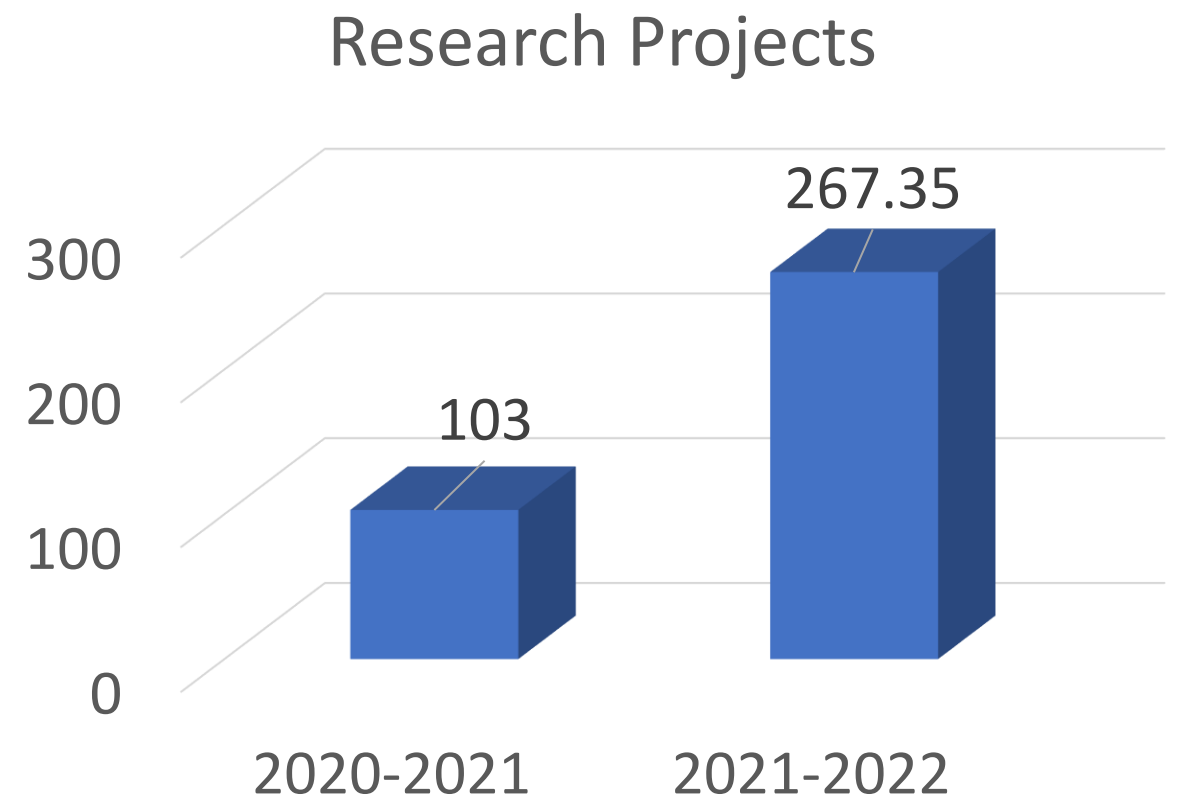
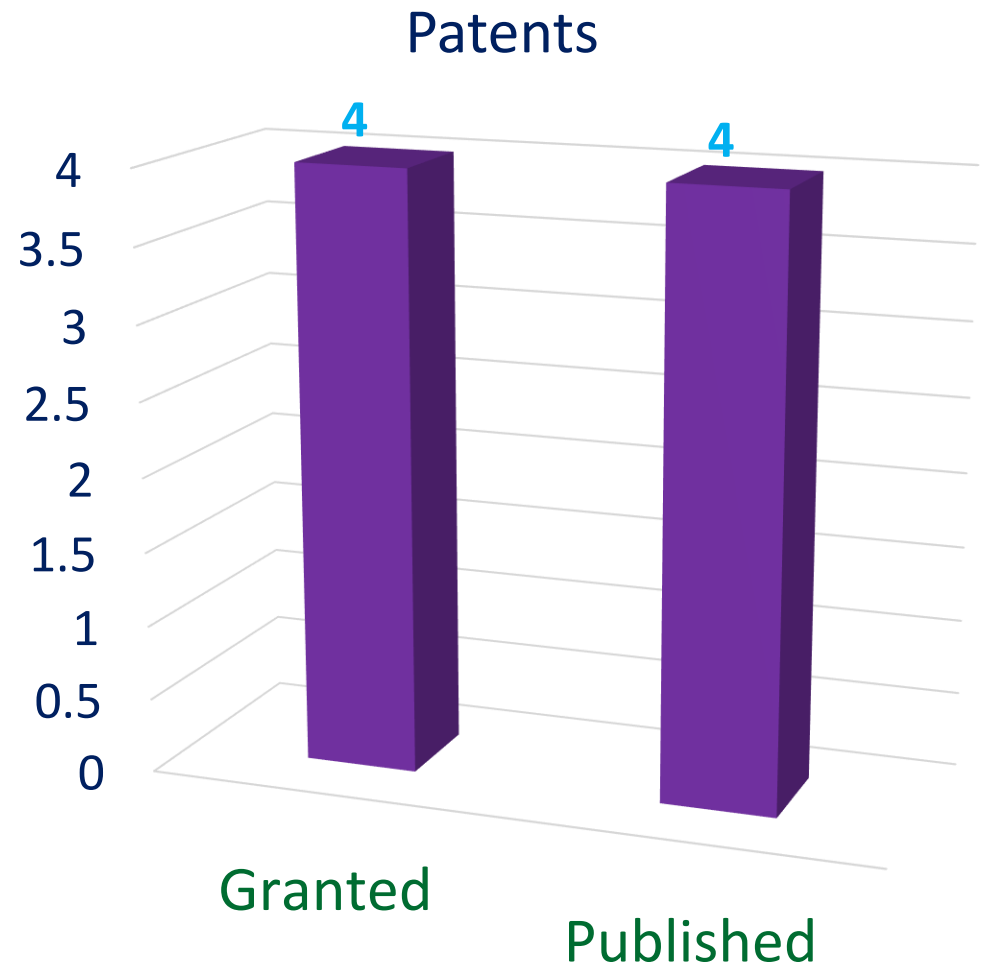


Designed and delivered
PMIC to ADA
Through MeiTY Project
CI: Sreehari Rao Patri

Details of program being offered

- B. Tech Program in ECE
 - Strength: 160
- M. Tech Programs:
 - Electronic Instrumentation and Embedded Systems - Strength: 30
 - VLSI System Design - Strength: 30
 - Advanced Communication Systems - Strength: 35
- Ph.D.
 - Research scholars are supervised in state of the art research topics in VLSI, communications, signal and image processing areas: 22 per year
 - Post DOC: 1

Patents and Externally funded Projects



SPARC Projects (ongoing)

	Number	Amount (Lakhs)
Ongoing *SPARC Projects	2	114
GIAN	5	48

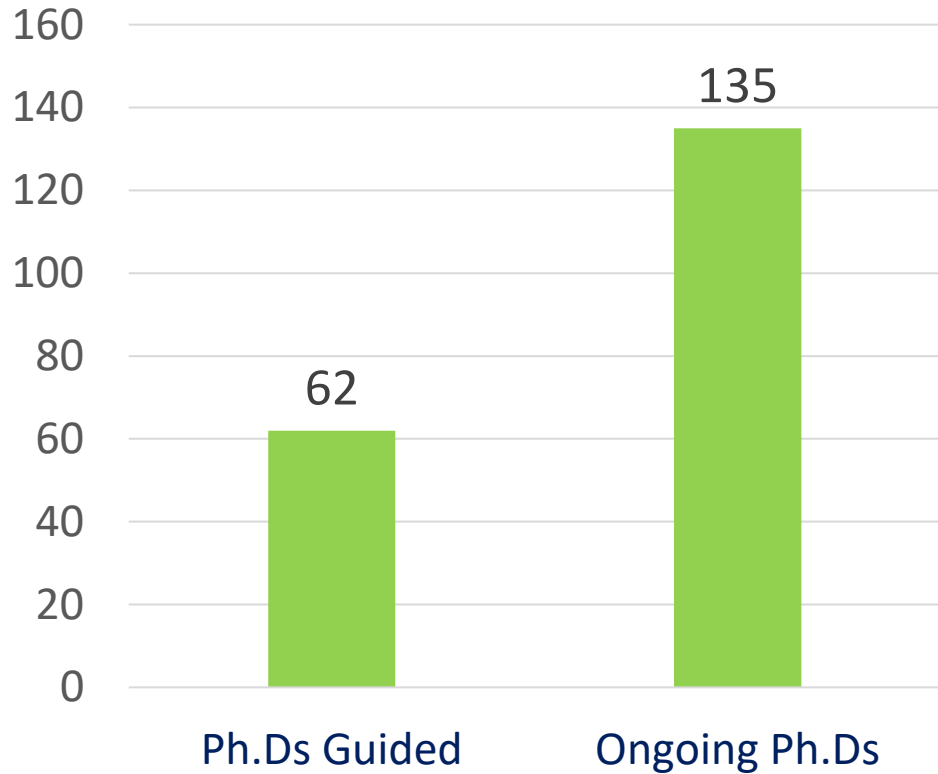
- ***Dr. P. Sreehari Rao and Dr. P Muralidhar**, “Advanced CMOS clock recovery circuits for mobile applications,” SPARC, Rs. 45 lakhs
- ***Dr. V. V. Mani, and Dr. Rahul J. Pandya, et. al.**, “ VLC-Based Vehicular Communication for enhancing Road Safety in Smart Cities,” SPARC, Rs. 69 Lakhs.

Consultancy (From Industry)

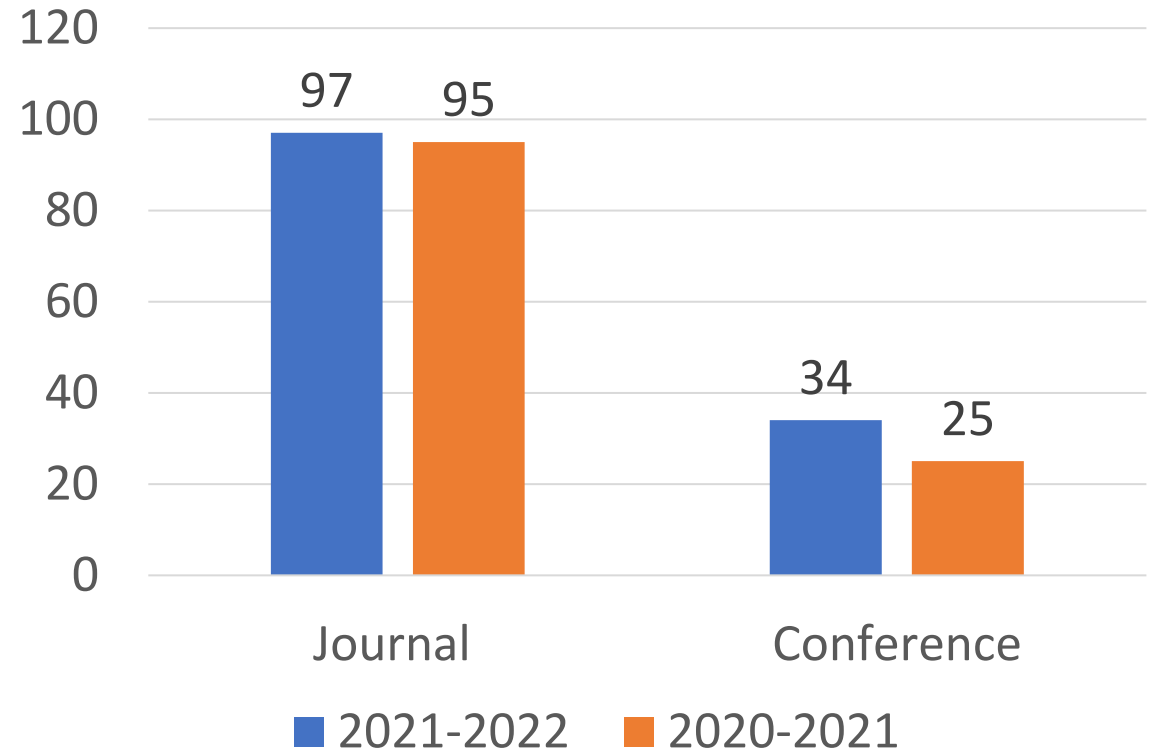
S. No	Project Title	Funding Agency	Amount (in Lakhs)
1	Design of Vivaldi Antennas in 0.4-6 GHz frequency band, Simulate 3 element array with steady of interference effects	Unistring Tech Solutions Pvt. Ltd. Hyderabad	1.00
Cumulative Amount			1.00

Research and Development activities

Research Guidance



Research Publications



* Ph.D. Awarded in 2021-2022: 12



International visits/Books, book chapters/ FDPs

- No. of International visits by faculty member : 01
- Books and Book Chapter:
 - Book Chapter: 04
- Conferences/Workshops/ FDPs : 40
- No. of Expert lectures delivered by Internationals Guests: 03 (online)



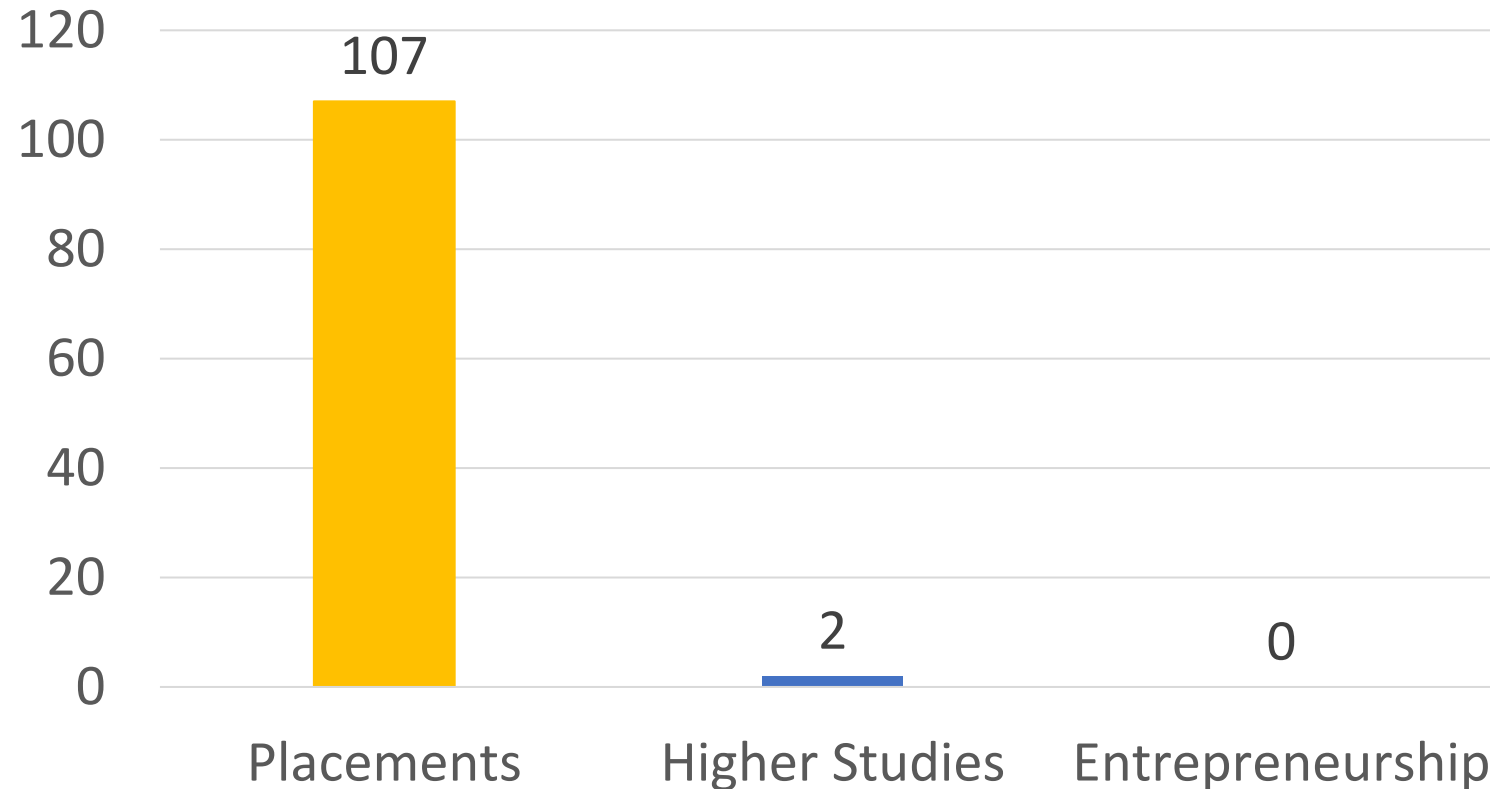
Expert lectures/Awards/outreach activities

- No. of Expert lectures/ Guest talks/ Webinars given by faculty: 55
- No. of department awards/ outreach activities/ achievements: 08
 - **Prof. P. Sreehari Rao**, Member - Review committee by Ministry of Defence, Govt. of India for Project Design Review (PDR)/ Detailed Design Review/DDR/Tapeout review committee for the readout IC of MEMS GYROSCOPE SENSOR” of RCI, DRDO
 - **Prof. T Kishore Kumar**, Member - Review committee by Ministry of Defence, Govt. of India for reviewing the project “Design and Development of Digital Signal Processor for Extended Range MMW Seeker” of RCI, DRDO
 - **Prof. T Kishore Kumar**, Member- NBA Accreditation Expert Team and visited three Engineering colleges

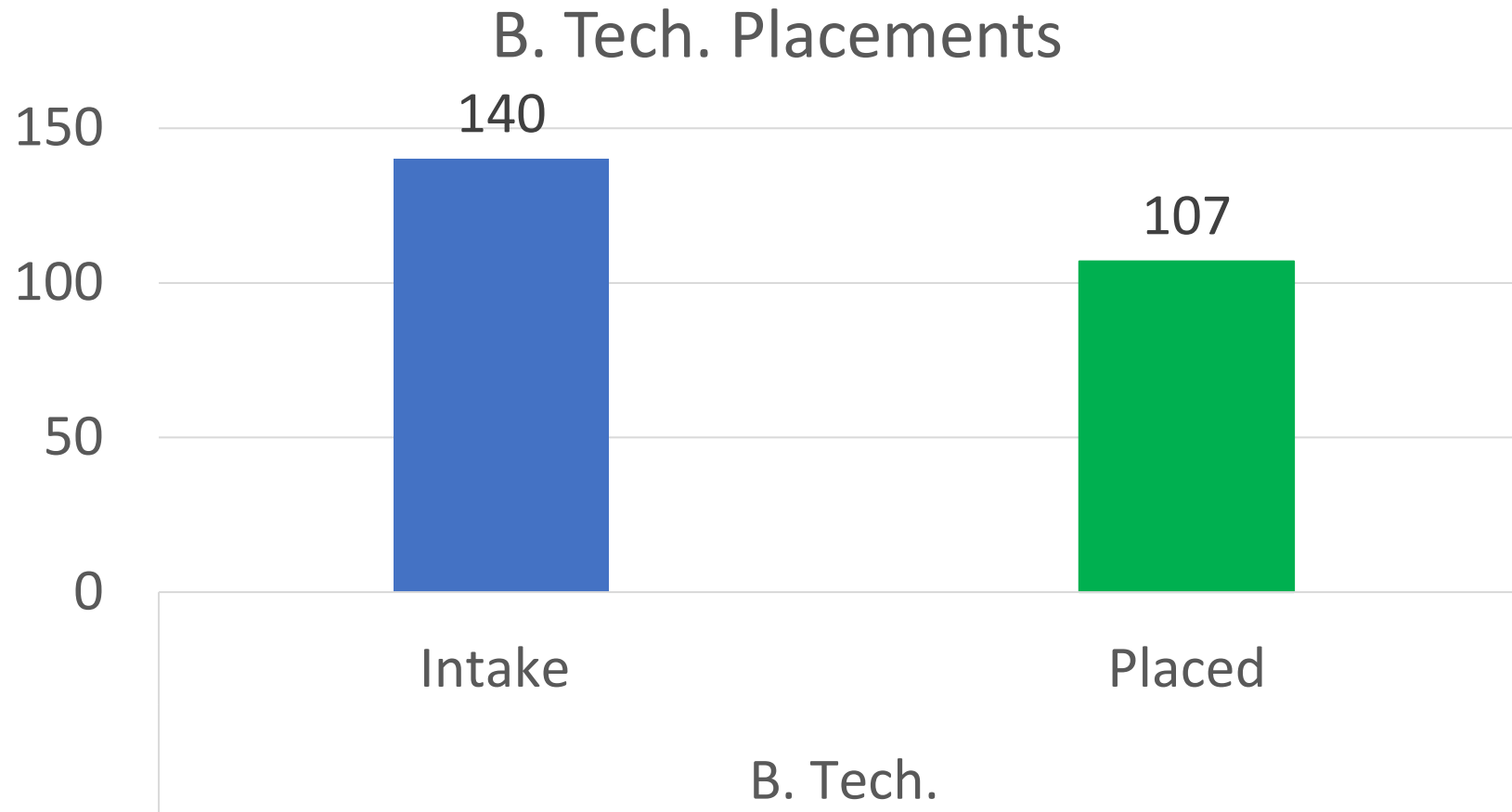
Student achievements

Name of the Student	Achievements
Raghu Vamshi Hemadri	Iteratively Reweighted Minimax-Concave Penalty Minimization for Accurate Low-rank Plus Sparse Matrix Decomposition published in <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> 10.1109/TPAMI.2021.3122259 in 2021.

Published student papers in Journals/Conference: 06



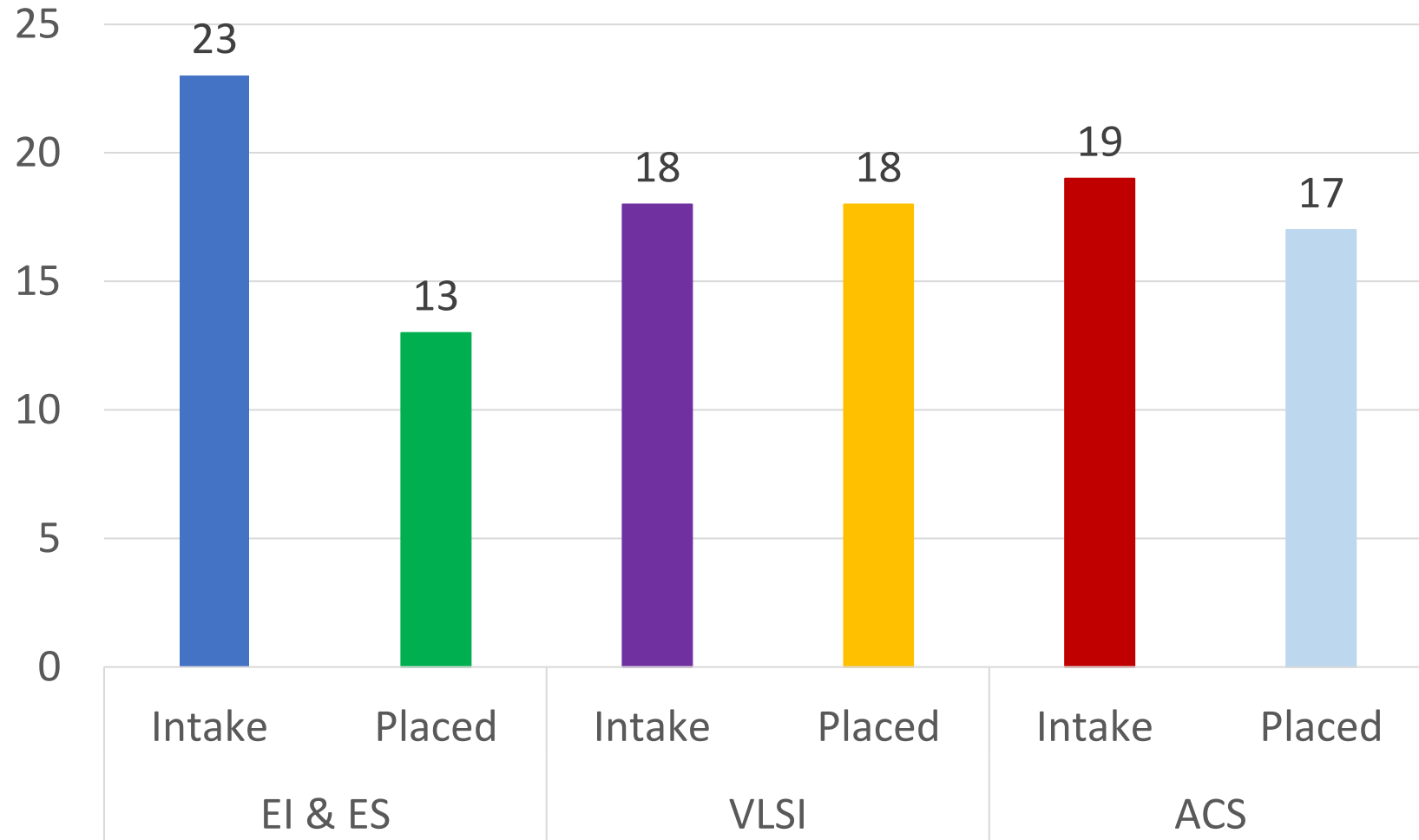
B. Tech Student Placements



* 113 students out of 140 students eligible for placements

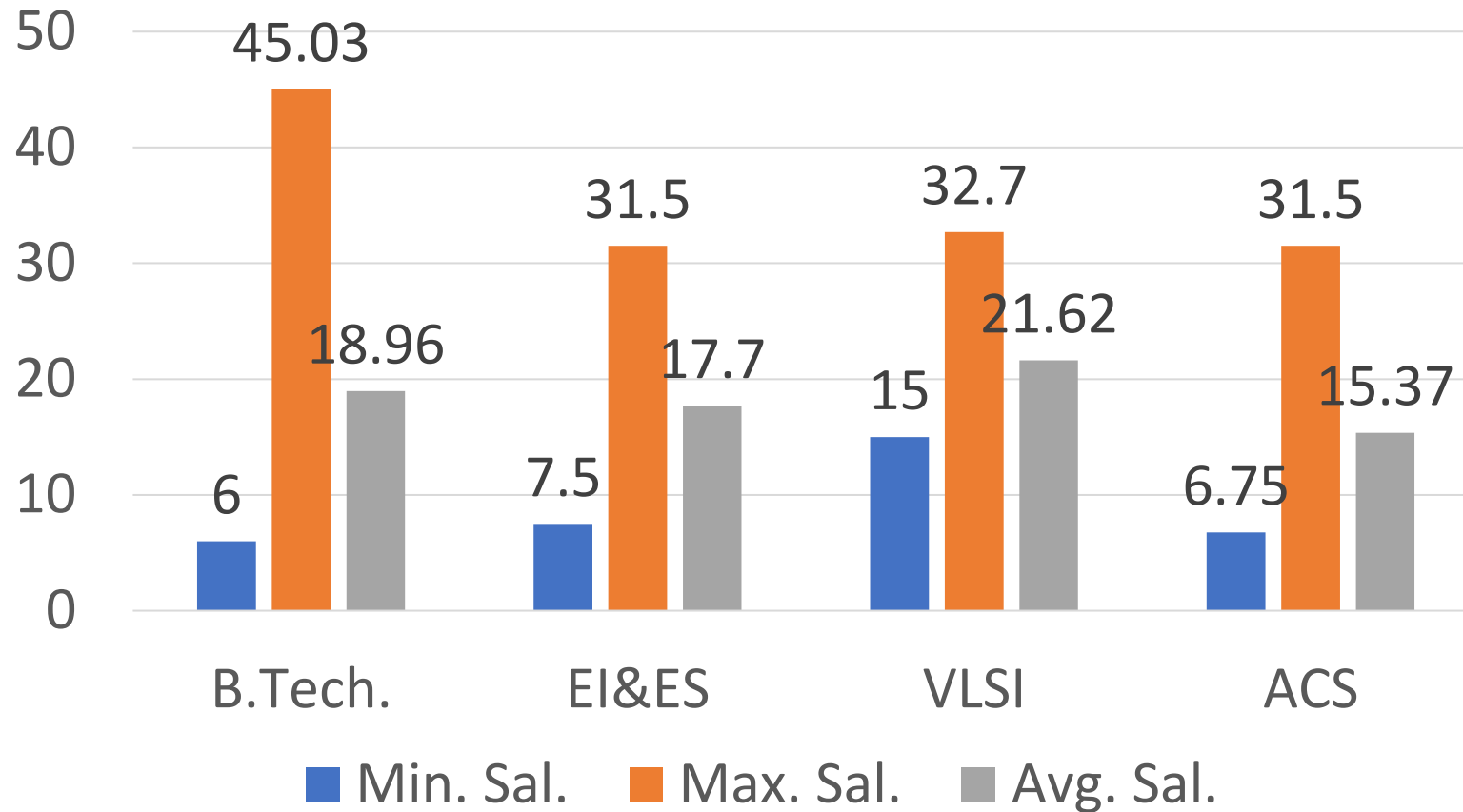
M. Tech Student Placements

M. Tech. Placements



Student Placements – Salary package

Salary details





Department associations/Student activities – IEEE student branch chapter activities

- IEEE Society activities:

- Initiated student branch chapter : Circuits and Systems (CAS) and Antenna Propagation.
- Conducted 4 IEEE student activities

Micro-Doppler Signature

Example I:
Sit down (A, B, C) then raise hands twice (E, D)

Example II:
Walk away from radar (A, B, C), turn around (D), push and pull arm twice (E, F, G, H), then walk towards radar (I)

A Hybrid FMCW Interferometry Radar for Indoor

Bloch Sphere (1/3) - Reference Values

$$\begin{pmatrix} \operatorname{Re}\{x\} \\ \operatorname{Im}\{x\} \end{pmatrix} = \begin{pmatrix} 2\operatorname{Re}\{x\} & 2\operatorname{Im}\{x\} \\ |x|^2 + 1 & |x|^2 - 1 \end{pmatrix} \begin{pmatrix} X \\ Y \\ Z \end{pmatrix}$$

0	1	0	1	0
0	-1	0	-1	0

Y axis maps the purely imaginary values

PATENTS ARE GRANTED FOR INVENTION

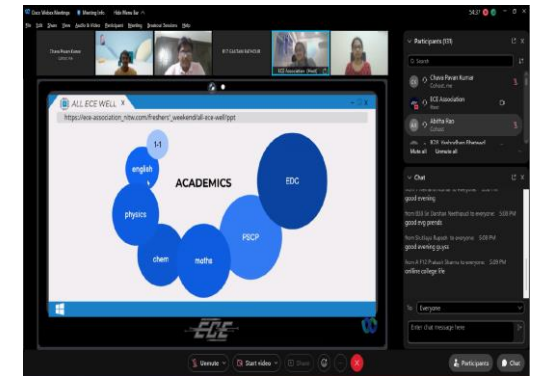
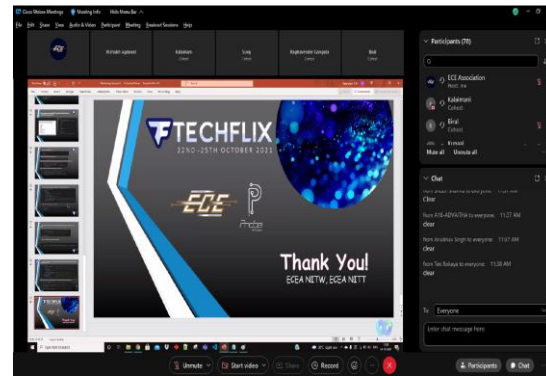
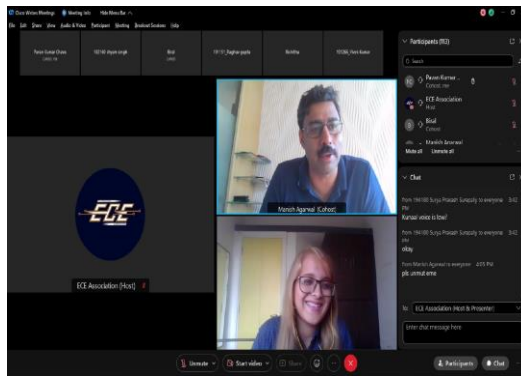
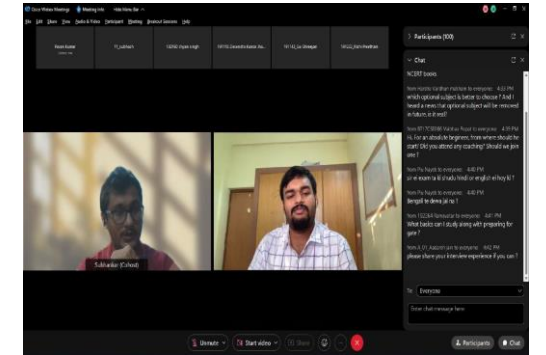
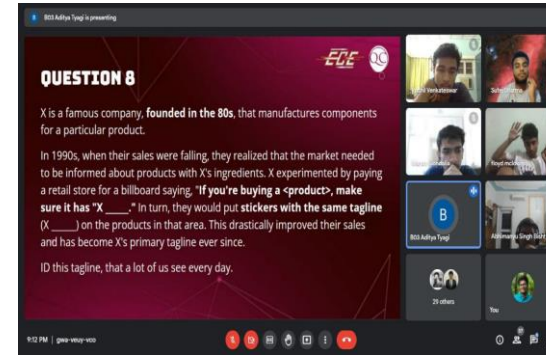
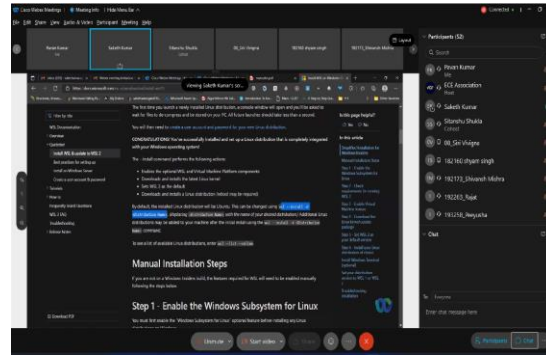
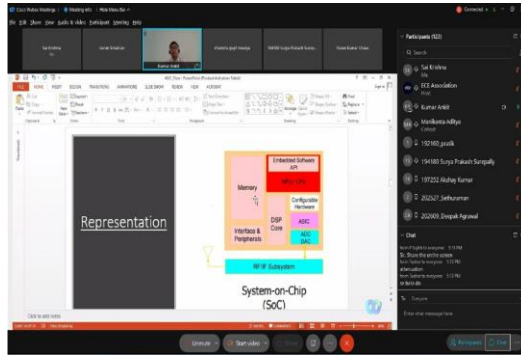
INVENTION MEANS SUCCESSFUL TECHNICAL SOLUTION TO A PROBLEM.

PROBLEM MAY BE OLD OR NEW



Department associations/Student activities – ECE Association activities

ECE Association activities: 20



New Labs/equipment/Software

- New labs developed: 01
 - Programming using python on Moodle LMS
 - New software procured: 01
 - NI-Labview software for Advanced Wireless Communications Lab
 - New Equipment procured: 01
 - PC based Vector network analyzer
- In collaboration with CRIF, microwave anechoic chamber for antenna measurements and VNA for mm wave circuit and antenna measurements was stup

Collaboration with Industry and Status of accreditation

- UG Prog in ECE has been NBA accredited for six years
- All three PG progs will go for accreditation soon
- Signed MoUs with AMD, AMS, SAMEER, IRISET and project based agreements with IISU



Summary

S. No.	Activity	Number
1	Publications (Peer Reviewed Journals/ conferences) (SCOPUS/SCI)	131
	International Journals	97
	International Conferences	34
	National Conferences	--
2	Funded Research Projects/SPARC projects (2021-22)	21
	DBT, SERB, DRDO, ISRO (Rs. 267.33 Lakhs)	14
	Ongoing Projects (Rs. 103 Lakhs)	07
3	PhD Awarded	12
4	Book Chapters	4
5	Patents	8
	Awarded	4
	Filed	4



Thrust Areas of Research

- IC Design
- Signal Processing
- Wireless Communication Systems
- AI and ML
- IoT
- mm Wave and THz Wave Communication systems
- Novel MOSFET device modelling
- Flexible Electronics
- Quantum Electronics and Computing
- Autonomous vehicles



Vision Statement

- Long Term[10 years]: Contributing “atma nirbhar bharat “
 - Establish *startup hub for IC design industry*
 - Smart *indigenous agri equipment hub*
 - *One stop Solution Smart Human Life*@ ECE-NITW [6G and autonomous smart systems]



Action Plan

- Short Term: 3 Years---Through HEFA/Plan grants/Alumni
 - To Monitor and realize the goals set by NEP through modified curriculum
 - New PG programs
 - To interact with alumni in the industry towards fetching more internships for B Tech final year students in focused areas
 - ***Initiate multi disciplinary research groups*** to bag projects in collaboration with defense and private industry
 - To initiate more MoUs with industries and explore the collaborative research
 - Sharing expertise with railways and starting new certification/PG Diploma programs [Through Indian railway institute of signal engineering and tele communication]

Action Plan

Means: Industry sponsored programs, Projects, Revenue from HEFA

- Medium Term[5 Years] : To establish **CoE** on the following:
 - **Smart Electronic systems:**
 - Collaboration: AMD,TI,AMS
 - Collaborate with VEDANTA, Cadence, Synopsys and India semiconductor mission for development of semiconductors and circuits encouraging **IC design startups**
 - Initiate industry sponsored minor programs/PG prog increasing employability
 - Collaborate with Reliance, TechMahindra and Western Digital to **support startups in 6G communication testbed.**
 - Collaboration with Hospitals to develop data base and develop **CoE for Smart Health Care Systems** in association with leading multi specialty hospitals
 - Collaboration with **RAR, Agri Univ** to continue ongoing beebot research **till transfer of technology** in collaboration with Marut Drones



Immediate Requirements

- Class rooms immediately required for existing courses: 6
- Space crunch for Faculty rooms
- Lab space for Ph.D. scholars to work and performance the experiments
- Additional class rooms and laboratory space requirements for new courses
- Fund requirement for procuring industry standard softwares and academic standard equipment to train the students to be industry ready
- Furniture requirement
- Encouragement is sought for Multidisciplinary research
 - Co supervision is requested to be encouraged! (faculty are shying away due to existing rule)

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

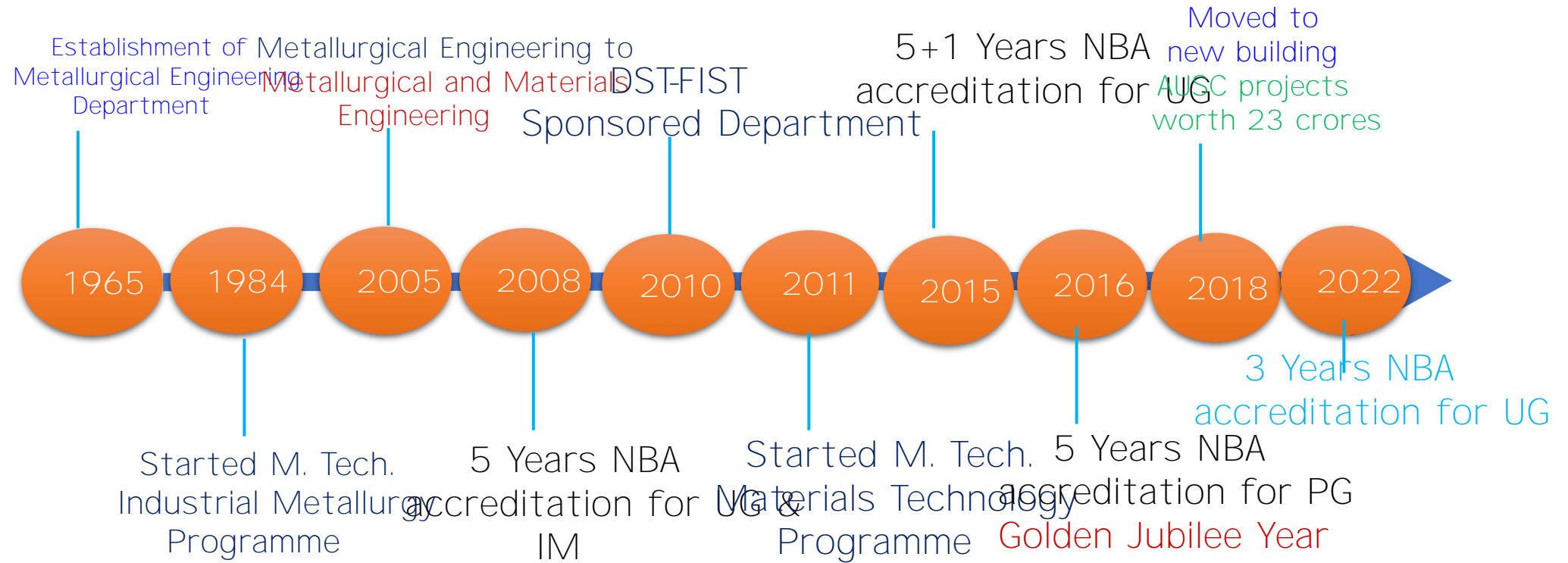
Presentation for Annual Academic Performance Appraisal (AAPA-2022)



Metallurgical & Materials Engineering Department

Department of Metallurgical and Materials Engineering:

History At A Glance



Level	Programme of Study	Started with Number seats, Year	Intake increased to Year	Year of obtaining Accreditation
UG	B. Tech in Metallurgical & Mater Engineering	30 in 1965	60+ 2 DASA in 2008	2015 for 5+1 Year 2022 for 3 Year
PG	M. Tech in Industrial Metallurgy	13 in 1984	20 in 2008	2008 for 5 Year 2016 for 5 Year
PG	M. Tech in Materials Technology	24 in 2011	Continuing	Not Applied Yet

Students Strength at Met & Mat Engineering Department

Total No of Students: ~365

Programme	No of Students
PhD	33 (Full time Institute Scholars ó 22 , Part time ó 11)
M.Tech (Industrial Metallurgy)	09
M.Tech (Materials Technology)	15
B.Tech (Met & Mat Engineering)	74 (II - Year) + 67 (III - Year) + 71 (IV - Year)
New Admission 2022-2023	
PhD	07 (Full time ó 05, Part time ó 02)
M.Tech (Industrial Metallurgy - IM)	04
M.Tech (Materials Technology - MT)	09
B.Tech (I - Year)	78 (Admissions in progress)

Faculty Details

Sanctioned Strength: 22

Regular Faculty: 14+1 (All with PhD) Ad-hoc Faculty: 6

Professors: 05

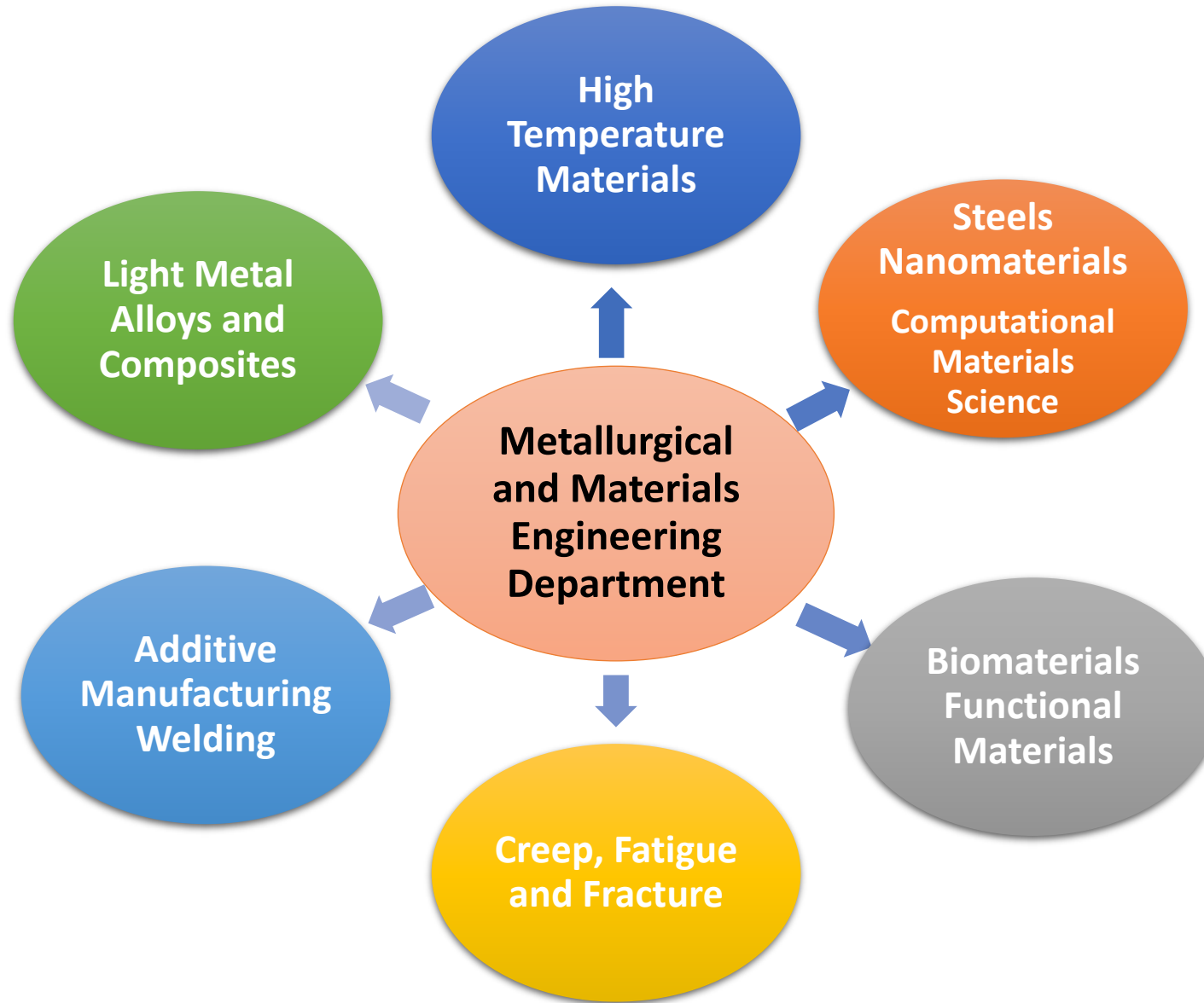
Associate Professors: 05

Assistant Professors: 04

(Dr. Raghupathy left to IIT Kanpur)

Women Faculty: 03 (regular) + 03 (Ad-hoc)

Different Research Areas of Department



Non-Teaching Staff Details

Total Staff: 15

Technical (10)

Secretarial (5)

Technical Assistant: 1

Assistant SG-I : 1

Technician SG-II: 1

Junior Assistant: 2

Technician : 2

Caretaker SG-I: 1

Senior Technician: 2

Daily Wage: 1

Daily Wage: 1

Outsourcing: 3

Details of the Programmes

Programmes
B. Tech (Met. & Mat. Engineering)
B. Tech Minor, Materials Engineering
B. Tech Honours, Met. & Mat. Engineering
M. Tech (Industrial Metallurgy - IM)
M. Tech (Materials Technology - MT)
PhD
PG Diploma (IM, MT)
Integrated MTech & PhD

Research Projects: 04+05 (Grants Worth: 394.9 Lakhs)

Newly Sanctioned: 04

- **Dr. Ajoy Kumar Pandey, Dr. N. Narasaiah and Dr. B. Srinivasa Rao** (Department of MME) have received a project on 'Exploratory studies on effect of fatigue and hold time on crack growth behavior of GTM Ti-64 alloy', from Gas Turbine Research Establishment (GTRE), Bangalore, worth of **Rs. 90.56 Lakhs**. (GTRE/MMG/BMR1/1218/21/CARS/A/21, dated 10.03.2022).
- **Dr. Nagamuthu Kishore Babu**, Teachers Associateship for Research Excellence (TARE) SERB, File No. TAR/2021/000325 Date: 01-Feb-2022, **18.30 Lakhs**.
- **Dr. Asit Kumar Khanra**, Development of Al-Ni-RE Alloys for High Temperature and Tribological Applications (India-Slovenia Bilateral Scientific and Technological Cooperation – Nov-2021), Rs. **21.0 Lakhs**.
- **Dr. R. Arockia Kumar**, Development of novel bioresorbable zinc alloys for bioimplant applications (India-Slovenia Bilateral Scientific and Technological Cooperation – Nov-2021) Rs. **14.0 Lakhs**.

Ongoing Projects: 05

- **Dr. Mahesh Kumar Talari**, Development of novel B and C modified fillers for the gas tungsten arc welding of Ti alloys, Aeronautics R&D Board, DRDO, **Rs. 48 Lakhs.**
- **Dr. Nagamuthu Kishore Babu**, Understanding the Role of Hydrogen in Titanium Alloy Weldments, Aeronautics R&D Board, DRDO, **Rs. 48.24 Lakhs.**
- **Dr. Uma Maheshwara Rao Seelam**, Towards 3 tesla coercivity Nd-Fe-B magnets without dysprosium addition into the bulk, SERB-Core Research Grant, File No. CRG/2020/006001 Dt. 29/12/2020, **Rs. 29.8 Lakhs.**
- **Dr. Sreedevi Varam**, Hydrogen Production through Water Splitting by Novel Nanocrystalline Al-based Alloys (with Added Few Layered Graphene), SERB-Core Research Grant, File No. SERB/F/10375/2019-20 dated 18/02/2020, **Rs. 34.2 Lakhs**
- **Dr. N. Narasaiah**, Dr. G. V. S Nageswara Rao, Dr. C. Vanitha, Dr. Ajoy Kumar Pandey, Dr. G. Brahma Raju, Dr. B. Srinivasa Rao, Oxide dispersion strengthened (ODS) iron-based alloys for Advanced Ultra Super Critical (AUSC) Technology, DST, TMD/CER/CleanCoal/2017/036 (ARCI) (C) and (G) dated 24-08-2018, **Rs. 90.812 Lakhs.**

Currently Active Projects: 09 (Grants Worth: 394.9 Lakhs)

Completed Consultancy Projects: 01

➤ **Prof. N. Narasaiah, Dr. Ajoy Kumar Pandey, Dr. R. Arockia Kumar, Dr. B. Srinivasa Rao**, Wear Life enhancement study of coal pulverizer grinding media (Z019X00004, dated 30/12/2019) (BHEL, Hyderabad) worth of Rs. **3.5 Lakhs**.

GIAN / SPARC Projects

- Sanctioned: 1
- Ongoing: Nil

Consultancy Work Details

Prof. N. Narasaiah, Dr. Ajoy Kumar Pandey, Dr. R. Arockia Kumar, Dr. B. Srinivasa Rao, Wear Life enhancement study of coal pulverizer grinding media (Z019X00004, dated 30/12/2019) (BHEL, Hyderabad) worth of Rs. **3.5 Lakhs**.

Asit Kumar Khanra, G. V. S. Nageswara Rao and N. Narasaiah, Studies to improve the life of die used for minting the coins (Ref No: IGMH/ R&D/ 2015-16/ 2238 Date: 09-01-2016) Mint Hyderabad, worth of Rs. **4.0 Lakhs**.

R. Arokiya Kumar, Ajoy Kumar Pandey and N. Narasaiah, In Situ hydrogen damage evaluation of boiler water wall tubes using NDT, (Ref.No. NETRA/PROJ/NITW/Hyd/16/1 Dated: 24 June 2016) NTPC, worth of Rs. **10.0 Lakhs**.

Number of Publications : 49

(a) International Journals: 49

(b) National Journals: 00

(c) International Conferences: 06

(d) National Conferences:00

- Acta Materialia
- Journal of Alloys and Compounds
- Materials Science and Engineering A
- Journal of Materials Science
- Computational Materials Science
- Ceramics International
- International Journal of Applied Ceramic Technology
- Journal of Non Crystalline solids
- Composite Interfaces
- Advanced Powder Technology
- Materials Chemistry and Physics
- Transaction of Indian Institute of Metals
- Transactions of the Indian National Academy of Engineering
- Advances in Materials and Processing Technologies
- Powder Metallurgy
- Fusion Engineering and Design
- Materials and Manufacturing Processes
- Applied Sciences
- Dynamic Behavior of Materials
- Materials Engineering and Performance
- *Frontiers in Materials*
- Materials Letters
- Physics B: Condensed Matter
- Metallurgical and Materials Engineering
- Metals
- Silicon

PhD Research Guidance

- **No. PhDs Completed: 11**
- **No. New PhDs admitted: 07**
- **Present Strength of PhDs: 40**

Guest talks/ Webinars delivered: 11

1. **Dr. V. Sreedevi** has delivered a guest lecture for the Six-Days Online FDP on Research Applications in Artificial Intelligence and Machine Learning for Mechanical Engineers at SRMIST, Tamilnadu on 'Machine Learning for New Materials Design' on 10th August, 2022.
2. **Dr. R. Arockia Kumar** has delivered an online guest lecture for the 7-days active learning on Advances in Materials Joining and Additive Manufacturing at IIT Indore, on 'Friction Stir Processing- A tool for developing functional materials' on 23rd August, 2022.
3. **Dr. Uma Maheswara Rao Seelam** has delivered a guest lecture at E&ICT Academy, NIT Warangal on 'Microstructural Characterization of Nanomaterials' on 21st July, 2022.
4. **Dr. Uma Maheswara Rao Seelam** has delivered an online guest lecture in the Worldwide Webinar organized by LabIndia[®] Instruments on 'Fundamentals of Imaging in SEM' on 30th May, 2022
5. **Dr. Uma Maheswara Rao Seelam** has delivered a guest lecture at STUTI-21 DST, NIT Warangal on 'SEM Imaging and Spectroscopy' on 30th May, 2022.
6. **Dr. Uma Maheswara Rao Seelam** has delivered a guest lecture at STUTI-21 DST, NIT Warangal, on 'Scanning Electron Microscopy & EDS Spectroscopy' on 30th May, 2022.

Guest talks/ Webinars delivered: 11

- 7. Dr. Sukla Mondol** has delivered an online guest lecture for the Six Days Online Short-Term Course on “Advances in materials processing and characterization on ‘Basics of TEM Imaging and Sample preparation’ on 17th May, 2022.
- 8. Prof. C.Vanitha** has delivered a guest lecture at DR N G P Institute of Technology, Coimbatore on ‘Metallurgy for Mechanical Engineers’ on 6th April, 2022.
- 9. Prof. G. V. S. Nageswara Rao** has delivered a guest lecture at Mepco Schlenk Engineering College (Autonomous), Sivakasi, Tamil Nadu on ‘Research Aspects on Thermal Barrier Coatings’ on 7th December, 2021.
- 10. Dr. R. Arockia Kumar** has delivered an online guest lecture during Innovations in Manufacturing of Novel Materials and Composites (ATAL FDP held in Christian College of Engineering and Technology)’, on the topic of ‘Friction stir processing-a tool to develop functional materials’ on 23rd November, 2021.
- 11. N. Kishore Babu** has delivered a guest lecture at IGCAR Kalpakam during the National Seminar on ‘Welding Science and Technology - Present Status & Future Direction ‘ Welding Science and Technology - Present Status & Future Direction ‘ NSWEST-2021, on ‘Development and joining of AlMg5-Al₂O₃ nanocomposites fabricated by powder metallurgy route’ on 23rd July, 2021.

New Labs Established (Equipment/Software)

- **Welding Laboratory (developed)**
- **Advanced Materials Laboratory (being developed)**
- **NDT Lab (being developed)**

Welding Laboratory (2018-22)



Shielded metal arc welding (SMAW)



Sub merged arc welding (SAW)



Gas metal arc welding (GMAW)

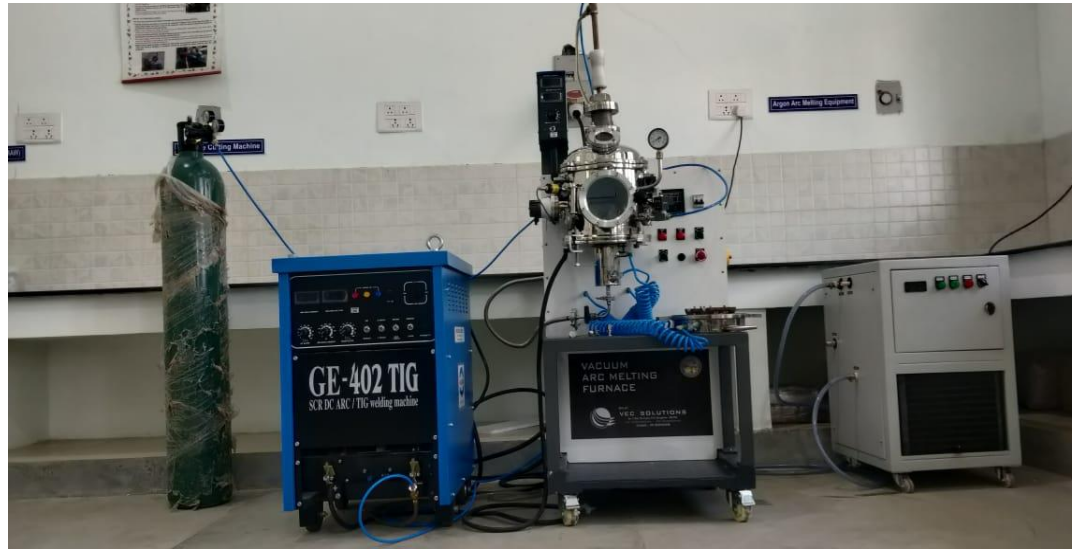


Gas Tungsten arc welding (GTAW)



Abrasive cutting machine

Welding Laboratory (2018-22)



Argon arc melting equipment



Varestraint testing equipment

High Temperature Materials Laboratory



100 kN Servo-electric fatigue testing systems



Creep Machines (18 Nos)

Fatigue Laboratory



Some of the Highly Utilised Sophisticated Equipment



These facilities are being extensively used by the students/ faculty of NITW and outside users as per chargeable basis.

Sophisticated equipment services from MMED (Year 2020-21)

	No of samples analysed					Total	Revenue generated (INR)
	MMED	NITW (other than MMED)	Academic institutes	R&D Labs	Industry		
X-ray diffraction unit (XRD)	794	1412	40			2206	35,525
Scanning Electron Microscope (SEM)	373	463	4			840	77,700

Equipment added in the last 5

- Vacuum induction melting furnace
- Welding machines (MIG, TIG, SAW)
- Universal tensile testing machine
- Optical microscopes
- Double disc polishers (8 nos.)
- Muffle furnace (1500C)
- Indentation creep tester
- Thermo-Calc software
- Microwave sintering furnace
- Dynamic mechanical analyzer
- Precision cutting machines
- Low speed saw
- Mounting machine
- Abrasive cutter
- Hydraulic press
- Corrosion cells
- Hot press



Vacuum arc welding



Submersible arc welding

State of art equipment under AISC

Creep	18
CFCG	04
Service hydraulic	01
Service electric	02



Welding machines



Powder metallurgy laboratory



Mechanical metallurgy laboratory

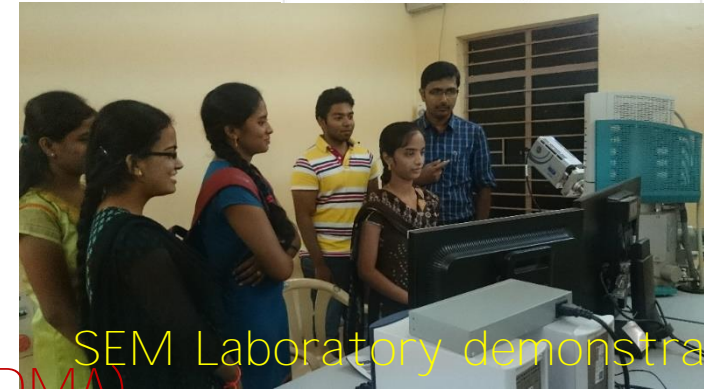
అధునాతన లోహాలతో అధిక విద్యుత్తు ఉత్పత్తి
విద్యుత్తు కేంద్రాల సామర్థ్యం పెంపుపై నిట్ లో
పరిశోధన



మెటల్స్ విభాగంలో ప్రయోగాలను విద్యార్థులను వివరిస్తున్న వాణిశ్చరణాన్ని

Laboratories (Curriculum & Research

1. Mineral Dressing Laboratory
2. Foundry Laboratory
3. UPEM Laboratory
4. Physical Metallurgy Laboratory
5. Heat Treatment Laboratory
6. Powder Metallurgy Laboratory
7. Corrosion Laboratory
8. Mechanical Metallurgy Laboratory
9. Computational Materials Engineering Laboratory
10. Welding Laboratory
11. Materials Characterization Laboratory (XRD,SFM,DMA)
12. High Temperature Materials Testing Laboratory
13. Fatigue Laboratory
14. Materials Processing Laboratory
15. Advanced Materials Laboratory



SEM Laboratory demonstration



Physical Metallurgy Laboratory

Sophisticated equipment of the Department/Research highlights etc.

- ✓ **Fatigue & Fracture Laboratory** (FCGR (2), Vacuum Tubular Furnaces, Microscopes, Precision cutting machine, Auto-clave)
- ✓ **High Temperature Materials Testing Laboratory** (Creep testing Machines, Fatigue machine)
- ✓ **Welding Laboratory** (Tungsten Inert Gas, Metal Inert Gas, Submerged Arc and Shielded Metal Arc welding; Argon Arc Melting)
- ✓ **Spex Mill – 8000M**: for producing nanocrystalline and amorphous materials

Research Thrust Areas:

Metal Joining, Additive Manufacturing, High Temperature Materials, Powder metallurgy, Surface Engineering, Materials Testing and Characterization, Mechanical Behaviour of Materials, Fatigue, Processing of Advanced Ceramics, Biomaterials, nanocomposites, Ultra High Temperature Ceramics, Tribology, Shape Memory Alloys, Friction Stir Processing, Non-equilibrium Processing of Materials, Advanced Characterization, Corrosion Engineering, Alloy development, light alloys.

Department association/Students Activities: 03

Expert lectures delivered by the Guests: 02

1. Dr. D. K. Das, Scientist H & Associate Director, DMRL, Hyderabad has delivered an online expert lecture during the virtual inauguration ceremony of MMEA-IIMSC association on November 5th, 2021.
2. Dr. Easwaramoorthi Ramasamy, Scientist E, ARCI Hyderabad has delivered an online expert guest lecture on the topic of “Next Generation Solar Cells - Materials and Methods” on 17th August, 2021.
3. Four days Fresher's Event ‘Prologue to Escapade’ (Freshers invitation)- Organized an interaction session with the faculty, seniors and orientation about the department for the fresher. (January 7-10th -2022)

Awards/Recognitions/Achievements of Faculty

- **Prof. C. Vanitha** has been awarded INAE fellowship (2021-22).
- **Dr. G. Brahma Raju** has been awarded the reviewer appreciation certificate from IIM (May 2021, February 2022)
- **Dr. G. Brahma Raju** invited to be Editorial Board Member of Green Buildings and Materials
- **Prof. Mahesh Kumar Talari** has been awarded the reviewer appreciation certificate from IIM

Students Achievements

Mr. Vadapally Rama Rao (M. Tech Student) got best presentation award for a paper entitled “Hot impression creep behavior of AlSi10Mg alloy fabricated through SLM route in ICMAT 2022 organised by National Institute of Technology Tiruchirappalli during June 10-11, 2022.

Placement Statistics (Through CCPD):

S. No.	Course	Total Students	Eligible	Placed	% Placement	Average Salary LPA
1	B. Tech	57	38	30	78.9	12.83
2	M. Tech (IM)	19	17	11	64.7	7.36
3	M. Tech (MT)	19	16	11	68.7	9.08

Additionally off-campus

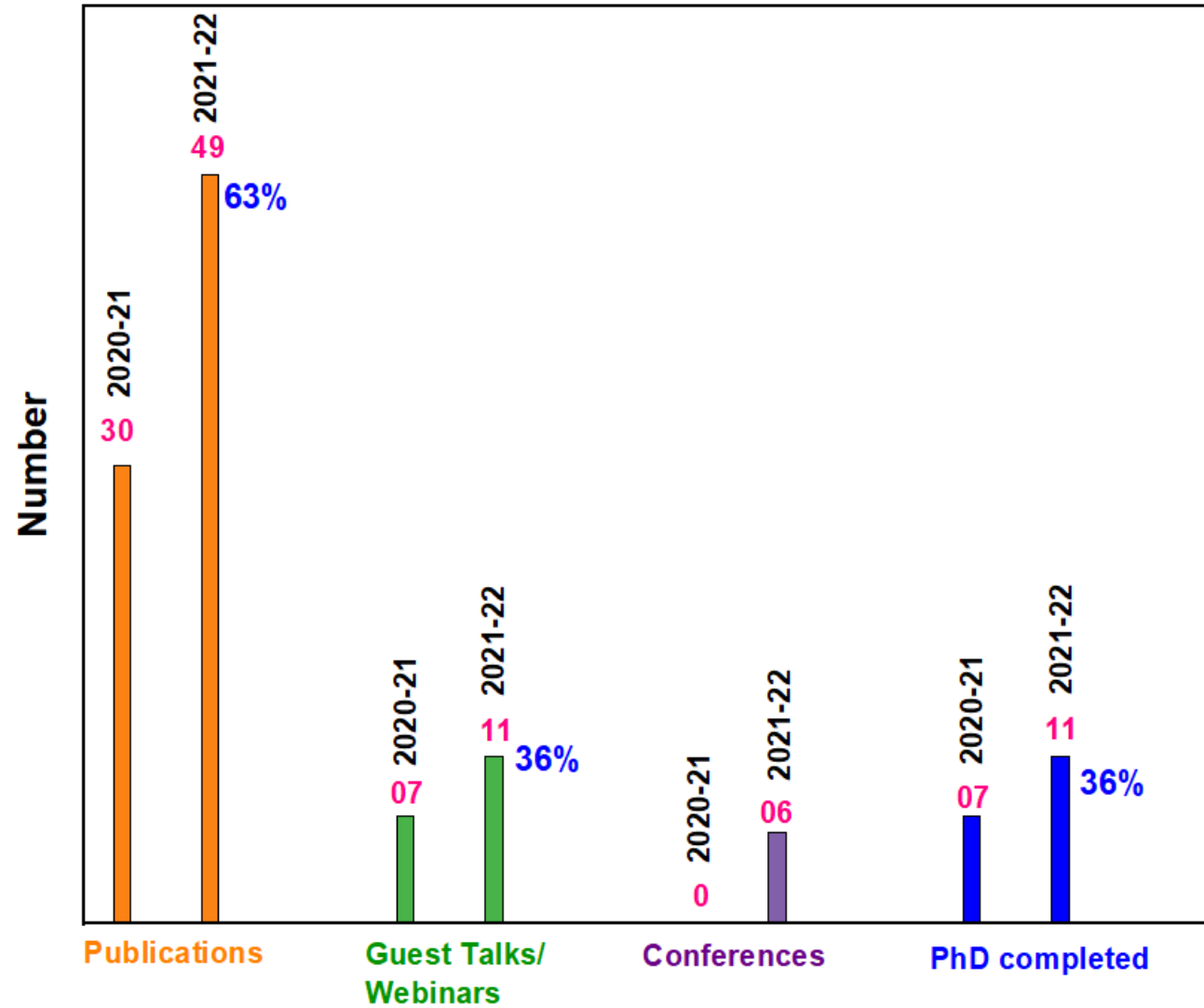
- **M. Tech Students off campus Jobs** : 4 (Physics Wallah, ISRO/ITI, NPCIL, ITI)
- **M. Tech Students Higher Study (PhD)** : 2 (IIT Roorkee, IIT Hyderabad)

Passed out Students Information

Higher Study Information- B.Tech

Name	Roll No	GRE/ GATE/ CAT	University	Contact Details	Year
Bristi Panja	175111	GRE	Tufts Gordon Institute, USA (MS (Innovation & Management))	bpanja@student.nitw.ac.in	2022-
Sravya Mareedu	175126	GRE	U. Texas, USA (MS – CS)	msravya@student.nitw.ac.in	2022-
Kodam Abhigna	175122	Early PhD program	PhD (IIT Delhi)	kodamabhigna@gmail.com	2022-
Rafshan Ul Atik	175138	GATE	M.Tech (IIT Madras)	rafshanul@student.nitw.ac.in	2022-

Summary



SWOT Analysis of Metallurgical & Materials Engineering

STRENGTH:

- 1). Outstanding Creep and Fatigue Laboratory: Attraction of Industrial Project
- 2). Qualified faculty (14 + 6)
- 3). New Qualified Technicians (No. 5)

WEAKNESS:

- 1). Less Industry interaction (Consultancy)
- 2). Weak in the area of Materials characterization (TEM, EBSD)
- 3). Less Activities on Filing Patent & Book Writing
- 4). Less number of regular faculty (14/ 22)

OPPORTUNITY:

- 1). To work more with industry
- 2). To become stronger MME with good research facilities

Department Vision

- Attain global recognition in research and training to meet challenging needs of Metallurgical and Materials Engineering with ethical and moral responsibility towards society.

Short term Conducting Workshops, Expert Lectures

Medium term Industry, R & D interaction and collaborations

Long term Organizing National and International Conferences, FDPs, Patents, Creating Advanced Characterization Facility

Annual Academic Performance Appraisal 2021-22



Dr. S. Srinath
Head, Department of Chemical Engineering, NIT Warangal

History & Milestones of Department

Major Milestones

2018-Moved to new building (Plinth Area: ~ 8000 m²)

2016-M.Tech Process Control Started

2015 – B. Tech & M. Tech Chemical Engg. accredited for 5 years

2014 –Golden Jubilee

QIP Centre for PhD

1968- M. Tech program started

1964- Started with 5 year B.Tech Program



Programme	Number of Students
PhD	39
M.Tech (Chemical Engineering)	11 (I-Year) + 19 (II-Year)
M.Tech (Systems & Control Engineering)	7(I-Year) + 16(II-Year)
B.Tech (Chemical Engineering)	111 (II - Year) + 116 (III - Year) + 126 (IV- Year)

Staff

Faculty

- ❖ Sanctioned Strength of Faculty - 27
- ❖ Total Faculty Strength : - 19 (Regular with all PhD) + 5 (Adhoc)
- ❖ Professor – 07
- ❖ Associate Professor- 04
- ❖ Assistant Professor- 08
- ❖ 3 Women Faculty (2 Regular & 1 Adhoc)

Non-Teaching Staff

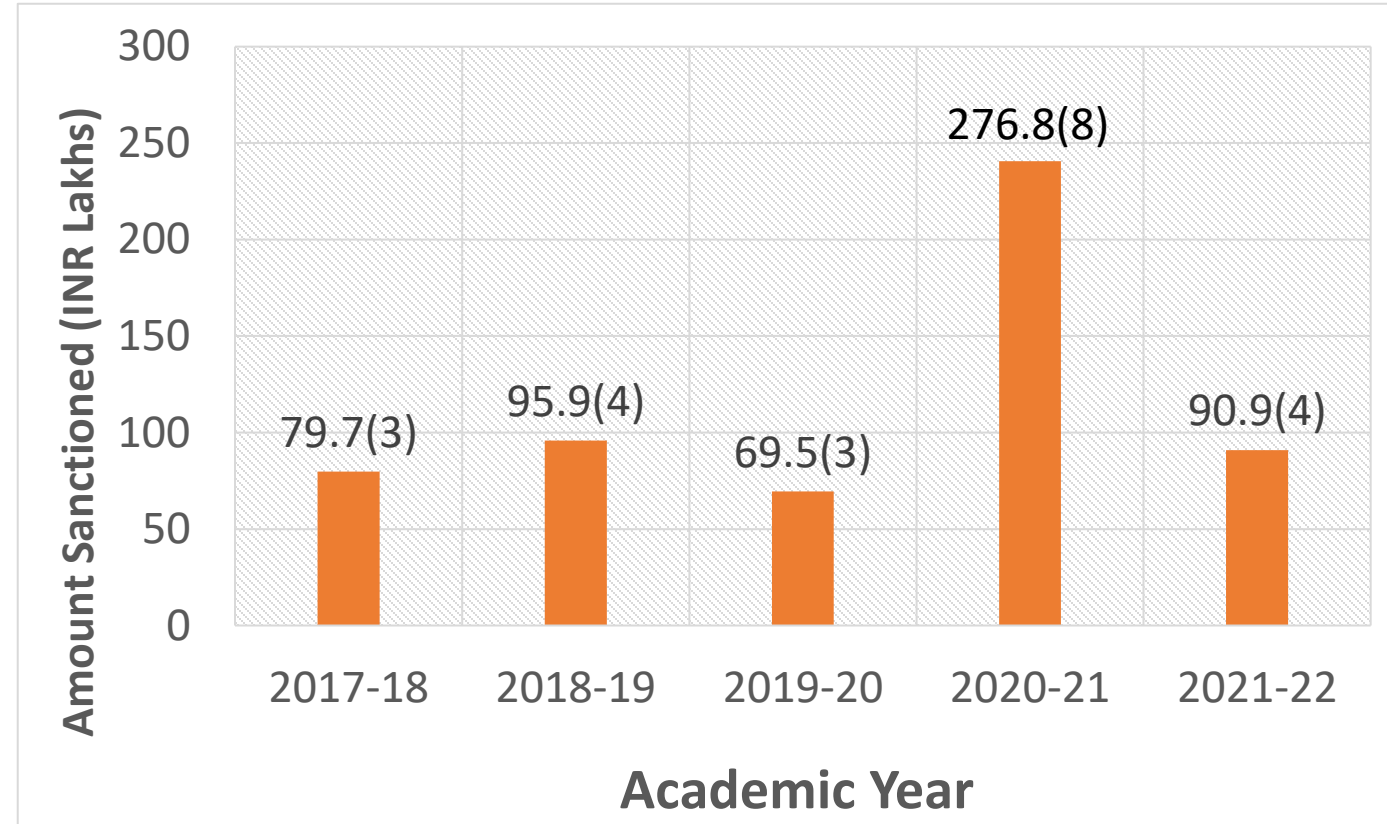
Technical Staff

- ❖ Technical Assistant-01
- ❖ Lab Technician-02
- ❖ Technical Staff-02
- ❖ Lab Assistant-02 (contract)

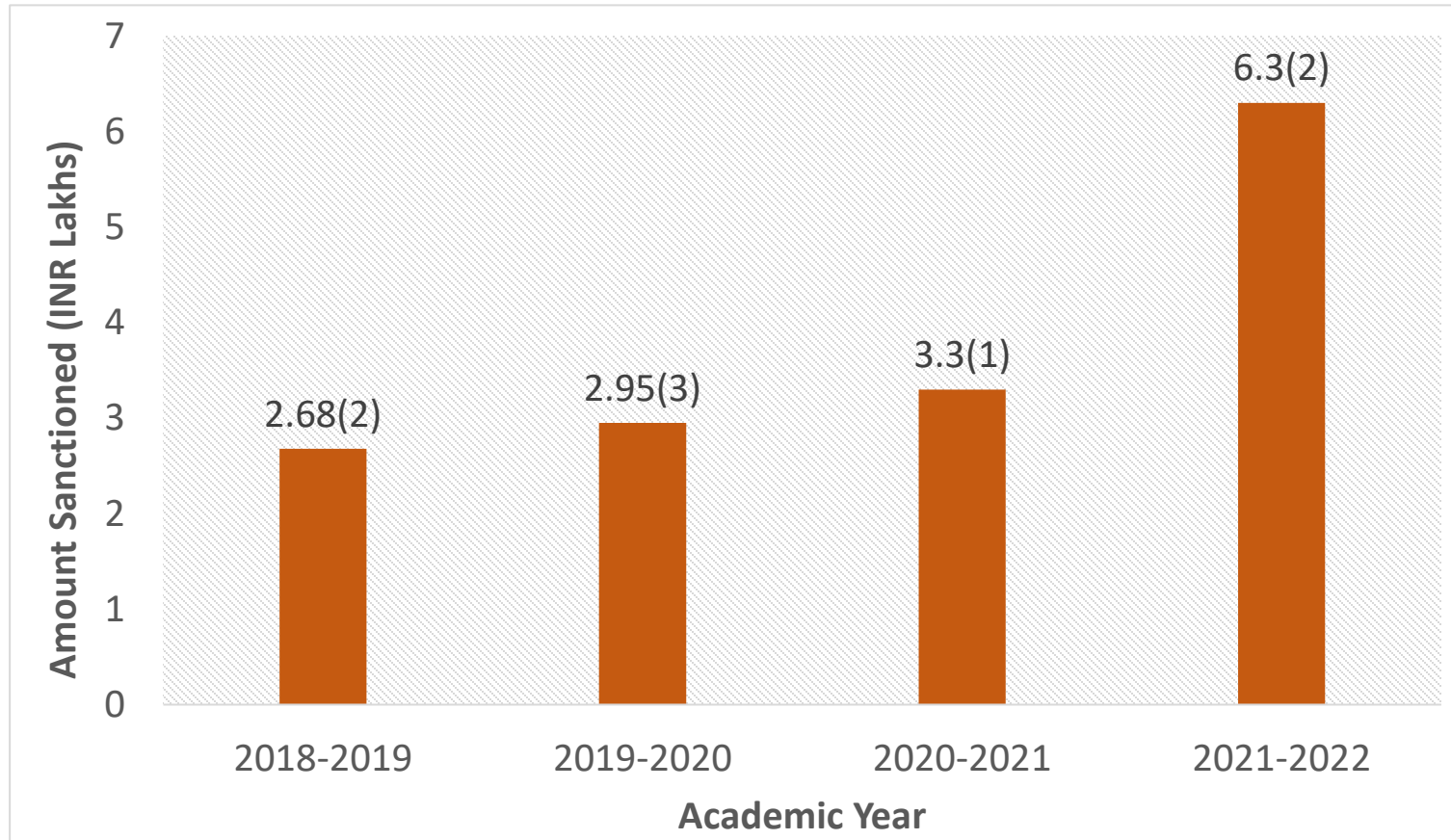
Office Staff

- ❖ Sr. Assistant-1
- ❖ Jr. Assistant-1
- ❖ Network Admin-1 (contract)
- ❖ Clerk-1(contract)

Sponsored R&D Projects



Consultancy Projects



Patents Granted & Published in last 3 years

Granted: 05
Published: 01
Filed: 01
Technology Transfer: 01

Sonawane Shirish Hari, Shaban Shaik and S. Srinath, "8] g d f n a n g p a r t i c l e s t o b i n d e r & p l a s t i c i z e r m a t r i x a n d i t s p r o c e s s \ Y Application No: 6001CHE2015, Publication Date 06/11/2015, Patent Grant No 338530, Date of Grant: 15/06/2020

Sonawane Shirish Hari, Sikhwaniraj Radhesham Deshmukh, Aditya Shivajirao Kulkarni, Ravindra Dattatraya Badguja, Nilesh Prakash, "D f c f n p r o d u c t i o n o f n a n o s i z e i r o n o x i d e d] [a Application No: 490CHE2014, Publication Date 03/02/2014, Patent Grant No 354749, Date of Grant: 29/12/2020

Sonawane Shirish Hari, YadagirMaralla Dr. G. Uday Bhaskar Babu, Mr Kome Ansari, Mr Aditya Deshmukh, "D U f s i z e r e d u c t i o n o f p h a r m a c e u t i c a l m a t e r i a l / d r u g s u s i n g i n n o v a t i v e c r y s t a l l i z a t i o n o f c W Application No 201841033, Publication Date: 14/09/2018, Patent Grant No 357419, Date of Grant: 01/02/2021

Sonawane Shirish Hari, K. Anandkishore, S. Srinath, "P i c k l i n g a n d p o l i s h i n g c h e m i c a l f o r b l a n k c o i n s a n d i t s p r o c e s s \ Y Application No: 201741036, Publication Date 11/10/2017, Patent Grant No 363660, Date of Grant: 30/03/2021

Patents Granted & Published (Contd..)

Y. PydiSetty, G. Srinivas, T. SunilKumar Counter-current continuous multistage wall heated fluidized bed dryer Publication Number 3338/CHE/2014A, Granted on 23/02/2021 Patent Number 359229

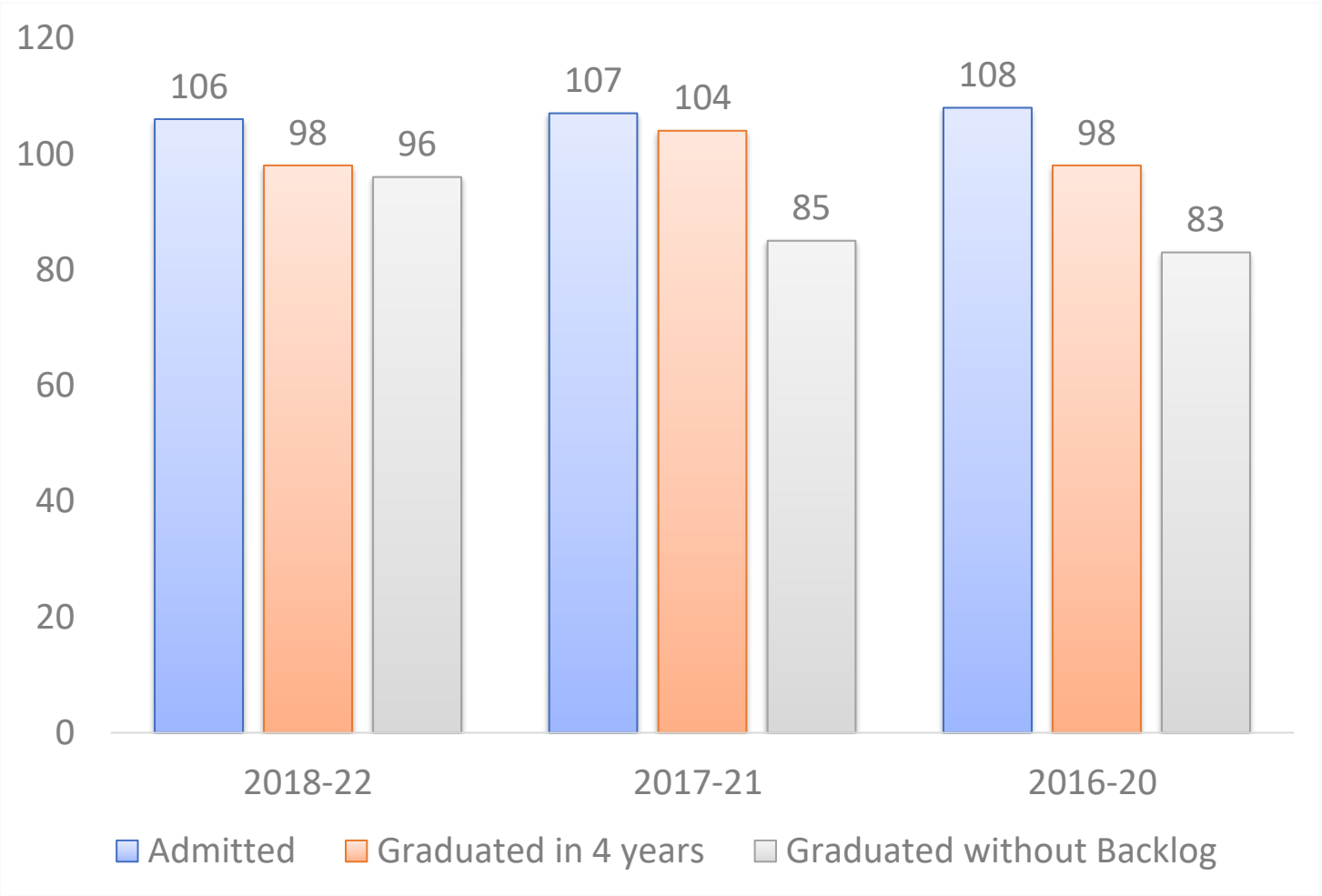
Sonawan Shirish Hari, Vikas Hakke, Narsimha P, P. Dilip Kumar, Bhaskar Bethi Low cost hybrid system based on hydrodynamic cavitation and hydrogen adsorption for textile dyewast Application No 20214100730 Publication Date 26/02/2021

Sonawan Shirish Hari, Vikas Hakke, Dilip Kumar, Vividha Landge High process for production of cellulose nanocrystals and its use there of Filed 2022

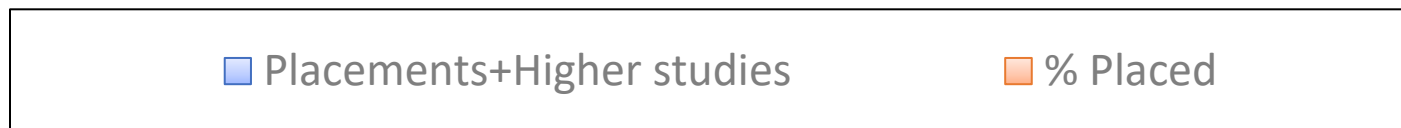
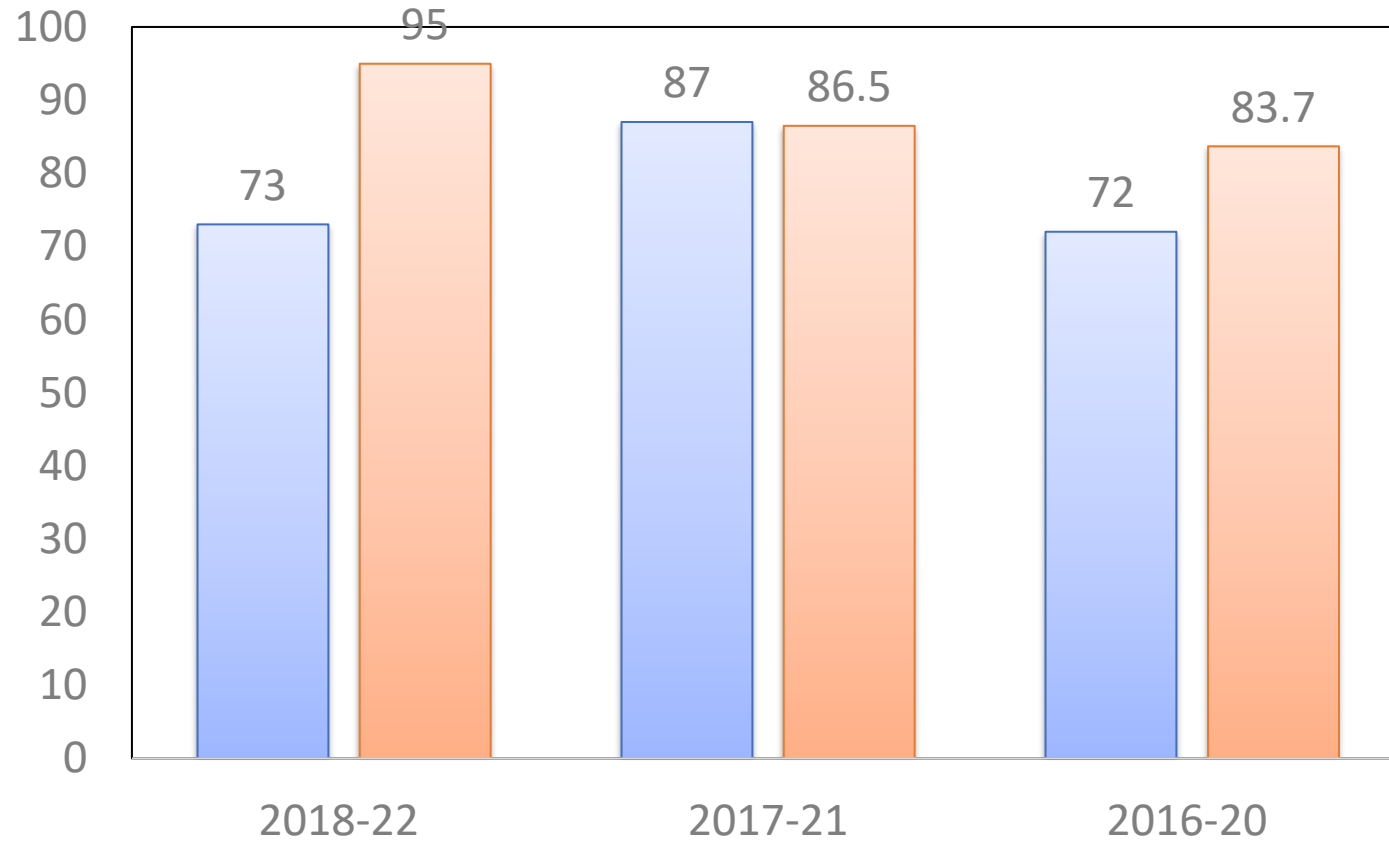
Publications/Projects/Patents/Chapters/PhD Graduate in Last 3 Year

Activities	2018-19	2019-20	2020-21	2021-22
Publications in peer reviewed Journals	64	59	50	66
Ongoing Projects	09	13	12	13(677.98 lakhs)
Completed Projects			7 (133.17 Lakhs)	7(123.2 lakhs)
Patents Filed/Granted	3	1	1/5	1
Book Chapters	10	7	15	19
PhD Graduated	4	6	6	11
PhD Students admitted				7

Student Success Rate



Campus Placements & Higher Studies



Students Awards/Achievements

- **Mr. Tetala Mani Sandeep** secured AIR-1, GATE 2022

Institute Gold Medal winners:

– **Mr. B. Sree Harsha, 2022**

- **Ms. Meghana Kollipara** – NITW – IITD Early Ph.D Exchange program

Best paper award to **Ms. Shravani Mangu**, IChEC 2021 held at NIT Jalandhar

Third prize in IChE students chapter Quiz competition & Elocution at OUCT.



Faculty Awards/Achievements

1. **Prof. Shirish H Sonawane** was Selected for faculty secondment for Asian Institute of Technology (AIT) Bangkok, 2022.
2. **Prof. Shirish H Sonawane**, Member of National Academy of Science 2021.
3. **Prof. Anand Kishore** was selected as Engineer of The Year – 2021 by the Institution of Engineers (India), Telangana.
4. **Dr. P. V. Suresh**, Associate Editor for Journal of Sustainable Mining (Scopus indexed journal) from Nov 2021.

Workshop/FDP/Conferences Organised

Number of **GIAN Course** conducted-2

Number of **FDPs** conducted -2

Number of **Workshops** conducted-2

International Conference-1

Outreach Activities: 27











New Labs Developed and Infrastructure in The Department

New Research Equipment :

1. Electro spinning Instrument
2. High Pressure Hydrothermal Autoclave Reactor
3. Photochemical Reactor
4. Fast Pyrolysis reactor
5. Emulsion Polymerization Reactor
6. Ultrasonic Atomizer
7. 3D Printer
8. Refrigerated centrifuge
9. Deep Freezer
10. UV Weathering Chamber
11. Digital Multimeter with Data acquisition system
12. Gas Chromatography
13. BOD
14. Optical Microscope
15. Karl Fisher Analyzer
16. Potentiostat

Research Capabilities of the department

Thrust Area of Research

-  Water Technologies
-  Energy Systems
-  Synthesis of Nanomaterials
-  Process Control
-  Process Intensification
-  Fluidization
-  Chemical looping combustion & CO2 Capture
-  Catalysis
-  High Performance Thermoset Composites
-  Modelling, Simulation & Optimization

Facilities Available for Research

Material Synthesis:

- Electro spinning Instrument (2 No's)
- High Pressure Hydrothermal Autoclave Reactor
- Microwave Reactor
- Photochemical Reactor
- Fast Pyrolysis reactor
- Emulsion Polymerization Reactor
- Ultrasonic Atomizer
- 3D Printer
- High Temperature Tubular Furnace (2 No'S)
- High Temperature Muffle Furnace(2 No'S)
- Vacuum Oven (2 No'S)
- Refrigerated centrifuge
- Deep Freezer
- Orbital Shaking Incubator
- Humidity Chamber
- UV Weathering Chamber

Coating Technologies:

- Dip coating

Experimental Setups

- Membrane Module for Wastewater treatment
- Pervaporation Setup
- Chemical Looping Combustion (CLC) Setup

- Computerized Plate type Heat Exchanger Test Rig
- High Temperature Resistivity measurements Setup
- Biodegradable Chamber
- Lab Scale Stirred Tank Membrane System

Testing:

- Electrochemical Workstation (2 No's)
- Fuel cell test Station
- Digital Multimetre with Data acquisition system
- Gas Chromatography
- TOC
- BOD
- **Liquid Density Meter**
- Rheometer
- Particle Size Analyzer
- Contact Angle Measurement
- **Double beam UV-Visible Spectrometer**
- Gas Analyzers
- Corrosion and Impedance Tester
- Optical Microscope
- Karl Fisher Analyzer
- Permeability Test
- Potentiostat

Chemical Engineering R&D roadmap for next 10 years

Establishing New Research Centres

- 2025. Centre of Excellence for Energy materials
- 2025-2028 Centre of Excellence in Polymer composites
- 2028-2030 Centre of Excellence in Water Treatment

Submitting research proposals to FIST, DST, and other funding agency to get funding to establish above-mentioned centres.

- < **Development of innovative laboratory** experimental setup with external funding.
- < Collaborative **Industry /Academia/ Research Projects.**
- < **O Q Wø u " y k v j " K p f w u v t k g u " c p f " T g u g c t e j " e g p v t g u**
- < Guiding UG / PG / PhD students on an **industry problem.**
- < Development of department level **characterization laboratory.**



IChE Student Chapter Chemical Engineering Association (ChEA)

ChEA and IChE presents

ASPEN PLUS WORKSHOP



Prof SARATBABU ANNE

DATE: 19TH FEBRUARY, 10AM

LIMITED REGISTRATIONS!!
HANDS ON EXPERIENCE
REGISTRATION FEE : 100/-



ChEA CHEMICAL ENGINEERING ASSOCIATION

ChEA

GUIDE-O-JUNIORS

A CORE PLACEMENT TALK
30th March, 6PM

"Refreshments will be provided"



Mondelez International
ATE
Reliance
Dr.Reddys
ExxonMobil

ChEA

CHEA AND IICHE PRESENTS Industry Insight



UGRASEN YADAV
Associate Vice President-
Process & Technology at
Technip Energies



PRAVEEN SAXENA
Director and CEO - BCPL



DHAWAL SAXENA
Associate Director - BCPL

20th February| 2 PM





PLACEMENT AND INTERNSHIP DIARIES









INTERN DIARIES

“ We should be vigilant enough to seize opportunities ”




Shanvi Tiwari
 ITC
 Profile: Core
 Cut off CGPA: None
 Stipend: 1.5 Lakh Per Month

Swipe >>>




PLACEMENT DIARIES

“ Try to build on what is unique about you and add skill sets that will ultimately make you stand out ”




Swetank Sahai
 Mastercard
 Profile: Data Engineer
 Cut Off CGPA : 6.5
 CTC : 13.5 LPA

Swipe >>>






Ch&E and IIT Madras presents you all

Listen Up Lessons



Ayaan Ali
 09 Solutions
 Consultant



Shashidhar K.
 Fractal Analytics
 Imagineer

Date : 19-09-2021
 Time : 12 noon








GATEWAY TO GATE



SRI DATTA CHARAN
 GATE 2021
 AIR 18
 NITW
 (CH)

25th SEPTEMBER | 6:00 PM

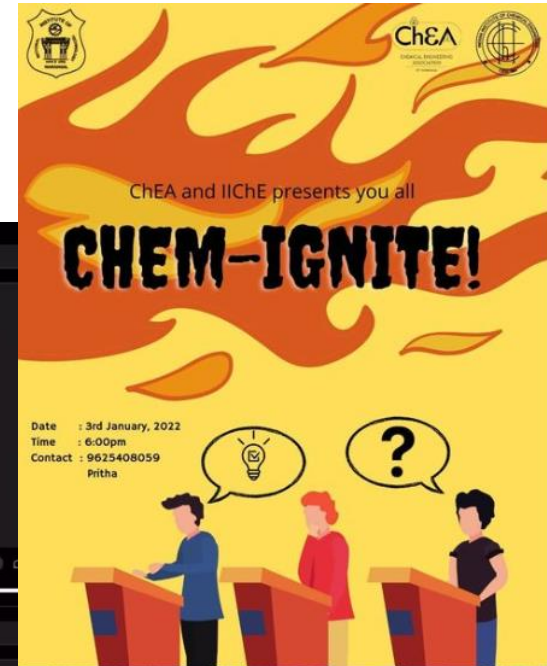
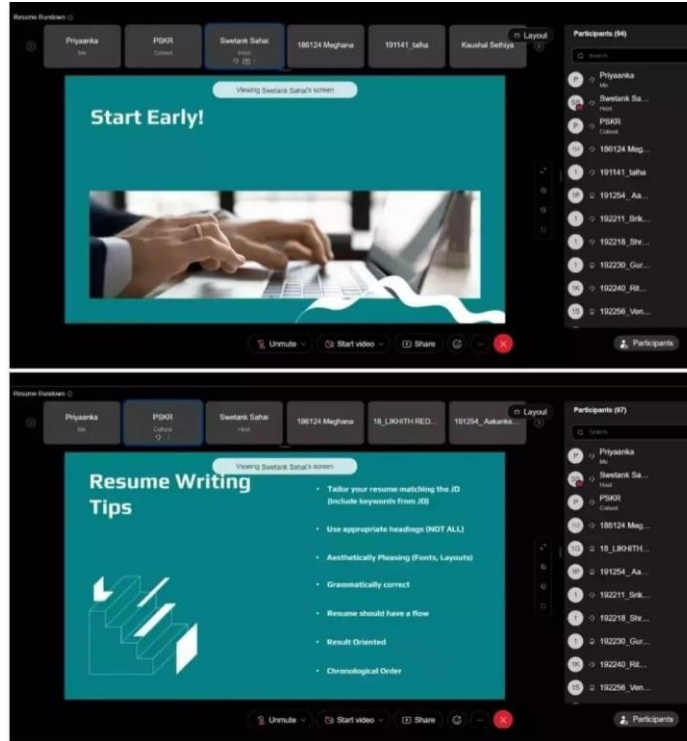
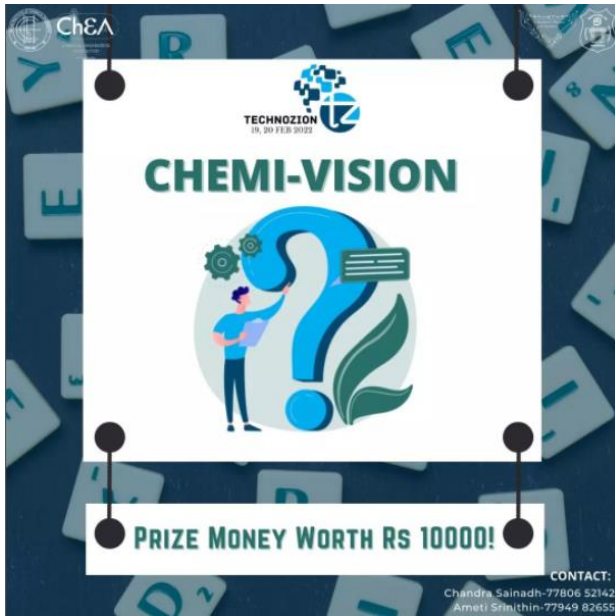
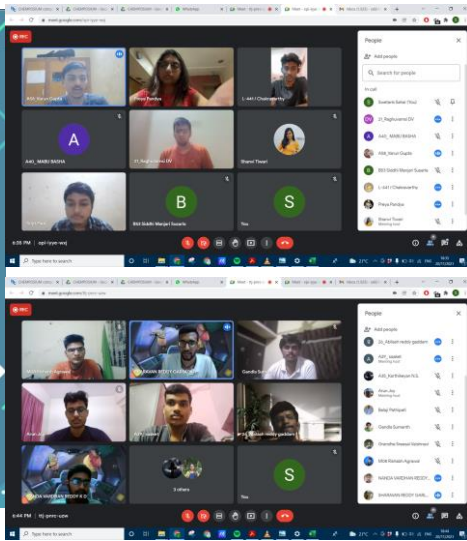
RESUME RUNDOWN

SESSION OUTLINE
TOOLS
SECTIONS
EVOLUTION
VERBS
RESUME SAMPLES

WITH PLACEMENT COORDINATORS

REGISTER NOW!

30TH OCTOBER - 12 PM



Ch&EA and IChE presents you all

KNOW YOUR BRANCH

Date : 18th January 2022
 Time : 7:00 pm
 Venue : GMeet
 Contact : 9625408059
 Pritha

Ch&EA presents

RESEARCH ROADMAP

23-01-22 SUNDAY 4PM

REGISTER NOW!

GRE
TOEFL
IELTS
MS
PHD

MARGH SRIVASTAVA : 7715059628

AREAS
PROJECTS
INTERNSHIPS
PAPERS

Research Internships and Projects

Opportunities:

- Mitacs Globalink
- NTU India
- NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE
- SPARK
- Summer Online Internship 2021
- Summer Research Internship Program

Ch&EA

Chem-O-Housie

BINGO!

REGISTER NOW !!!
 OPEN TO ALL
 GET A CHANCE TO WIN PRIZE
 MONEY WORTH 6000/-

CONTACT
 Manisha- 6303452919
 Parshav- 9834479297

Ch&EA

CHEM-E-CASE

CASE STUDY CHALLENGE

OPEN TO ALL

Prize Money Worth
INR 13,000/-

Swetank Sahai 9491618913
 Priha Shakharu 9625408059

Ch&EA

SEMEX

DON'T SETTLE FOR LESS!
 HUSTLE TO BE THE BEST!

- Guidance**
From all the seniors in every possible way, to achieve what you want.
- Expert Talks**
What was their approach towards the subject.
- Reference Books**
Which might help you score well.

For 2nd years- 30/1/22
 For 3rd years- 29/1/22
 Time: 5 PM

chea-iiche

Ch&EA

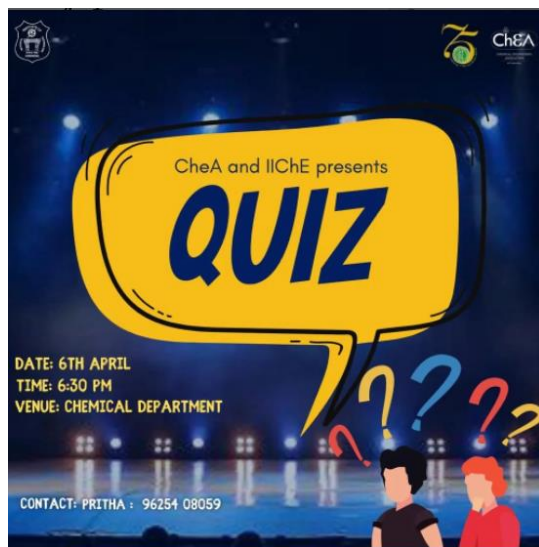
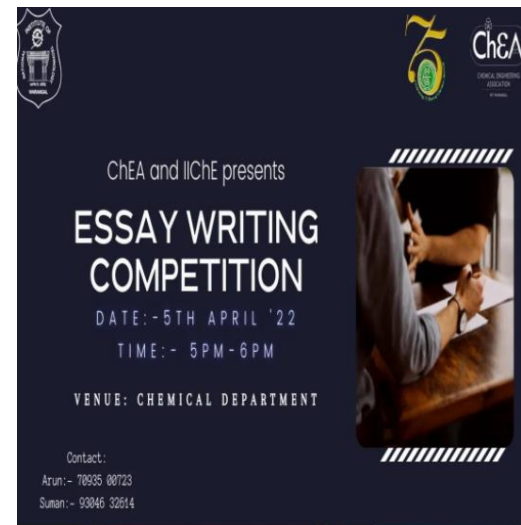
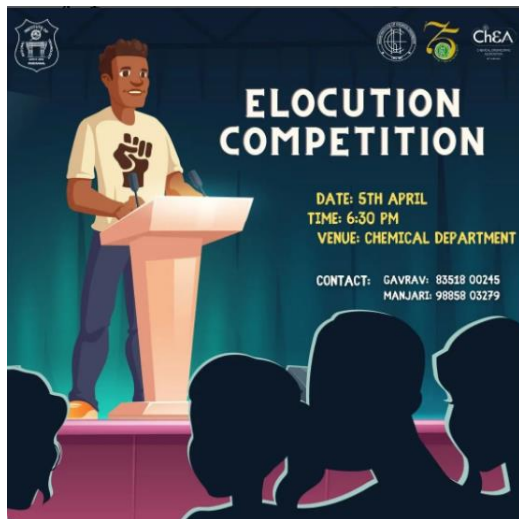
TECHNOZION CHEMENGAGE

GD DEBATE

FEB 19-20

PRIZES WORTH RS 12000

BALAJI : 6281592663
 VARUN : 9966695035



Professional Activities (contd..)

Technozion: Annual Tech Fest

- Aquafrost -
- Chemstorm – Design contest
- Chemtransit - Innovative
- Chemswitch - Design of a chemical switch
- Ignite – Material selection contest
- Papylon – Paper contest

Spring Spree: Annual Cultural Fest

SCHEMCON 2022



Indian Institute of Chemical Engineers (IICHE)
Celebrating 75 years of glorious journey...

National Institute of Technology Warangal &
IICHE Hyderabad Regional Centre

SCHEMCON 2022

Abstract Submission deadline is Extended Till 25th Aug 2022

18th Annual Session of Chemical Engineering Students Congress
Sustainable Technological Advancements In Chemical Industries -2022 (STAC-2022)

Register Today to win:
CASH PRIZES

Venue:
NIT Warangal

SAVE THE DATE
23rd & 24th Sept 2022

<http://cms.nitw.ac.in/schemcon/>

Online/Offline option

Bank Account Details
Acct Name: SCHEMCON IICHE - (2022)
Acct No.: 41050932165
IFSC Code: SBIN0020149
MICR: 506002030
State Bank of India,
NIT Campus, Warangal

Important Dates:

Submission of the Abstract	25 th August '22
Acceptance Notification & Registration Fee	31 st August '22
Last date of Registration Fee	15 th Sept '22
Conference Dates	23 rd & 24 th Sep '22

For more information: Organizing secretary, SCHEMCON-2022 (+91 999 46 466 10)

ChEA was awarded as the best technical association in the institute consecutively for TWO years in the last five years.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL
ACADEMIC APPRAISAL MEETING

Presented By

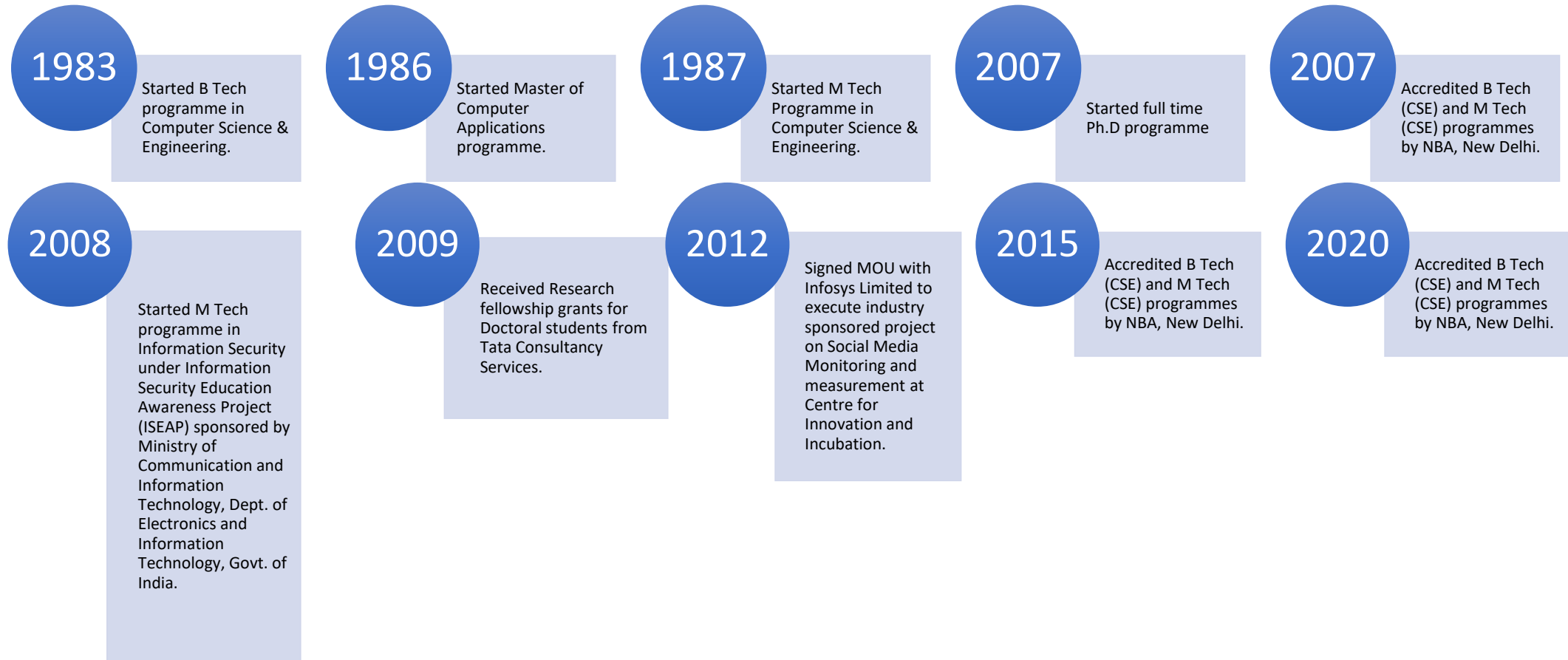
Dr. S.RAVICHANDRA

Associate Professor and Head

Best of its Kind in India

- *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.
- The Department has distinguished and committed faculty with **PhD** from reputed institutes.

History



Programmes Currently offered by the Department

- Bachelor of Technology in Computer Science and Engineering
- Bachelor of Technology in Computer Science and Engineering with Honors
- Minor in Computer Science and Engineering for other B.Tech Programmes
- Master of Technology in Computer Science and Engineering
- Master of Technology in Computer Science and Information Security
- Master of Computer Applications
- Doctor of Philosophy in Computer Science and Engineering

Vision of the Department

Attaining global recognition in Computer Science & Engineering education, research and training to meet the growing needs of the industry and society.

Mission of the Department

- Imparting quality education through well-designed curriculum in tune with the challenging software needs of the industry.
- Providing state-of-art research facilities to generate knowledge and develop technologies in the thrust areas of Computer Science and Engineering.
- Developing linkages with world class organizations to strengthen industry-academia relationships for mutual benefit.

Goals

- **Short-term:** Establishing Centre of Excellences for Cyber-Security, Software Testing, Cyber-Physical System, IOT, Data Science
- **Medium-term:** To establish Industrial sponsored research labs
- **Long-term:** To start UG/PG online programmes (world-wide) specialised in the domains such as AI/ML/IOT/Data Science/Network/Cyber Security

Faculty Members

- No. of Faculty members : 29/56
 - Professors : 9
 - Associate Professors: 7
 - Assistant Professors: 13
 - Adhoc faculty : 5
 - Women Faculty: 5 (Reg.) + 3 (Adhoc) = 8
- No. of Faculty members: 9
 - Senior Technical Assistant: 1
 - Technical Assistant :2
 - **Senior Assistant: 1**
 - Senior Technician: 1
 - Junior Assistant: 1
 - Technician: 2
 - Caretaker SG-II: 1

Infrastructure/Labs

- Software Engineering Laboratory - 90
- Computing Laboratory - 40
- Data Engineering Laboratory - 45
- Wireless and Security Laboratory -35
- Cloud Security Laboratory - 80 (Partially Sponsored by *ISEA Project Phase I*)
- Open Source Development Laboratory - 50
- Mini-Center of Excellence in Big Data -12 WS, 1 High End Big Data Server, NVIDIA DGX - A100 GPU Server for AI and Deep Learning

Ph.D. Awarded

- Awarded: 13 (2021-2022)
- Continuing : 83
 - Full Time: 38
 - Full Time IDRBT : 7,
 - Part Time: 38

Publications

- No. of Publications : 121+
- Journals (SCI/SCOPUS) : 78+
- International Conferences: 43+
- Book Chapters: 12+

Area of Research

- Cloud Computing
 - Database Technologies Data Mining
 - Distributed Systems
 - Computer Networks
 - Information Security
 - Machine Learning
 - Data Science
 - Artificial Intelligence
 - Neural Networks and Soft Computing
 - Software Engineering
 - Software Testing
 - Software Design
 - Program Analysis
 - Model driven framework for automated software generation in Distributed Systems environment
 - Parallel Processing
 - Rough and Fuzzy systems
 - Secure Multi-party Computations
- Secure Multi-party Computations
 - Mobile Computing,
 - Wireless Ad-hoc and Sensors Networks,
 - Cyber Physical Systems and Security
 - Computational Neuroscience
 - Computer Vision, Image Processing and Graphics
 - Multimedia and Video Processing
 - Algorithms and Graph Theory
 - Cryptanalysis
 - Bio-Informatics
 - IDS
 - Data Privacy

Research and Development Projects

- **No. of R&D Projects : 8 (6 New + 2 Ongoing) - Total Budget: Rs. 1.6 Cr Approx.**
- *“Blockchain Enabled Digital Identity and Authentication for Dynamic KYC (Know Your Customer) in Banking and Finance”* Dr. Rakesh Tripathi (Dept. of IT, NIT Raipur), **Dr. Balaprakash Rao**, from PRAYAS scheme of Technology Incubation Hub (TIH) of National Mission on Interdisciplinary Cyber Physical Systems, IIT Bhilai for INR 8.3 Lakhs.
- *“Solving Discrete Logarithm Problem over $GF(2^n)$ using Quasi Polynomial Time”* **Lead-PI: Dr. Padmavathy, Co-Lead-PI: Dr. S. Ravichandra**, Co-Lead-PI: Dr. Y. Srinivasa Rao; Funding Organization: Scientific Analysis Group, DRDO New Delhi, Amount: Rs 24,97 Lakhs, Duration: 2 years, 2022-2024
- *“Smart Cleaner Automatic Clean the Smart Contract by Repairing Dead Atomic Conditions”* **Dr. Sangharatna Godbole** (P.I), NIT Warangal and **Prof. P. Radha Krishna** (Co-PI), NIT Warangal , Technology Incubation Hub (TIH) of National Mission on Interdisciplinary Cyber Physical Systems (NMICPS) for IIT Bhilai Innovation and Technology Foundation (IBITF) in FinTech Technologies under “ **P r o m o t e a n d A c c e l e r a t i o n o f Y o u n g a n d A s p i r i n g t e c h n o l o g y e n t r e p r e n e u r s (P R A Y A S)** for Rs. 26.46 Lakhs (3 years) 2022-2025.

Research and Development Projects

- “*Design and development of Machine Learning based Security Aware Dynamic Resource Allocation Schemes for Multi-Tenant 5G Virtualized V*” by agency DST-SERB SRG Budget, Dr. Balaprakasa Rao Killi, Rs. 12.96 Lakhs (2 years).
- “*Deep multi-source data fusion network for recommender system Scheme*” by Faculty Research Programme Grant, IoE, University of Delhi, **Dr. Vikas Kumar (PI)**, Delhi University, **Dr. Venkaeteshwarao Kagita (Co-PI)** NIT Warangal, Rs. 3 Lakhs (2 years).
- “*Development of Prediction and Response System to Communicable Diseases in Real Time using Deep Learning*” by SERB, Dr. T. Ramakrishnudu (**PI**) NIT Warangal, Rs. 9.07 Lakhs (3 years).
-) Dr Raju Bhukya, EEQ/2019/000132, Budget INR 30.5 Lakhs, SERB, Duration 3 years.
- *Dynamic and Static Security Analysis of Large Power System using High* Dr. Ram Krishan, Dr. Dileep, **Dr. Sanjaya Kumar, Dr. Venkateswara Rao K**, NIT/EED/DRP/SERB/2020/, Budget: 45.58 Lacs, NSM-DST, 2 Years

Conference/FDPs Organized

- E&ICT – 95 (Online Mode)

Total Participants Trained 5273 (Faculty) + 102 (Research Scholar) = 5328

- CCE - 78 (Online Mode)

Total Participants Trained 3000+

- Gian Courses - 2
- Conference 1

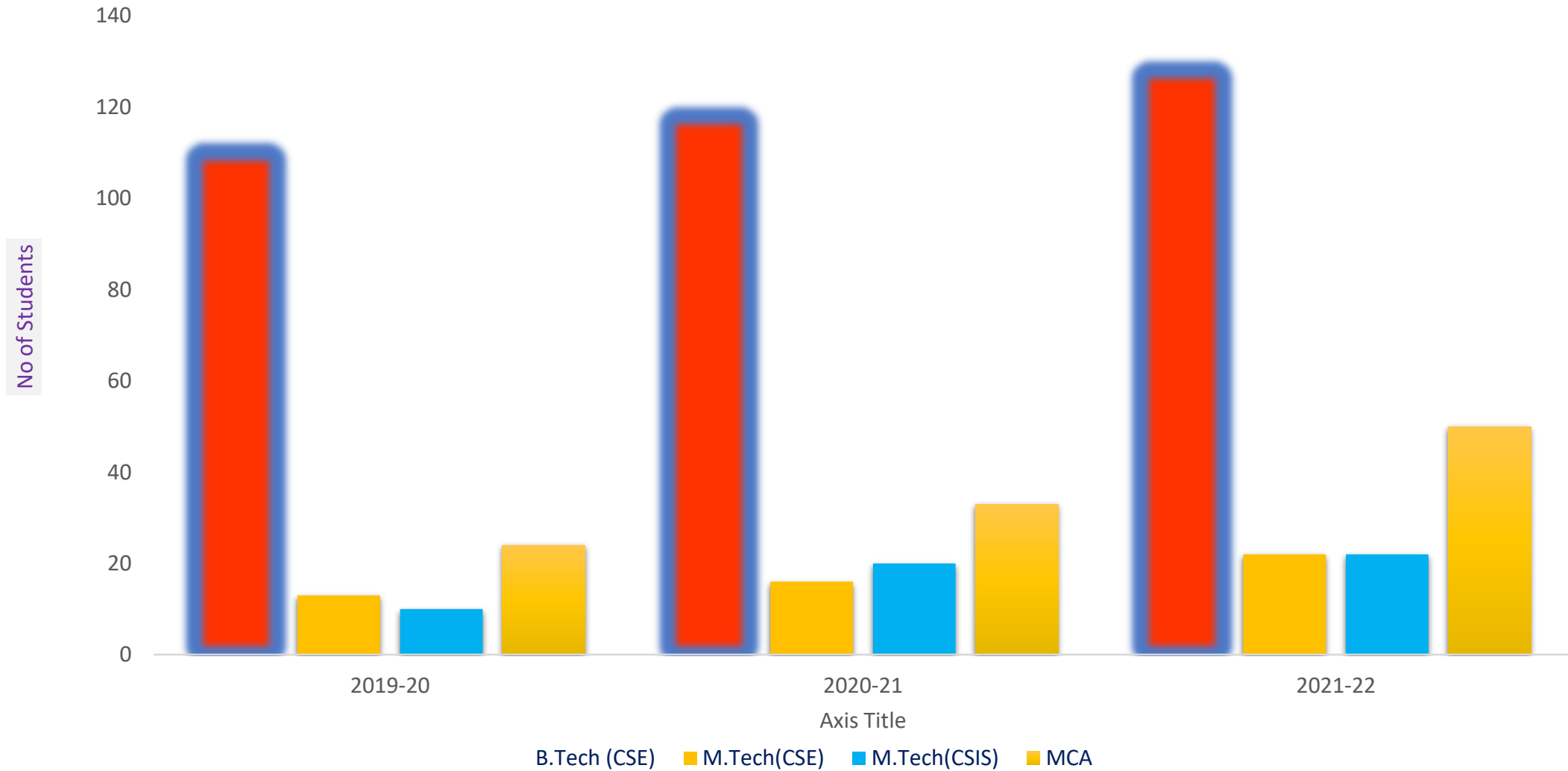
Awards and Talks

- Awards
 - Patents Granted 1
- Talks: 39

Placement Statistics

Course	Branch	Total Students	Total Students (Eligible*)	Placed	No. Placed Percentage	Max. Sal (LPA)	Min. Sal. (LPA)	Median (LPA)	Avg. Sal. LPA	Total
B.Tech	Computer Science & Engineering	143	129	128	99.2	62.5	6.5	25.4	25.5	128
M.Tech	Computer Science & Engineering	23	23	22	95.7	45.03	4.5	18.66	21.9	44
	CS & Information Security	23	23	22	95.7	45.03	10.23	17.2	22.1	
M.C.A.	Master of Computer Applications	55	50	50	100	36	6.5	10	13.4	50

Placement Statistics



Students with Package > 25 lacs (2021-22)

Sl. No.	Name	Roll number	Company	Type of offer	CTC
1	Priyansh Maheshwari	187246	DEShaw	PPO	62.5
2	Gaurav Singh	187117	DEShaw	PPO	62.5
3	Debrup Mondal	187214	DEShaw	PPO	57.5
4	Kushagra Kinger	187131	Microsoft	PPO	45.03
5	MD Saad Zeman	187136	Microsoft	PPO	45.03
6	Kakara Satya Vineel	187126	Microsoft	PPO	45.03
7	Atul Raguwanshi	187108	Microsoft	PPO	45.03
8	Snigdha	187260	Microsoft	PPO	45.03
9	Ritik Agrawal	187151	Microsoft	PPO	45.03
10	Harshita Hazarika	187119	Microsoft	Campus Placement	45.03
11	Tushar Sain	187268	Microsoft	Campus Placement	45.03
12	Anusha potu	187244	Microsoft	Campus Placement	45.03
13	Jithender Reddy Mamidi	187232	Microsoft	Campus Placement	45.03
14	Chidambaram Reddy Vennupusa	187271	Microsoft	PPO	45.03
15	Ajeeth Singh	187105	Arcesium	PPO	36
16	Khemraj Satish Marathe	187135	UBER	PPO	35.52
17	Vuppala Neeraj Kumar	187172	ServiceNow	PPO	33.59
18	Swapnik Saiba	187255	ServiceNow	PPO	33.59
19	Abhishek Suryavanshi	187103	ServiceNow	PPO	33.59
20	Krishnakant Daliya	187130	Servicenow	Campus Placement	33.59
21	Srikar Chinthareddy	187263	Servicenow	Campus Placement	33.59
22	Akhilesh Yadav	187205	Mindtickle	Campus Placement	32.5
23	Anshuman Singh	187107	Oracle	Campus Placement	32
24	Ashwini Kumar Dhaked	187207	Oracle	Campus Placement	32
25	Preet Patel	187147	Oracle	Campus Placement	32

Sl. No.	Name	Roll number	Company	Type of offer	CTC
26	Surya Sharma	187264	Oracle	Campus Placement	32
27	Vaibhav Jadhav	187170	Oracle	Campus Placement	32
28	Venkata Dhiren Seera	187257	Oracle	Campus Placement	32
29	Uday Kiran Suram	187169	Oracle	Campus Placement	32
30	Nithin Sreeram	187262	VISA	PPO	31.99
31	Rutwik Shrikant Dharanappagoudar	187153	VISA	PPO	31.99
32	Adarsh Sri Ram Muniganti	187104	VISA	PPO	31.99
33	PALIREDDY HARSHAVARDHAN REDDY	187241	VISA	PPO	31.99
34	Harjeet Singh	187218	Oracle	PPO	31.95
35	Kshithija Thirumala	187267	Oracle	PPO	31.95
36	Roshni Sannapu	187252	Oracle	PPO	31.95
37	Naman Mittal	187238	Oracle	PPO	31.95
38	Deepak Satheesan	187115	Oracle	PPO	31.95
39	Palash Gupta	187142	Oracle	PPO	31.95
40	Sagar Malla	187133	Oracle	PPO	31.95
41	Abhishek Kumar Shukla	187203	Oracle	PPO	31.95
42	Avinash Manyam	187233	Oracle	PPO	31.95
43	Venkata Harika Ongole	187171	Oracle	PPO	31.95
44	Budati Jaya Siva Sri Krishna Sai	187112	Oracle	PPO	31.95
45	Saketh Reddy vemula	187269	Oracle	PPO	31.95
46	Mayur Prasanna	187234	Oracle	PPO	31.95
47	Soham Mukherjee	187161	Oracle	PPO	31.95
48	ABHINAV JAGLAN	187202	Oracle	PPO	31.95
49	SHAMAL SHAIKH	187258	Oracle	PPO	31.95
50	Gagan Vamsi Reddy	187228	Oracle	PPO	31.95

Students with Package > 25 lacs (2021-22)

Sl. No.	Name	Roll number	Company	Type of offer	CTC
51	Abhiram Kusumba	187230	Oracle	PPO	31.95
52	Bhaskrjya Nath	187210	Oracle	PPO	31.95
53	Vanshika Agrawal	187270	Amazon	PPO	31.5
54	Soniya Dhoke	187162	Amazon	PPO	31.5
55	Prapti Maheshwari	187245	Amazon	PPO	31.5
56	Heena Mittal	187120	Amazon	PPO	31.5
57	Polisetty vamshi krishna	187243	Goldman Sachs	PPO	31.5
58	Pradyumn Shukla	187146	Goldman Sachs	PPO	31.5
59	Chavali V S S Chaitanya	187113	Goldman Sachs	PPO	31.5
60	Yashasvi Rai	187272	Goldman Sachs	PPO	31.5
61	Shreya Garg	187259	Goldman Sachs	PPO	31.5
62	Vinod Kumar kuruva	187229	Goldman Sachs	Campus Placement	31.5
63	Heba Riaz	187219	Goldman Sachs	Campus Placement	31.5
64	Patel Niravkumar Pravinbhai	187242	Amazon	Campus Placement	30
65	D.Koushik Sai Kiran Reddy	187213	CITRIX	PPO	29.4
66	Dasari Roshik	187116	CITRIX	PPO	29.4
67	Ankush Verma	187206	CITRIX	PPO	29.4

Students with Package > 25 lacs (2022-23)

Sl. No.	NAME	ROLL NO	COMPANY	TYPE	CTC
1	Mohd Sufiyan Ansari	197151	D E Shaw	PPO	62.75
2	Prayag Patel	197261	D E Shaw	PPO	62.75
3	Mamidi Sushith Reddy	197149	D E Shaw	PPO	51.75
4	Deekshita Tirumala	197125	Microsoft	PPO	51
5	Disha Inwati	197127	Microsoft	PPO	51
6	Rajat Goyal	197267	Microsoft	PPO	51
7	Pavan Kalyan Reddy Neerudu	197256	Microsoft	PPO	51
8	Vishwas Gajawada	197188	Microsoft	PPO	51
9	Sindhusa Padmanabhuni	197258	Microsoft	PPO	51
10	Meda Jaithra	197150	Microsoft	PPO	51
11	P.Gnana Samhitha	197160	Microsoft	PPO	51
12	Deepanshu Jindal	197126	Microsoft	PPO	51
13	Thanmayee Pounjula	197161	Microsoft	PPO	51
14	Suma Dasari	197124	Microsoft	FTE	51
15	Chinmay Hardikar	197131	Microsoft	FTE	51
16	Saswat Das	197273	Microsoft	PPO	51
17	Meghana Pasikanti	197159	Microsoft	PPO	51
18	Manoj Kumar Reddy	197259	Amazon	PPO	44.2
19	Waseem	197281	Amazon	PPO	44.2
20	Sai Bharath	197247	Amazon	PPO	44.2
21	Venkat sai Tejavath	197183	Amazon	PPO	44.2
22	Suchith	197220	Amazon	PPO	44.2
23	Aditya Srivastav	197205	Salesforce	PPO	42.83

Sl. No.	NAME	ROLL NO	COMPANY	TYPE	CTC
24	Rachit Bathla	197165	Salesforce	PPO	42.83
25	ShreeRam Mohanty	197266	Salesforce	PPO	42.83
26	Kashi Sharma	197141	Salesforce	PPO	42.83
27	Dinesh Reddy Sudireddy	197279	Salesforce	PPO	42.83
28	Shubhank Kulshreshtha	197276	Salesforce	PPO	42.83
29	Abhishek Pratap Singh	197103	Cashfree	FTE	39
30	Harshith Bansal	197132	Cashfree	FTE	39
31	Ishita Gupta	197235	Uber	PPO	38.03
32	Sanath Kumar Vengaldas	197287	Uber	PPO	38.03
33	Nikitha Pulluri	197263	UBER	FTE	38
34	Sreyas Bekkam	197119	Providence	PPO	37
35	Kokkiralala Rohith Rao	197244	Providence	FTE	37
36	Manoj Boganadham	197121	Goldman Sachs	PPO	36.5
37	Apurv Jain	197211	Goldman Sachs	PPO	36.5
38	Aashi Agarwal	197201	Goldman Sachs	PPO	36.5
39	Deepak Prasad	197225	Goldman Sachs	PPO	36.5
40	Yashpal Rajput	197190	Goldman Sachs	PPO	36.5
41	Vedant Gandhi	197187	Servicenow	PPO	34.5
42	Jaspreet singh	197137	Servicenow	PPO	34.5
43	Sasi Kanth	197146	Servicenow	PPO	34.5
44	Nemi Brahmachari	197257	Servicenow	PPO	34.5
45	Anish Agarwal	197110	VISA	PPO	33.54
46	Darshan Solanki	197223	VISA	PPO	33.54
47	Hemanth Termanti	197283	VISA	PPO	33.54
48	Vandana Pachipala	197285	VISA	PPO	33.54
49	Yash Kumawat	197189	VISA	PPO	33.54

Total Students

Sl. No	Course	Year	Students
1	B. Tech	IV	180
2	B. Tech	III	180
3	B. Tech	II	180
4	M. Tech(CSE)	II	35
5	M. Tech(CSIS)	I	44
6	MCA	III	43
7	MCA	II	39
8	MCA	I	46
9	Ph.D	-	83

Purchases

<u>Sl.No</u>	Details	Cost(In lakhs)
1	NetSim Software is purchased for modeling, simulation and research in various networking technologies and protocols including 5G, IoT, Wireless LAN (Wi-Fi), Mobile Adhoc Networks (MANETs), Wireless Sensor Networks, Cognitive Radio Networks, Vehicular Adhoc Networks (VANETs), LTE Networks	14,13,927/-
2	NVIDIA DGX A100 Server	99,82,363/-
3	High End Server for Cloud Security	14,00000/-
4	IOT Software	13,00000/-
Total		14096290/-

Equipments

- Purchased and Installed High End Server in Cloud Security Laboratory (Sponsored by ISEA Project Phase –II)
- Purchased & Installed a total **FIVE** HP Z6 G4 WORKSTATION Model E27G4.RAM – 64. HDD – 2 TB, cost Rs. 4.32 Lakhs
- **ONE** Big GPU Workstation, cost Rs. 99.82 Lakhs

The World's First AI System

- NVIDIA DGX - A100 is the universal system for all AI and Deep Learning workloads, offering unprecedented compute density, performance, and flexibility in the world's first 5 petaFLOPS AI system.
- With deep learning neural networks becoming more complex, training times have dramatically increased, resulting in lower productivity and higher costs. NVIDIA Deep learning technology and complete solution stack significantly accelerate your AI training, resulting in deeper insights in less time, significant cost savings, and faster time to ROI.
- Its running parallel jobs and multiple users without impacting system performance. The large models using a fully GPU optimized software stack and up to 320GB of GPU Memory.
- *Our student tested on large dataset with deep learning model on 16gb GPU Workstation for competition of one epoch. It took 3 hours time to complete the computation. However, the same application in DGX A100 machine, it took us 30 mins for 5 epochs*

4X NVIDIA A100 TENSOR CORE GPUs

160 or 320 gigabytes (GB) total GPU memory.
Fully interconnected with high-bandwidth,
third-generation NVIDIA® NVLink® at 200 GB/s

7.68 TERABYTE (TB) PCIe GEN4 NVME SOLID-STATE DRIVE (SSD)

Delivers 1.4M IOPS storage performance,
2X faster than PCIe Gen3 NVMe SSDs

REFRIGERANT COOLING

Whisper quiet, a perfect
solution for your desk while still
being optimized for performance



64-CORE AMD CPU AND PCIe GEN4

3.2X more cores to power multiple
users and the most intensive AI jobs,
512GB system memory

NVIDIA DGX™ DISPLAY ADAPTER

4x Mini DisplayPort, 4K resolution

REMOTE MANAGEMENT

Integrated 1Gbase-T Ethernet baseboard
management controller (BMC) port

MOUs

- The NIT Warangal executed a MOU with Infosys Ltd., through the Department of Computer Science and Engineering (**Dr. Sangharatna Godbole** and **Prof. P. Radha Krishna**) in the month of January 2022.
- Centre of Excellence in Cyber-Security by DGSI has entered into MOU with NITW. DGSI agreed to offer **Two** fulltime sponsorship to the Ph.D Students.

Recognition

Faculty Members: Two Start-ups

- **Dr. Sangharatna Godbole and Prof. P. Radha Krishna** incorporated a Startup named “NITMINER Technologies Private Limited” powered by Computer Science and Engineering, NIT Warangal and Sponsored by PRAYAS IBITF IIT Bhilai.
- **Dr. Balaprakash Rao Killi** incorporated a Startup named “Vishwa Prayag Technologies Private Limited” powered by Computer Science and Engineering, NIT Warangal and Sponsored by PRAYAS IBITF IIT Bhilai.

- Both the start-ups will develop the products and will generate the revenue.

Phd Students Achivements

Sl. No.	Ph.D. Scholar	Supervisor	Post	Organisation
1	Dr. J. Pavan Kumar	Dr. P. V. Subbareddy	Assistant Professor	NIT Trichy
2	Dr. Vinay Raj	Dr. Ravichandra Sadam	Assistant Professor	NIT Trichy
3	Dr. Hemkumar D	Dr. S Ravi Chandra & Prof. DVLNSomayajulu	Assistant Professor	VNIT Nagpur
4	Dr. Vinay Raj	Dr. Ravichandra Sadam	PostDoc	Ireland



Computer Science and Engineering Association

- Our students are extremely active in CSEEA. This association organises several important events and workshops for increasing the skills of the students of the department.
- Our students have conducted several competitions, talks, workshops, events as follows:

CODEMON Catalogs



Codemon Edition

Gallery

Filter Sort Q

Questions on Binary Tree

Easy

Medium

Binary Tree Questions

Stacks and Queues

	Array	Singly-Linked List	Double-Linked List
by index	O(1)	O(N)	O(N)
before first node	O(N)	O(1)	O(1)
after first node	O(N)	O(1)	O(1)
after last node	O(1)	O(N)	O(N)
the first node	O(N)	O(1)	O(1)
a given node	O(N)	O(N)	O(N)
the last node	O(1)	O(N)	O(N)
a given node	O(N)	O(N)	O(N)

Linked List

Sorting and Searching

Binary Tree

Max Heap

Min Heap

Heap

Binary Search Tree

- Search tree property
 - all keys in left subtree smaller than root's key
 - all keys in right subtree larger than root's key
- Result:
 - easy to find any given key
 - insert/delete by traverse this

Binary Search Tree

Segment Tree

- Segment Trees are mainly used for range queries with range or point updates for an array.
- Segment Trees are generally implemented as array data structure.
- Each node of segment tree has l and r values associated with it which shows that node is

Segment Tree

AVL Trees

BALANCE FACTOR

- Balance factor of a node = height(left subtree) - height(right subtree)

AVL Trees

Graph - I

Graph - I

In Graphs 2, we will look at:

- Cycle Detection in graph
- Topological Sorting
- Kahn's algorithm
- Minimum Spanning Tree(MST)
- Prim's Algorithm

Graphs - II

Dynamic Programming is an algorithmic paradigm that solves a given complex problem by breaking it into sub-problems and stores the results of sub-problems to avoid computing the same results again.

We can apply DP technique to those problems that exhibit the below 2 characteristics:

Dynamic Programming

CODEMON Contest: Date: 17TH October, 2021, 2p.m. to 4p.m. Platform: Hacker rank

- **CODEMON Doubt Clearing Session**

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide with a grid diagram. The grid has 7 rows labeled L1 to L7. The first two rows (L1 and L2) have green squares, while the remaining rows (L3 to L7) have red squares. A legend at the bottom of the grid indicates that green squares represent 'Home Town' and red squares represent 'Intersection'. Handwritten annotations include '1, 1, L2' and '6, 12 10' in a box. The Zoom interface includes a 'REC' button, a 'Chirantan Muliya is presenting' indicator, and a grid of participant tiles. The participants listed are: Abhishek Pratap ..., Chirantan Muliya (highlighted), B73_Sumaiyya, A 67 VASAMSETTL..., Monisha Kant, Nitin Kolli, Sakshi Sancheti, ARUN KALUVAKO..., Sathvika Moramp..., Jaydeep patidar, 12 others, and You. The bottom status bar shows the time as 4:48 PM and the meeting name as 'Codex (CODEMON Edition)'.

YBlockchain Summit

We are proud to announce a collaboration between

Yb **CSEA**

YBlockchain x CSEA NITW

Join our discord server at yblockcha.in/community

Yb **YBlockchain**
Blockchain · Upskilling · Mentorship Resources

BLOCKCHAIN SUMMIT

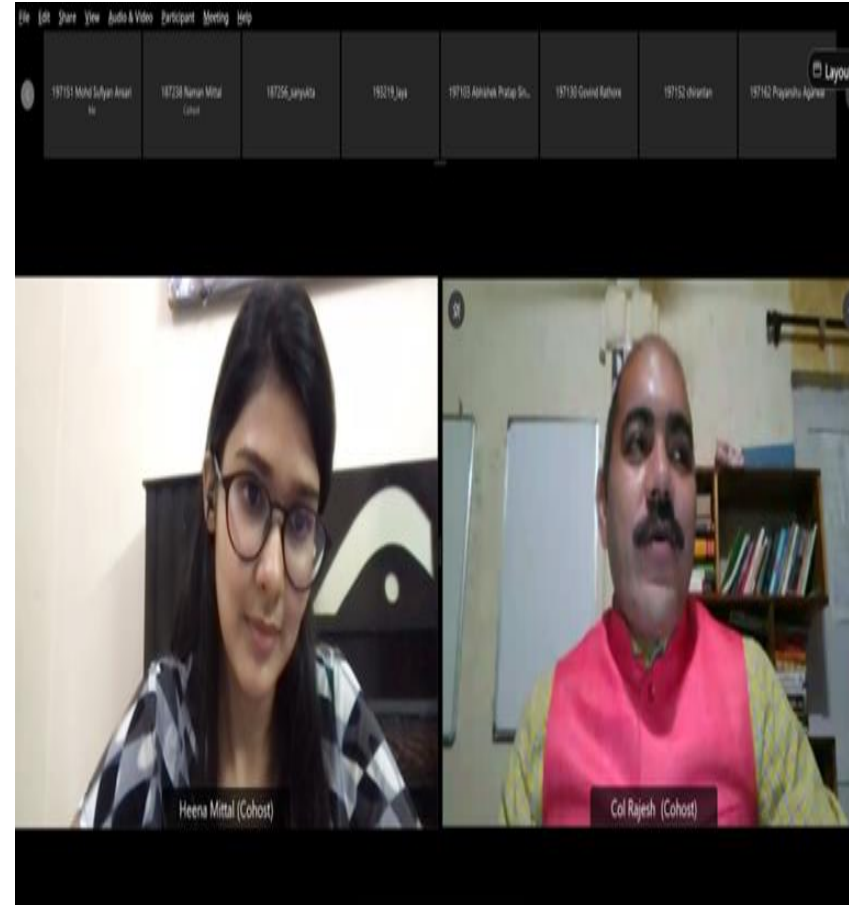
Expert speakers and panel sessions
Guided hands-on blockchain training
Access to curated resources

15-17
OCTOBER
2021

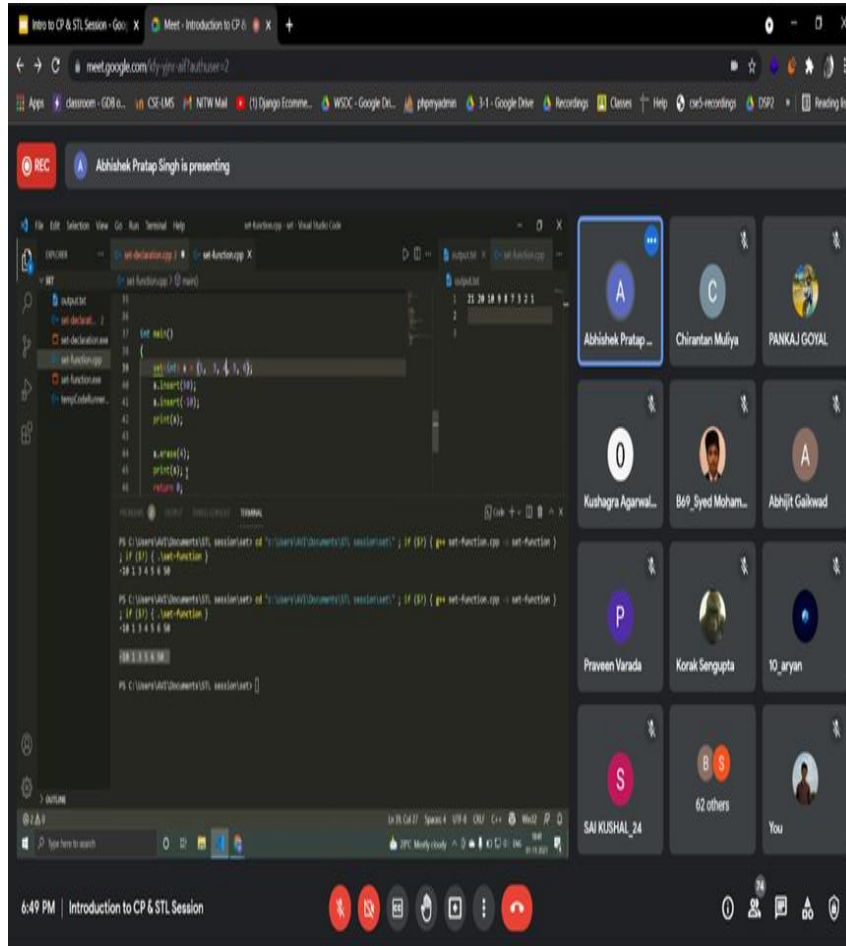
Stay Tuned for Registrations

Talk with Col. Rajesh Adhau

- Date: 24th October 2021,
- The CSE association started off this academic year's "Talks with CSEA" with a highly anticipated talk with Col (Dr.) Rajesh Adhau. A Kargil war veteran, a hero of the country, his job demanded making fearless decisions with sometimes uncertain results.



Introduction to Competitive Programming & STL Session

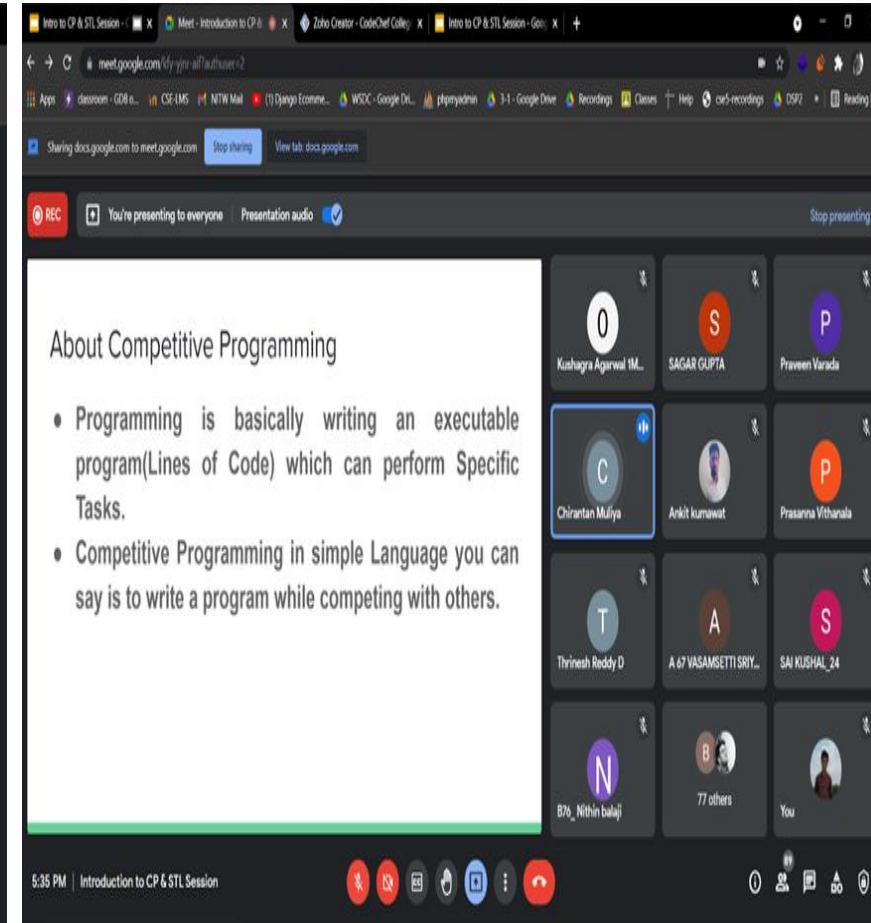


The screenshot shows a Google Meet window with a code editor open. The code editor displays the following C++ code:

```
#include <bits/stdc++.h>
using namespace std;
int main()
{
    int n;
    cin >> n;
    vector<int> v;
    for(int i=0; i<n; i++)
    {
        int x;
        cin >> x;
        v.push_back(x);
    }
    sort(v.begin(), v.end());
    for(int i=0; i<n; i++)
    {
        cout << v[i] << " ";
        if(i%5==4)
            cout << "\n";
    }
    return 0;
}
```

The output of the code is: 22 28 18 9 7 2 1

The meeting interface shows a grid of participants with the following names visible: Abhishek Pratap Singh, Chirantan Muliya, PANKAJ GOYAL, Kushagra Agarwal..., Ba9_syed Moham..., Abhijit Galkwad, Praveen Varada, Korak Sengupta, 10_aryan, SAI KUSHAL_24, 62 others, and You.



The screenshot shows a Google Meet window with a presentation slide titled "About Competitive Programming". The slide content is:

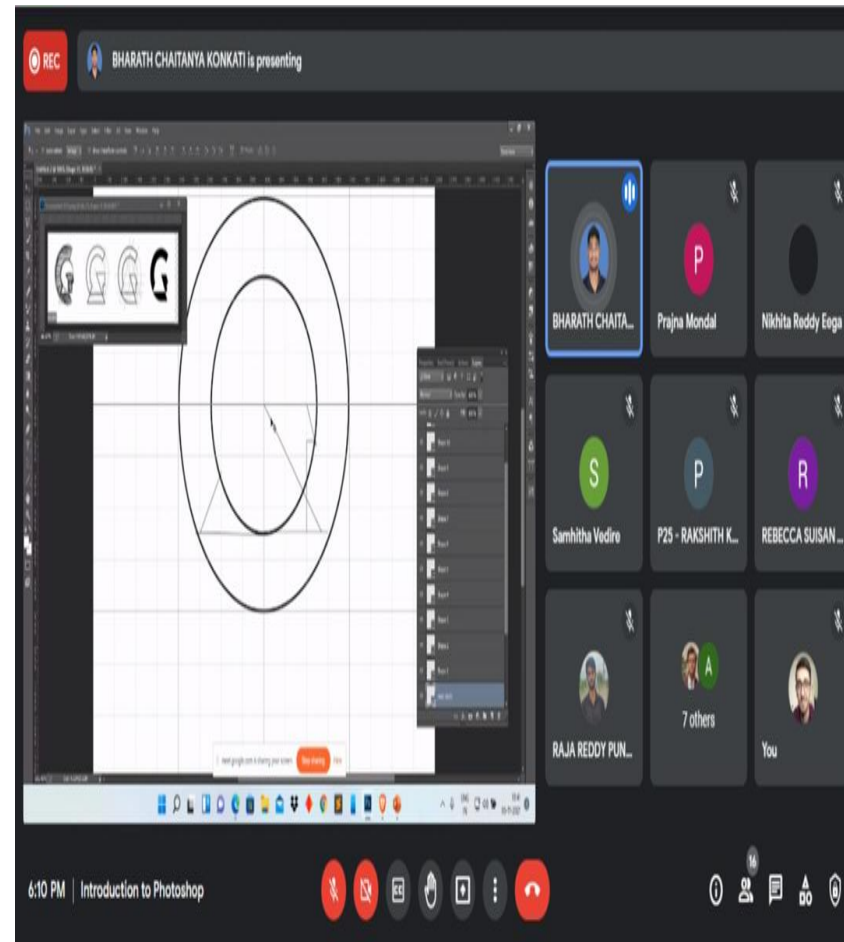
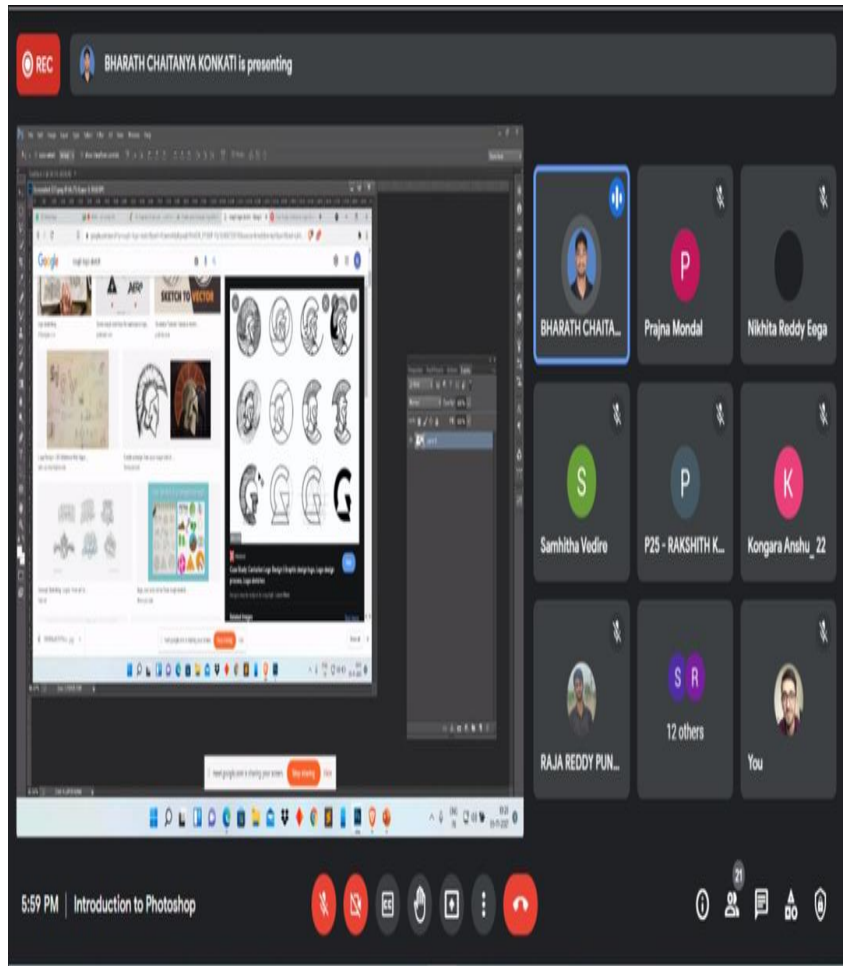
About Competitive Programming

- Programming is basically writing an executable program(Lines of Code) which can perform Specific Tasks.
- Competitive Programming in simple Language you can say is to write a program while competing with others.

The meeting interface shows a grid of participants with the following names visible: Kushagra Agarwal..., SAGAR GUPTA, Praveen Varada, Chirantan Muliya, Ankit kumawat, Prasanna Vithanala, Thrineth Reddy D, A 67 VASAMSETTI SRY..., SAI KUSHAL_24, B7o_Nithin balaji, 77 others, and You.

DESIGNATHON

Date: 5th – 6th Nov Collab with Painting Club Themes were UI/UX, Fighting for Rights, and Logo Design.



GSoC Decoded: 7th Nov 2021



Ezreverze 12th-14th Nov 2021

The screenshot shows a Cisco Webex Meeting interface. The top bar includes 'Meeting Info', 'Hide Menu Bar', and a menu with 'File', 'Edit', 'Share', 'View', 'Audio & Video', 'Participant', 'Meeting', 'Breakout Sessions', and 'Help'. The participant bar at the top lists: Abhishek Prasad Singh (Co-host), Rahul Khatav, Oboy (Co-host, highlighted with a blue box), Vandana Pachpala (Co-host), Deekshita Tirumala (Host), and 193209_Page. The main window displays a terminal window titled 'Viewing Oboy's application(s)'. The terminal shows a shell script with various functions and commands. The chat window on the right shows a list of participants (207156 Pratham Bande, 207262RohitRajev, Abhishek Kumar) and a chat message: 'Go to insert mode and right click. From Deekshita Tirumala to everyone: 7:02 PM you get the paste option. From Siddharth S to everyone: 7:07 PM or just press esc key and type 4yy or 13yy to copy 4 or 12 lines then move the cursor to where u want to paste. and press p key in keyboard.' The bottom bar includes 'Unmute', 'Start video', 'Share', and 'Participants'.

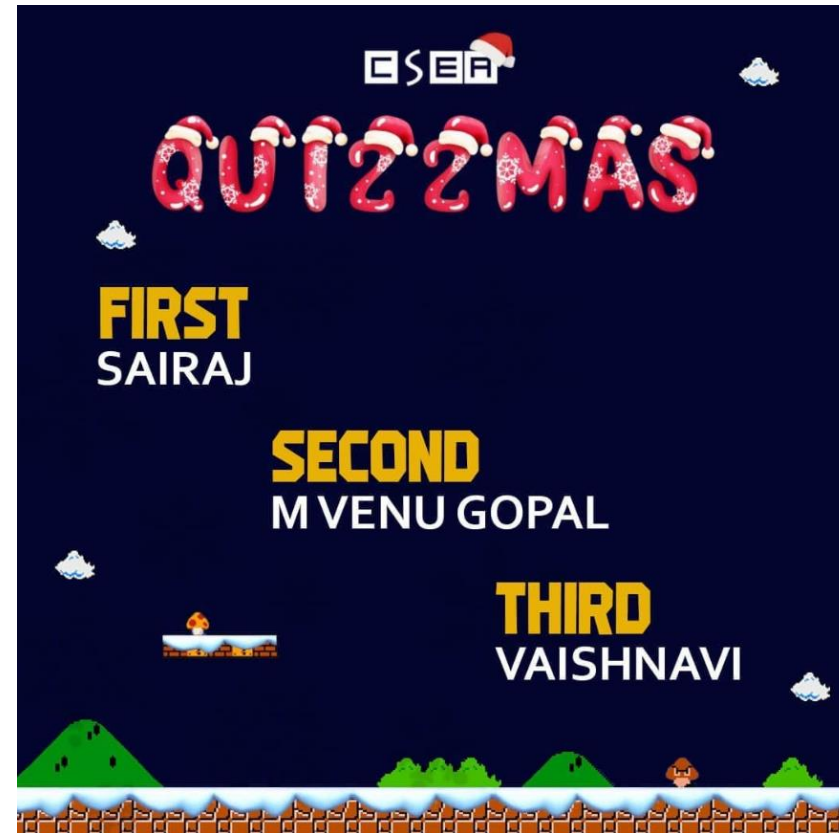
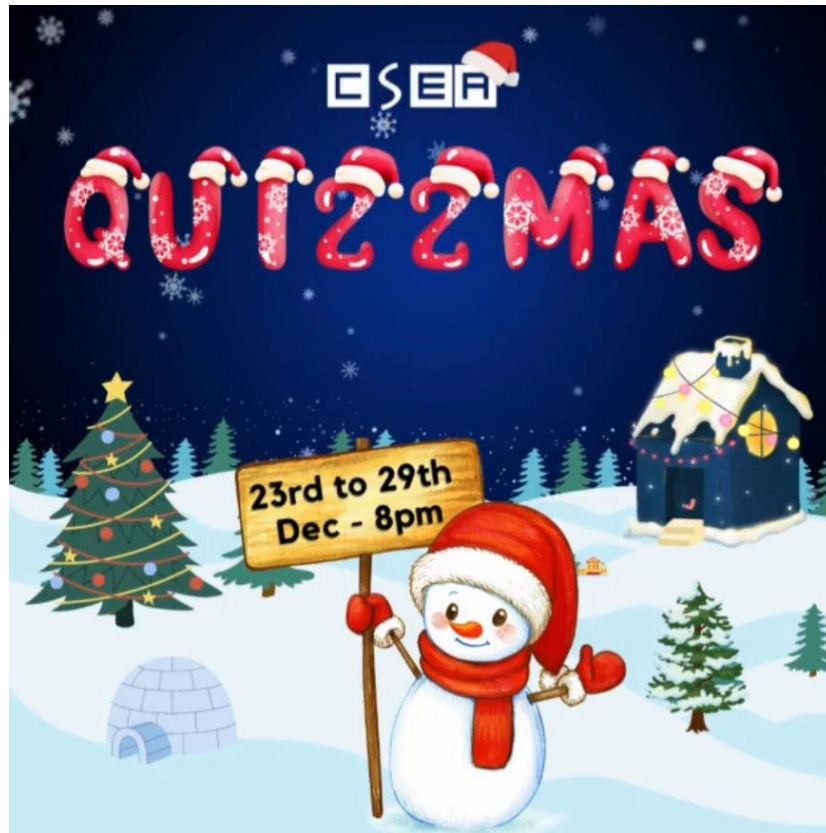
The screenshot shows a Cisco Webex Meeting interface. The top bar includes 'Meeting Info', 'Hide Menu Bar', and a menu with 'File', 'Edit', 'Share', 'View', 'Audio & Video', 'Participant', 'Meeting', 'Breakout Sessions', and 'Help'. The participant bar at the top lists: Abhishek Prasad Singh (Co-host), R, 187135 Khemraj Marathe (Co-host, highlighted with a blue box), Vandana Pachpala (Co-host), Deekshita Tirumala (Host), and Abhishek Kumar. The main window displays a presentation slide titled 'Viewing 187135 Khemraj Ma...'. The slide content is: '\$ gzip This is used to compress the files. Each single file is compressed into a single file. The compressed file consists of a GNU zip header and deflated data. -f : force -d : unzip -r : rename'. Below the slide is a terminal window showing a list of commands: 1 khemraj@khemraj-HP-Pavilion-Notebook:~/DEV/rythm \$ ls, 2 departments.csv files.txt pages.csv _pycache_, 3 khemraj@khemraj-HP-Pavilion-Notebook:~/DEV/rythm \$ gzip -f pages.csv, 4 khemraj@khemraj-HP-Pavilion-Notebook:~/DEV/rythm \$ ls, 5 departments.csv files.txt pages.csv.gz _pycache_, 6 khemraj@khemraj-HP-Pavilion-Notebook:~/DEV/rythm \$ gzip -d pages.csv.gz, 7 khemraj@khemraj-HP-Pavilion-Notebook:~/DEV/rythm \$ ls, 8 departments.csv files.txt pages.csv _pycache_. The chat window on the right shows a list of participants (Abhishek Pr..., Deekshita Tirumala, 187135 Khemraj Marathe, Oboy) and a chat message: 'from Deekshita Tirumala to everyone: 5:14 PM If anyone has any doubts please feel free to put them up on the chat! from Maradana Yasaarath_25 to everyone: 5:14 PM ok from Maradana Yasaarath_25 to everyone: 5:18 PM no'. The bottom bar includes 'Unmute', 'Start video', 'Share', and 'Participants'.

Quiz Di Mezz'ora : 28th Nov 2022



- This quiz was for 30 minutes and had 30 questions: 10 easy, 10 medium, and 10 difficult. The questions were based on logical understanding, mental ability, and cryptography
- Attendance of around 80 people.

Quizzmass 26th -31st Dec 2021



Blockchain Hackathon

- Dates: 10th – 30th December 2022
- CSEA in collaboration with ***YBlockchain***, is currently conducting the 20-day Blockchain Hackathon. It is a follow up after the Blockchain Summit. Students from all years and all streams have taken part in it and conduction of this event has kick-started a culture of Blockchain.

Newsletter interview 19th Dec 2021



SAHITI YERRAMILLI

CSE NIT Warangal '19
School of Computer Science, Carnegie Mellon University



Was pursuing a master's always your goal or did your professional career or college experience shape that decision?

It was always my goal as I wanted to study further. But I was uncertain about what I wanted to specialize in. So, I think working at Microsoft gave me a window to think about what I was interested in. I worked on a mixed reality project during my time there which really helped me gain more insight into the real-life application of the subject. Besides if your professional career is related to your master's course, it adds a certain weightage to your resume which gives you an edge during the selection process.

Did you have any guidance while applying to CMU?

It was just from a few friends, my dad, and brother. Application process requires a lot of writing and making changes is very tedious, especially in the case of statement of purpose. SOP is something that doesn't happen overnight. It takes a lot of time and effort as you're uncertain in the beginning. Getting it reviewed by a lot of people is the key. You understand its faults and learn how to improve it.

Web Dev Bootcamp

HTML and CSS - 12th Feb, 5-6:30 PM JS - 13th Feb, 5-6:30 PM Github and Portfolio website - 18th Feb, 9:30 PM
Platform- CISCO WebEx



Coderythm 1.0 : 11th January 2022



The poster features a dark red background with a central black rounded rectangle. At the top left of the black rectangle is the 'SEA' logo. In the center is a white hexagonal badge containing the CodeChef logo and the text 'CODECHEF <NIT WARANGAL> Chapter'. Below this, the event title 'CODERYTHM 1.0' is written in large, bold, yellow-outlined letters. The date and time 'JANUARY 11, 2022 07:00 - 09:30 PM' are displayed in white. At the bottom of the black rectangle, it says 'in collaboration with' followed by the CodeChef logo. Below the black rectangle, the contact information 'For queries: Tushar Sain +91-7982175066' is written in white. At the very bottom, the names of the problem setters 'Problem Setters : Abhishek | Chaitanya | Chirantan | Pankaj | Sufiyan' are listed in white.

SEA

CODECHEF
<NIT WARANGAL>
Chapter

CODERYTHM 1.0

JANUARY 11, 2022
07:00 - 09:30 PM

in collaboration with 

For queries: Tushar Sain +91-7982175066

Problem Setters : Abhishek | Chaitanya | Chirantan | Pankaj | Sufiyan

Valar Doubtulis: 8th January & 9th January

A screenshot of a Zoom meeting. The top bar shows 'Devika Baid_23 is presenting'. The main window displays Visual Studio Code with a C++ program named '5.cpp'. The code is as follows:

```
1 int main()
2 {
3     int n;
4     cin >> n;
5     while(n--)
6     {
7         int i;
8         for(i=1; i<=n; i++)
9             cout << " " << i << " ";
10        cout << "\n";
11    }
12    return 0;
13 }
```

The terminal output shows the execution of the program with input '3 4' and output '3 4', and input '2 4' and output '2 4'. The Zoom interface shows a grid of participants: Devika Baid_23, 21CSBOA4S SUPR..., TANISHA KAR 21C..., DAKSH DEEP, Arjun Khare CSBO..., ARNAV AGARNAL, Johan Biju George, PRATHAM BANDE, 21CSBOA03 Ansh..., and 54 others. The bottom status bar shows '6:35 PM | odt-rmb-yfq'.

A screenshot of a Zoom meeting. The top bar shows 'Nikhita Reddy Ega is presenting'. The main window displays the OnlineGDB website. The code editor shows a C++ program:

```
1 int main()
2 {
3     int i = 0; // i=1
4     i = i + 1;
5     cout << i;
6 }
7 /**
8  Ans: 0
9 */
10 //
11
12
13
14 Q12)
15 int main(){
16     int a = 10, b = 5;
17     a += b; // a+=b -> a=10+5=15
18     b = a - b; // b=10
19     a += b; // a+=b=15+10 =25
20     cout << a << " " << b;
21 }
22 /**
23  Ans: 25 10
24 */
25
```

The terminal output shows 'Ans: 25 10'. The Zoom interface shows a grid of participants: Nikhita Reddy Ega, 21CSBOA23 J ROHIT, and 05 Atharv Kulkarni. An 'In-call messages' panel on the right shows a conversation:

friend is reserved keyword

SAATVIK SRIVASTAVA 5:40 PM
got it

Mohd Sulayan Ansari 5:40 PM
friend is used in class (you will know later) for functions

SAATVIK SRIVASTAVA 5:40 PM
thanks!

21CSBOA23 J ROHIT 5:40 PM
Please repeat

11 th question

05 Atharv Kulkarni 5:40 PM
Yeah pls repeat 11th

The bottom status bar shows '5:49 PM | odt-rmb-yfq'.

Tri-NIT Hackathon 29th Jan 2022



Spider RED Club

CSEEA

Association for Computing Machinery
NITK Student Chapter

TRI-NIT HACKATHON

JANUARY 29

Registrations are now open!

QR code for registration



REGISTER NOW

TRI-NIT HACKATHON

sponsored by

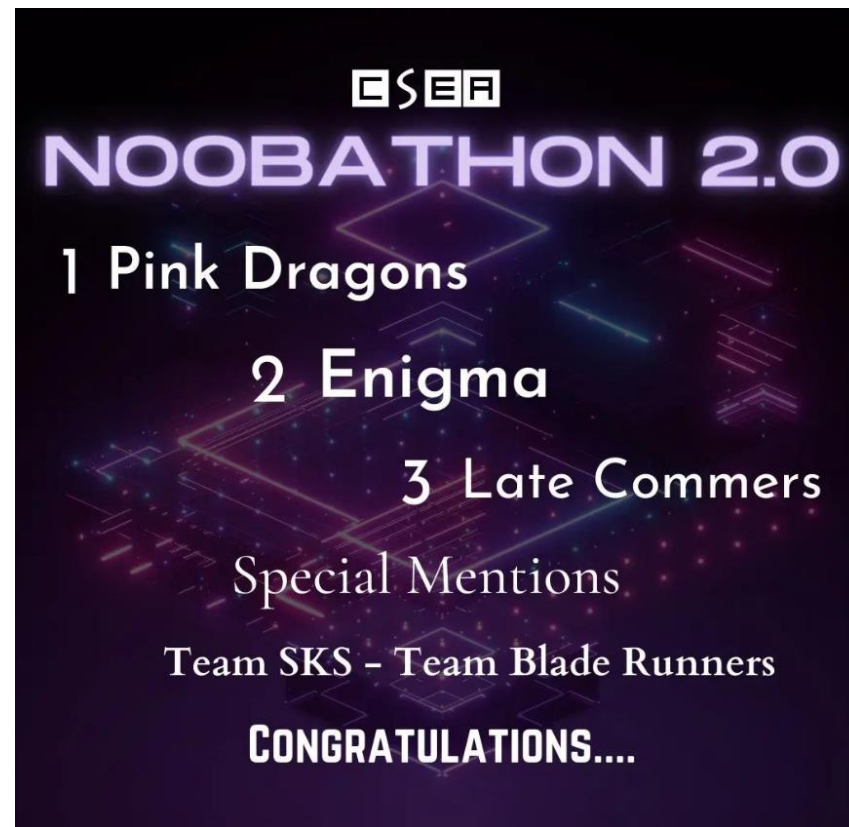
solt BharatX SKILL LYNC Klapz

Registrations close on January 27!

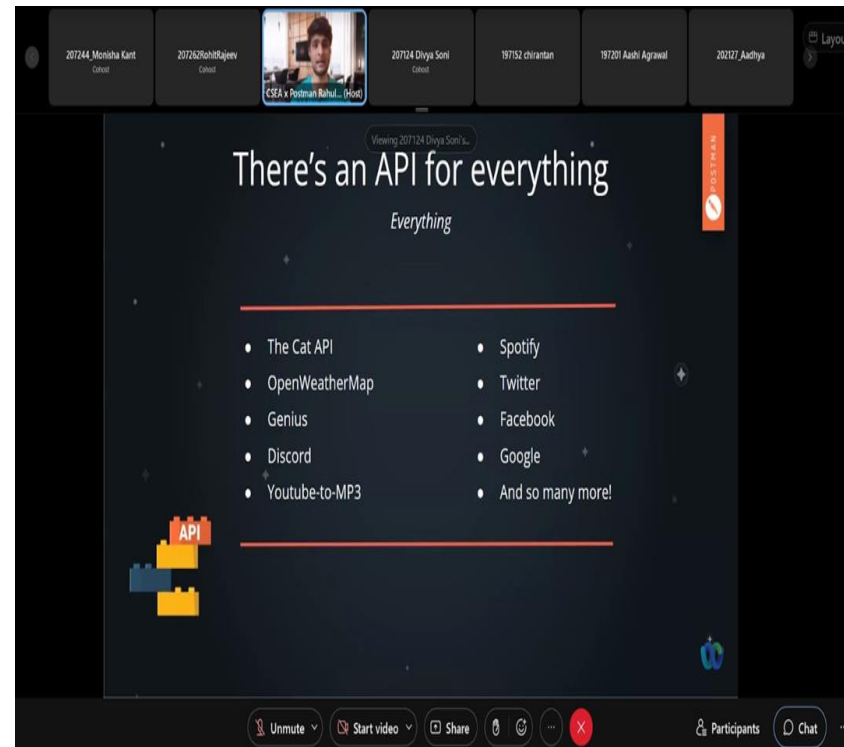
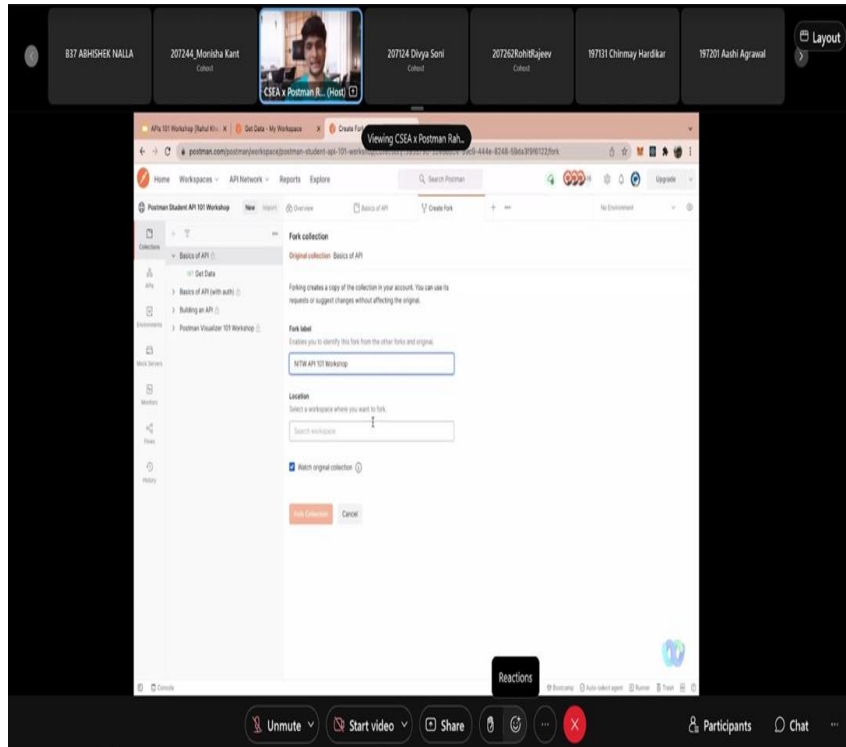
₹ 25,000 2 ND PLACE	₹ 35,000 1 ST PLACE	₹ 15,000 3 RD PLACE
₹ 7,500 NOTABLE MENTION	₹ 7,500 NOTABLE MENTION	

QR code for registration

NOOBATHON 2.0 : 13th April to 14th April 2022



POSTMAN API: 5th March 2022



VIVA LA PROGRAMMING:

4th, 5th, and 6th April 2022



CHRONOCODE: 23rd April 2022



CSEER and  PRESENT

CHRONOCODE

powered by  CHRONUS

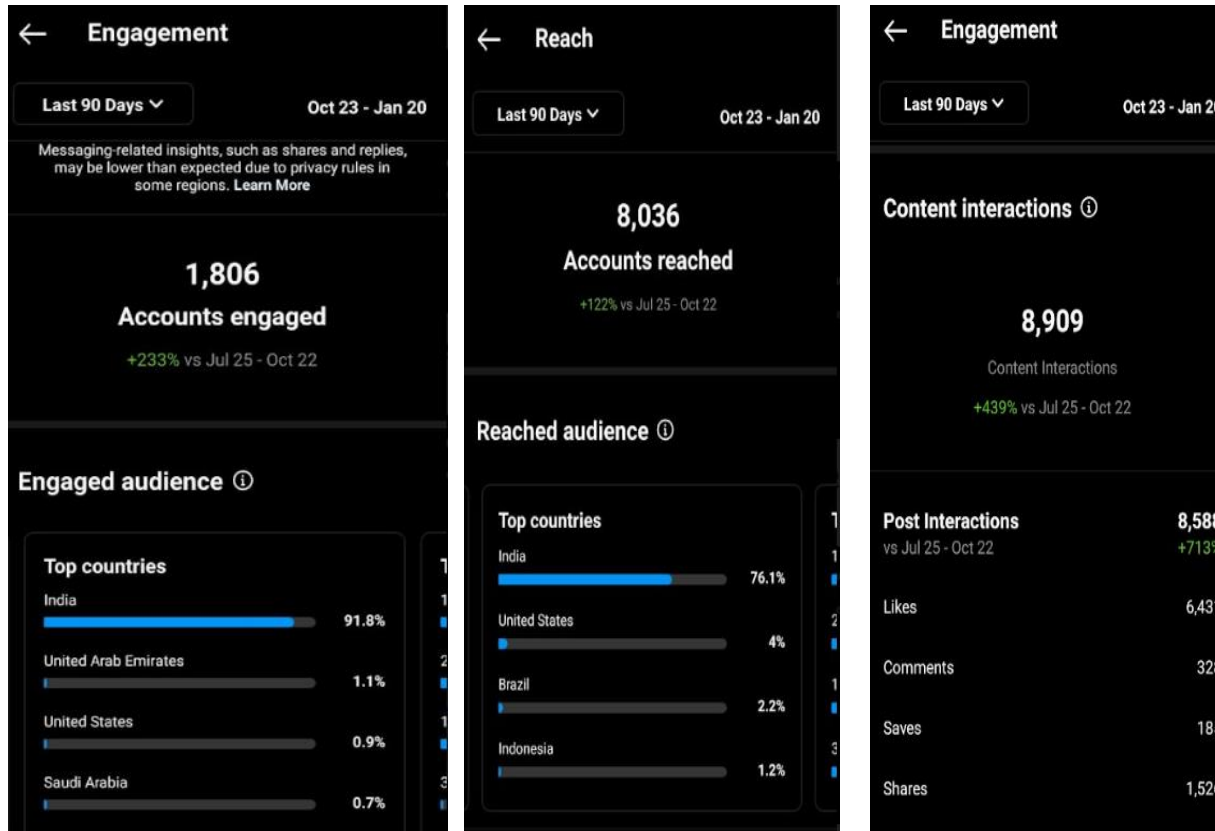


Win Prizes Worth **Rs. 20,000**

23 APRIL, 2022
5.30 to 8 PM



SOCIAL MEDIA STATISTICS for CSEA



We have managed to reach out to 8,036 people and engage over 1800 accounts. We engaged almost 8900 audience members through social media and kept our page interactive to any questions and opinions

Infrastructure Requirements

- New Building / Mirror to Library
- New Research Labs for Faculty (Research Projects/Startups)
- New Class Rooms
- Repairs: Rooms/Labs in the Existing Building
- Research Space for Master Students (M.Tech & MCA), PhD

Strengths/ Weakness

Strengths

- Our faculty and Students
- Adapting to new technologies and Trends
- Mentoring other institutes' faculty in the upcoming areas

Weakness

- SFR
- Dept. could not get new CSE building.
- Infrastructure is one of important factors for quality research output.
- Patent Filing to be improved

NIT WARANGAL
DEPARTMENT OF
BIOTECHNOLOGY
DEPARTMENTAL LEVEL
DATA FOR ACADEMIC YEAR
2021-2022



NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL



DEPARTMENT OF BIOTECHNOLOGY

Chemical Engineering & Biotechnology Block (4th, 5th, & 6th Floors)



Prof. Korrapati Narasimhulu
Head of the Department
Department of Biotechnology

Vision of the Department

To become a global centre of excellence for quality education, research, technological services and entrepreneurship in emerging areas of biotechnology

Mission of the Department

Imparting quality education to develop innovative, entrepreneurial and ethical professionals fit for globally competitive environment.

Promoting scientific discovery and development in diversified fields of biotechnology through a fusion between engineering and life sciences.

Fostering relationship with institutes of higher learning and research, alumni and industries.

S.NO	Department Timeline	Year
1	B. Tech. (Biotechnology) program started with TEQIP-I	2006
2	Technical Association of Biotechnology (TAB)	2007
3	Ph. D Program was initiated	2008
4	02 Students received DAAD fellowships	2009
5	First U.G batch passed out	2010
6	TEQIP II	2011
7	Bioethics Committee Constituted	2012
8	First Externally funded Project	2013
9	Sophisticated equipments were added	2014
10	U.G program Accredited by NBA	2015
11	Permanent and new building allotted	2016
12	3 rd Department with all Doctorates in the Institute	2017

S.NO	Department Timeline	Year
14	Moved to New Building	2019
15	Five New Faculty Members Joined	2019
16	Six New Faculty Members Joined	2020
17	M. Tech. (Biotechnology) Introduced	2020

Courses offered by the Department



B. Tech Biotechnology - 2006

M. Tech Biotechnology -2020

Ph.D. Biotechnology - 2008

Faculty, Staff and Student Data

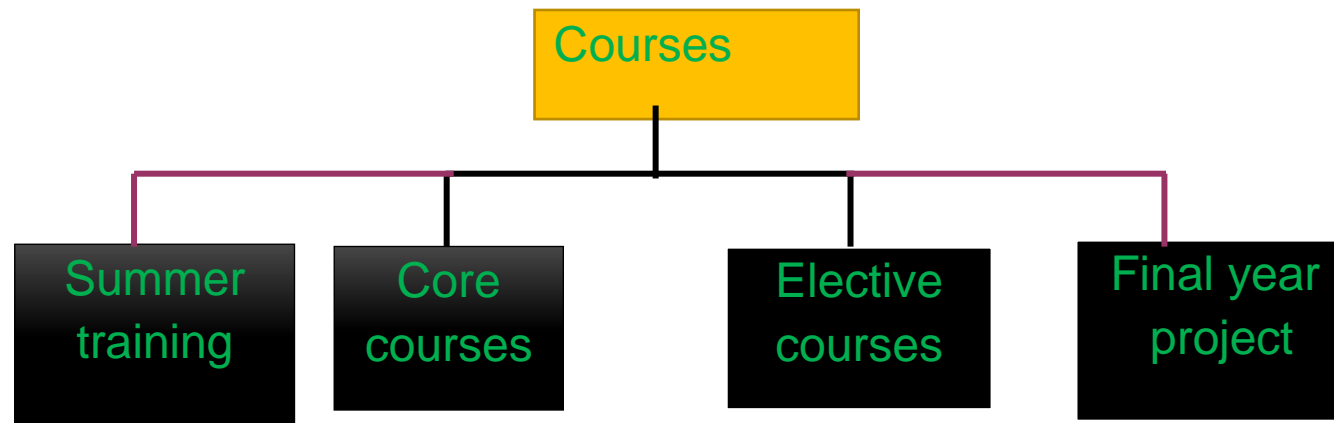
Regular Faculty	Designation	Number
1.	Professors	03
2.	Associate Professors	07
3.	Assistant Professors	10
	Total	20

Support Staff	Designation	Number
1.	Technical Staff	04
2.	Non-Technical Staff	03
3.	Temporary Staff	04
	Total	11

Program	Name of Program	Annual Intake	Total Students
UG	B. Tech. (Biotechnology)	86	240
PG	M. Tech. (Biotechnology)	20 (from A.Y. 2021-22)	25
PhD	Ph.D. (Biotechnology)	Variable	27
	Total		292

B. Tech. course structure in the Dept. of Biotechnology

The department of Biotechnology offers a B.Tech. programme developed to provide quality education and training to undergraduate students which will shoulder the responsibility of developing the biotechnology industry and research



Programme spans over period of **four years** with total of **eight semesters**

Department Infrastructure & Facilities

- ✓ 01 Dept. Seminar Hall
- ✓ 01 Dept. Conference Hall
- ✓ 03 UG Class Rooms
- ✓ 02 PG Class Rooms
- ✓ 07 UG Laboratories
- ✓ 02 Research laboratory
- ✓ 19 Faculty Research Labs

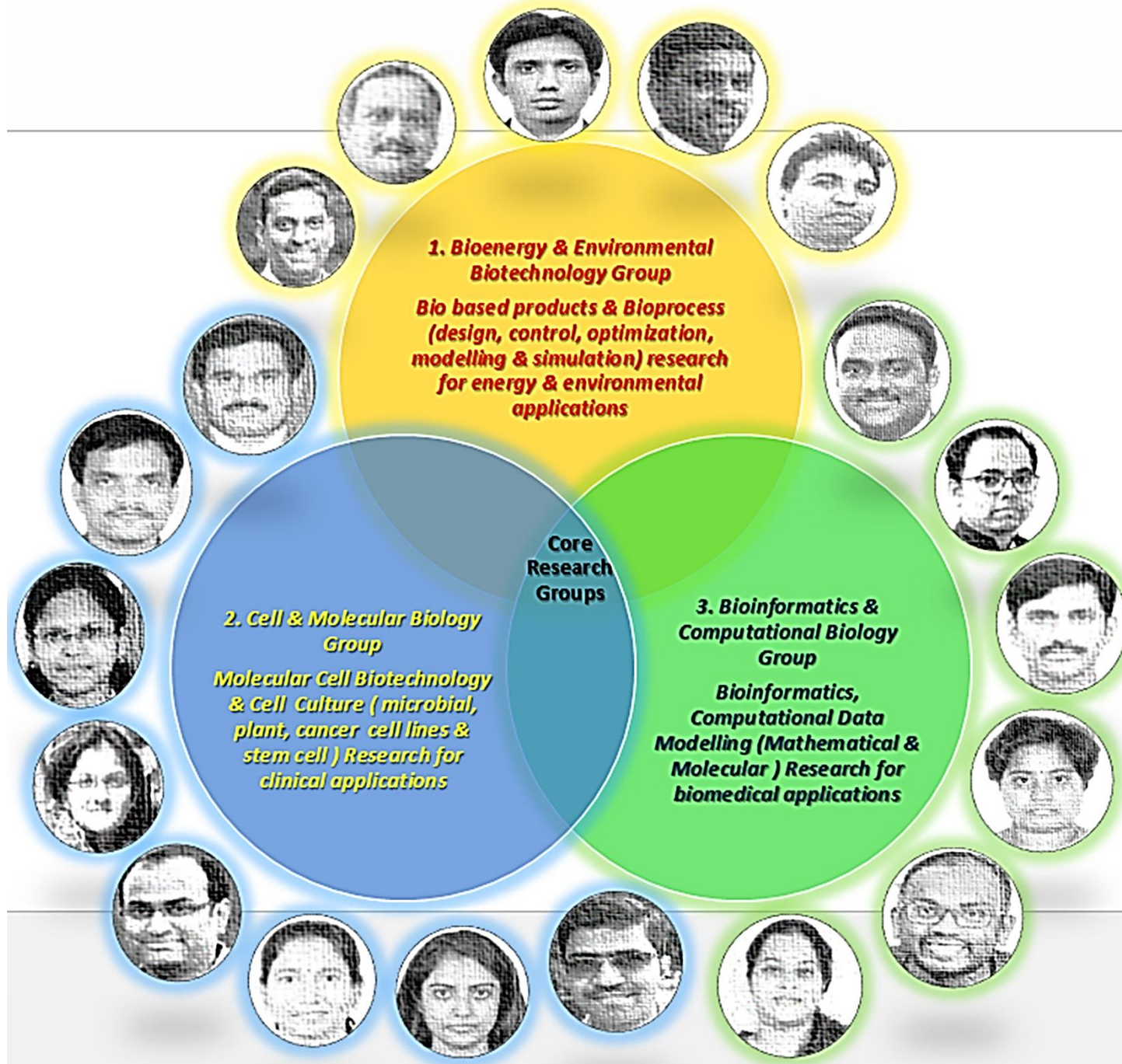
- **50 Computers**
- **01 Server**
- **02 Proprietary software**



SuperPro Designer®

Faculty of the Department





Professors (03)

Areas of Specialization



Prof. Korrapati Narasimhulu
Head of the Department
Ph.D. (NIT Warangal)

Environmental Biotechnology
Biofuels & Bioenergy



Prof.. Parcha Sreenivasa Rao
Ph.D. (JNTU Hyderabad)

Stem Cell Engineering
Downstream Processing



Prof. R. Satish Babu
Ph.D. (JNTU Hyderabad)

Environmental Biotechnology
Modeling and Simulation of
Bioprocesses

Associate Professors (07)**Areas of Specialisation**

Dr. P. Onkara Perumal
Ph.D. (NIT Warangal)

Bioinformatics
Functional Genomics



Dr. Amitava Bandhu
Ph.D. (Univ. of Calcutta)

Gene regulation in *Mycobacterium tuberculosis*



Dr. B Rama Raju
Ph.D. (NIT Warangal)

Metabolic Engineering
Biofuels & Biomaterials



Dr. V. Kohila
Ph.D. (IIT Guwahati)

Cancer Gene Therapy
Marine Biotechnology



Dr. Asim Bikas Das
Ph.D. (IIT Guwahati)

Signaling Pathways in Cancer
Network System Biology

Associate Professors (07)

Areas of Specialisation



Dr. Urmila Saxena
Ph.D. (IIT Guwahati)

Nanobiotechnology
Medical Biosensors



Dr. Prakash Saudagar
Ph.D. (IIT Guwahati)

Molecular and Biochemical
Parasitology



Assistant Professors (10)
Specialisation
Dr. P. Shyam
Ph.D. (Univ. of Hyderabad)

Bioinformatics, Systems biology



Dr. M. Jerold
Ph.D. (NIT Calicut)

Biofuels, Algal Biotechnology

Assistant Professors (10)

Areas of Specialisation



Dr. P. Anbumathi
Ph.D. (IIT Bombay)

Systems Biology, Mathematical Modelling and Simulation of Biological Processes



Dr. D. Ratnaprabha
Ph.D. (Kakatiya Univ.)

Plant Biotechnology, Plant Tissue Culture



Dr. Soumya Lipsa Rath
Ph. D. (IIT Madras)

Computational Biophysics



Dr. Surajbhan Sevda
Ph.D. (IIT Delhi)

**Bioelectrochemical System
Biological Wastewater Treatment**

Assistant Professors (16)

Areas of Specialisation



Dr. Priya
Ph.D. (IIT Bombay)

Cell Biology, Epigenetics



Dr. Thyageshwar Chandran
Ph.D. (IISc Bangalore)

Structural Biology



Dr. Chockalingam. S
Ph.D. (IIT Guwahati)

Cell Signaling, Cancer Biology



Dr. Ashish A Prabhu
Ph.D. (IIT Guwahati)

**Metabolic Engineering; Bioprocess
Engineering; Biomass**

S. No.	Activity	Number
1	Publications (Peer Reviewed Journals/ conferences)(SCOPUS/SCI)	
	International Journals with impact factor	33
	International Journals without impact factor	00
	National Journals	00
	International Conferences	00
	National Conferences	01
2	Funded Research Projects/SPARC projects (2020-21)	
	DBT, SERB, DRDO	0
	Ongoing Projects (Rs 62.96 Lakhs)	3
	DST, SERB, IITM, NHAI, CSIR	3 (ongoing)
	Total number of projects ongoing	3
	Total budget	62.96 Lakhs
3	PhD's Awarded	3
4	Book Chapters	11
	Book Published	01

Major Equipment in the Laboratories

- UV VISIBLE DOUBLE BEAM SPECTROPHOTOMETER
- GC
- HPLC
- FPLC
- RT -PCR
- BIOREACTORS
- CO2 INCUBATOR
- BIOSAFETY CABINET
- ULTRASONICATOR
- -80 FREEZER
- -20 FREEZER
- FREEZE DRIER
- ICE FLAKING MACHINE
- COLD CABINET



Technical Association of Biotechnology (TAB)2021-22

1. School Visit (23rd October 2021)

On 23rd October 2021, 9 students from NIT Warangal visited the Government Girls High School, Kazipet. The volunteers from the Technical Association of Biotechnology were: Supreetha, Karan, Siri poojitha, Manasa chava, Sai Charan, Himanshu, Sai Teja, Aryan and Sirisha.

Understanding the importance of the youth in building a smart future for India, TAB NITW volunteers interacted with around 150 students of 9th and 10th class and had a lively discussion about science, innovation and biotechnology. Students understood how vaccines work, GM crops, insulin, cloning, and cancer. The students were fascinated by how forensic scientists use DNA samples to solve crimes. The students also saw a live experiment about how to determine blood groups.



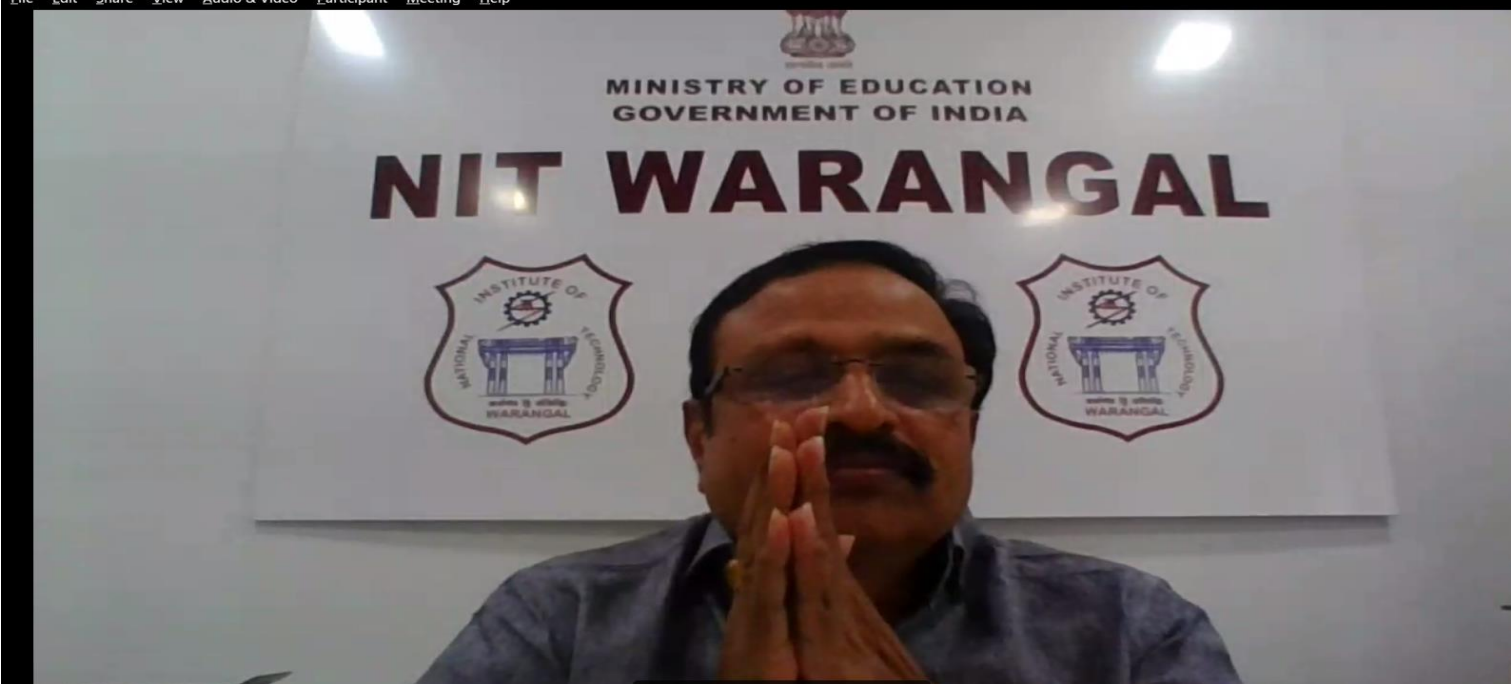
1. Inaugural Ceremony (25th October 2021)

The new executive body of the Technical Association of Biotechnology 2021-2022 was inducted in the inaugural ceremony held on 25th October 2021. The ceremony was a strong start for the new executive body in the presence of dignitaries such as Prof. N V Ramana Rao, Director NITW as the chief guest, Dr. K Thangaraj, Director of Centre for DNA Fingerprinting and Diagnostics, Hyderabad and Dr. Ramana Murthy J V, Dean Student Welfare, NITW as guests of honour.

The Head of department of biotechnology, Dr. K Narasimhulu, The Faculty Advisor of TAB, Dr. Perugu Shyam, and Treasurer of TAB, Dr. Urmila Saxena, along with the guests of honour and chief guest, spoke motivating words to the students.

The Executive body, led by General Secretaries Lakshmi Priya V and Nandini Kanoria, put forward their plan of action for the year 2021-22, which was greatly appreciated by all dignitaries. The team plans on providing career guidance and mentoring, technical sessions and imparting social impact.

To mark the occasion, Dr. Thangaraj also presented the audience with a talk on Human origin, health and diseases that was truly intriguing and enlightening for all.



Sai charan Malyala
Me



Sourav Singh



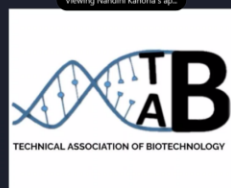
Chundi Sai Gurucharan

Cisco Webex Meetings Meeting Info Hide Menu Bar

File Edit Share View Audio & Video Participant Meeting Help

Sai charan Malyala Me Deepthi Gutta Nandini Kanoria [M] Sourav Singh


Viewing Nandini Kanoria's ap...



Plan for TAB 2021-22

Participants (55)

- Sai charan ... Me
- Dr. Shyam Perugu Host
- Nandini Kanoria
- 198127_srilaxmi
- 198152_Anusha Mondru
- A.Gayathri
- Abhishek Gade
- Afruh
- Anbumathi P
- Anjana
- Ankit Goel
- Ankush Sinha



Dr.K.Narasimhulu

Sai charan Malyala Me K.Thangaraj sri pooptha NIT WARANGAL

Unmute Start video Share Participants Chat

Type here to search 15:04 25-10-2021

Cisco Webex Meetings Meeting Info Hide Menu Bar

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Unmute Stop video Share Participants Chat

Speaking: Dr Perugu Shyam

198127_sriaxmi 198152_Anusha Mondru A Revanth Kumar A.Gayathri Abhishek Gade

Afrah AKILAN M ALLIKAVALA RAMACHANDRA... Anbumathi P Anjana

Arjun Arun kumar B.Nischala BT21105 Neha Goel Deepthi Gulla

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Cisco Webex Meetings Meeting Info Hide Menu Bar

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Unmute Stop video Share Participants Chat

Sai charan Malayala

Siri poojitha Sourav Singh

K Thangaraj

Human origin, health and disease

NIT, Warangal
25 October 2021

K. Thangaraj

CSIR-Centre for Cellular and Molecular Biology, Hyderabad
DBT-Centre for DNA Fingerprinting and Diagnostics, Hyderabad

Type here to search



INVITATION
FOR
INAUGURAL CEREMONY
OF



TWO DAY NATIONAL CONFERENCE ON ADVANCEMENTS IN BIOTECHNOLOGY

ORGANISED BY TECHNICAL ASSOCIATION OF BIOTECHNOLOGY

CHIEF GUEST

PROF. N.V. RAMANA RAO
DIRECTOR, NIT WARANGAL



GUEST OF HONOUR

DR. RATNAKAR PALAKODETI
VICE PRESIDENT & GLOBAL PRACTICE HEAD - LIFE SCIENCES AND
MEDICAL DEVICES, TECH MAHINDRA



Dr. KORRAPATI NARASIMHULU
HEAD
DEPARTMENT OF BIOTECHNOLOGY



Dr. PERUGU SHYAM
COORDINATOR AND ADVISOR
TECHNICAL ASSOCIATION OF BIOTECHNOLOGY

STUDENT COORDINATORS

NANDINI KANORIA, GENERAL SECRETARY
LAKSHMI PRIYA, GENERAL SECRETARY
NEHA GOEL, EXECUTIVE MEMBER

29th JANUARY, 2022
3:30 P.M TO 4:00 P.M

SCAN THE QR CODE TO JOIN



JOINING LINK:

Research Internships: A to Z (21 Nov 2021)

An interactive webinar was conducted on 21st November 2021. The guest alumni, Simran Asawa (PhD student at ETH Zurich, and NITW 2018 Batch) and Ashwin Narain (PhD student, University of Wurzburg, NITW 2017 Batch).

The discussion started by understanding what research meant to our guests, followed by the importance of research internships. They addressed the effects of covid on finding internships and how to overcome this loss. They also discussed how to go about writing cover letters, resumes, and differentiating your application from the rest.

Finally, the team shared a database of all available research internships with the 60+ attendees.



Placement Details

B.Tech FINAL YEAR (2018-2022) (Total Strength: 56 Students)

Number of Students Placed – 33 students

- Package range (5 LPA to 33.0 LPA)
- Average median salary – 12.1 LPA
- Students with salary under 10 LPA – 21 students
- Students with salary between 11-20 LPA – 9 students
- Students with salary above 30 LPA – 3 students

Number of students opting for higher education – 19 students (26% already placed, i.e, 5 students opting for higher education after placement)

Number of students preparing for competitive exams – 25 students (24% already placed, i.e, 6 students opting for competitive exams after placement)

Companies in which students got placed – LTI, Axis bank, Quixy, Accenture, Goldman Sachs, Ford, ICICI Bank, Fractal analytics, Nation with namo, Darwinbox, EXL, Merilytics, PayUMoney, Quantiphi, Blend360, Tata Steel, Ola, Tata Unistore

M.Tech FINAL YEAR (2020-2022) (Total Strength: 15 students)

Number of Students Placed – 6 students

- Package range (5 LPA to 12 LPA)
- Average median salary – 8.8 LPA
- Students with salary under 10 LPA – 5 students (1 in Biocon, 1 in PharmaAce, 3 in PwC India)
- Students with salary between 11-20 LPA – 1 student (HCL)
- Companies in which students got placed – Biocon, HCL, PwC India, PharmaAce

Laboratories

UG Laboratories

No. of
labs

Biochemistry and Instrumentation Analysis

Microbiology and Immunology

Bioprocess Engineering and Bioprocess instrumentation and control

Molecular Biology & Genetics and Genetic Engineering

Downstream Processing and Bio reaction engineering

Bioinformatics and Modelling & Simulation of Bioprocess

Transportation Phenomena Lab

07

Research Labs

Stem cell research lab , Cell Culture lab

02

Class rooms

05

AY 2021 -22

Ph.D.'s Awarded: 04

Strengths

- Young and Dynamic faculty
- Almost all Faculty have externally funded research projects (worth 5 Cr)
- Active research in diverse research areas
- Publications in High Impact Journals

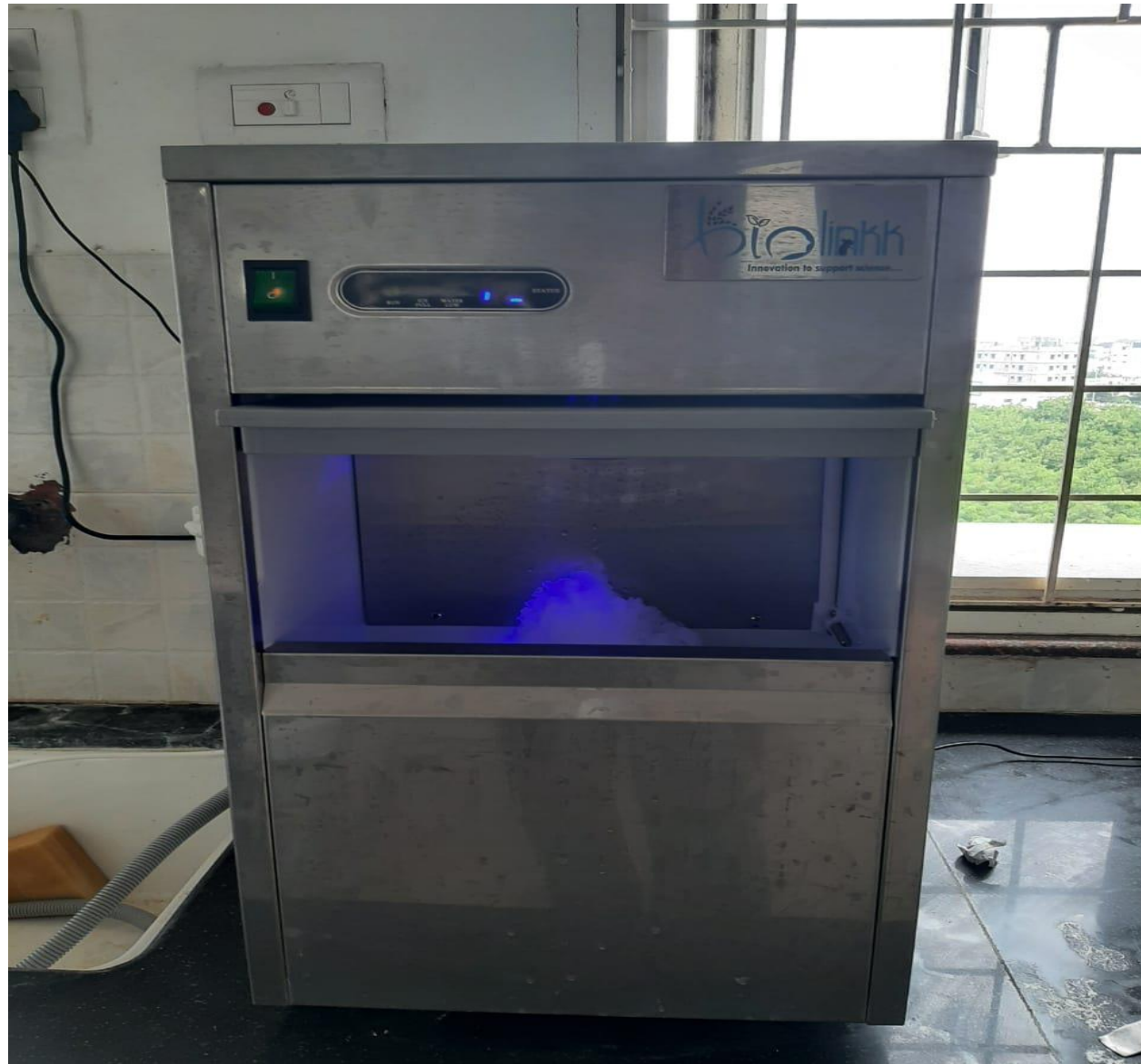
International recognition of the Department

- Student achievements in securing prestigious International Internships
- Student Exchange programs
- Strong and Active Alumni

Opportunities

Molecular Services and Testing facility

- Medical College/Universities/Colleges











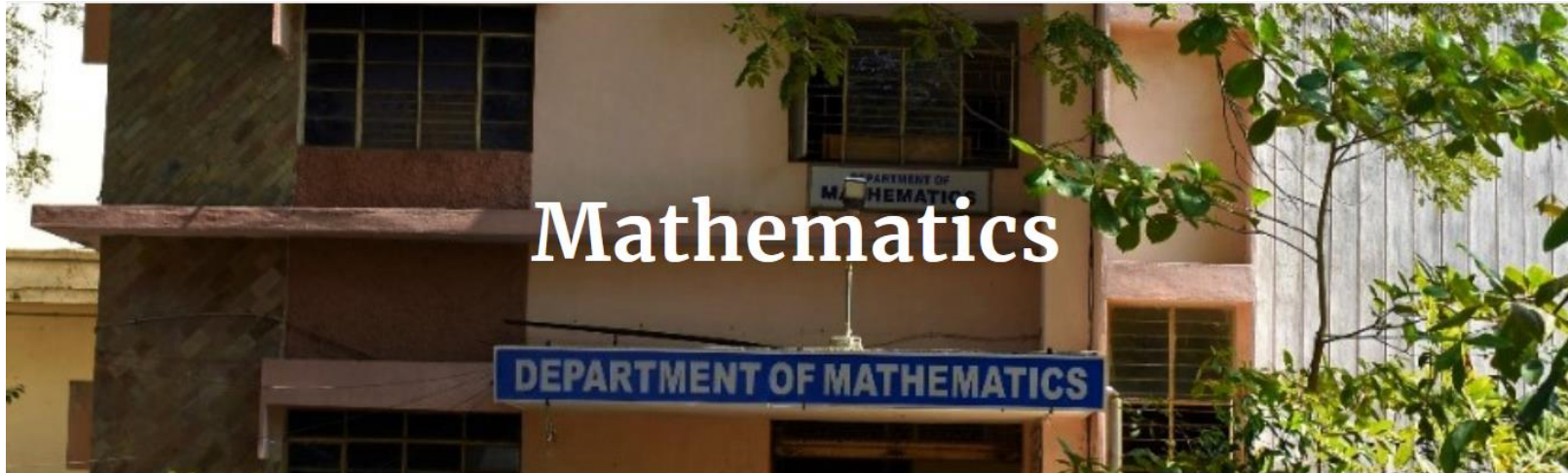




Budget requirements

- **Phase-1:** Laboratory furniture P.O is released : Installation will be completed by 30th November, 2022
- **Phase-2:** Laboratory furniture at drafting of the specifications

Annual Academic Performance Appraisal (July 1st, 2021 to June 30th, 2022)



Presenting by

Prof. Hari Ponnamma Rani

Head of the Department

1959 : The Department of Mathematics has been in existence since the inception of the College. **PhD Program started.**

1970 : **Started TWO years M.Sc. (Applied Math) course – 6 Students.**

1984 : Expanded as Dept. of Mathematics & Humanities.

1994 : **Established a full-fledged Computation Laboratory.**

2001 : Launched TWO years M.Sc. (Math. and Scientific Computing) course.

2002 : Recognized as a center for Quality Improvement Program (QIP) for Ph.D by the AICTE apart from IITs and IISc (among all NITs).

2009 : Bifurcated as Department of Mathematics

2015 : MoU with Indian Institute of Geomagnetism, Mumbai.

2018-19 : Recognized as a National Resource Centre in Mathematics by MHRD, Govt. of India to conduct Online Refresher Courses for all Mathematics Faculty members of all Institutions in the Country.

2021 : Launched 5 years Integrated M.Sc. (MATHEMATICS) course and Minor courses.

S.No.	Description	Number
1	Sanctioned Strength	23
2	Regular Faculty	19
	Professors	6
	Associate Professors	7
	Assistant Professors	6
3	No. of Regular Faculty with Ph.D.	19
4	Women Faculty	4
5	Adhoc Faculty (Women Faculty: 2)	7

- **Numerical Analysis**
- **Finite Element Method**
- **Fluid Mechanics**
- **Bio-Mechanics**
- **Geo Fluid Mechanics**
- **Computational Fluid Dynamics**
- **Operations Research**
- **Fuzzy Sets and Systems**
- **Mathematical Modelling**
- **Algebraic Coding Theory**
- **Cryptography**
- **Differential Equations**

S.No.	Designation	Number
1	Junior Assistant	1
2	Technician (UG)	2

Ph.D. Programme

- Full Time (Institute, CSIR, INSPIRE, QIP) and Part Time

M.Sc. (Applied Mathematics): 2 year Programme

- Started in 1970
- Number of seats: 30
- Admission through JAM

M.Sc. (Mathematics & Scientific Computing): 2 year Programme

- Started in 2001
- Number of seats: 30
- Admission through JAM

M.Sc. Integrated Mathematics : 5 year Programme

- Started in 2021
- Number of seats: 20
- Admission through JEE Mains

Minor in Applied and Computational Mathematics

- Started in 2021

Post Doctoral Programme

- Started in 2022

S.No	Description	Number	Amount	Number	Amount
		2021-22		2020-21	
1	New R&D Projects Sanctioned	1	25L	-	-
2	Ongoing Research Projects	1	20L	2	38.30 L
3	Projects Completed	1	20L	1	28L

S.No	Description	Number	Amount	Number	Amount
		2021-22		2020-21	
1	New Course Approved	1	10L	2	20L
2	Course Conducted	2	20L		

2021-22

S.No.	Programme	# Students Registered	# Students Completed	# Students Pursuing Higher Studies	# Students Pursuing Jobs
1	M.Sc. (AM)	27	27	2	14 (51%)
2	M.Sc. (M&SC)	27	27	1	23 (85%) Highest : 32L CTC Avg: 10.2L CTC

2020-21

S.No.	Programme	# Students Registered	# Students Completed	# Students Pursuing Higher Studies	# Students Pursuing Jobs
1	M.Sc. (AM)	27	27	11	2 (7 %)
2	M.Sc. (M&SC)	27	27	5 (Uni British Columbia, Canada, M.S., \$21,400 stipend)	9 (33%) Highest:18L CTC

S.No.	Type of Publication	2021-22	2020-21
1	International Journals	56	60
2	International Conferences	6	4

S.No.	Description	2021-22	2020-21
1	# PhDs Completed	6	2
2	# New Students Admitted	20	7
3	Present Strength of PhD Students	50	

S.No.	Description	2021-22
1.	# Books Written	1
2.	# Book Chapters Written	2

S.No.	Conferences/ Workshops/FDPs/ Webinars	2021-22	2020-21
1	# Workshops	3	1
2	# FDPs		2
3	# Webinars/Symposium	1	2

S.No.	Description	2021-22	2020-21
1	Distinguished guests visited the department	Prof. Haripriya Gundimeda, Humanities and Social Sciences, IIT B	
2	# Expert Lectures delivered by the Guests	1 (Physical) 8 (Online)	
3	# Expert Lectures/ Guest Talks/Webinars delivered by the Faculty	23	32
4	# Faculty Chaired Conferences / Symposia Sessions	3	10

S.No.	Description	2021-22	2020-21
1	# Department Outreach Activities	5	15
2	# Students Achievements		
	M.Sc. Students' Placements	51% (M.Sc. AM) 83% (M.Sc. Math & Sci Comp)	7% (M.Sc. AM) 33% (M.Sc. Math & Sci Comp)
	Higher Education (MTech, PhD at IITs & Abroad)	29% (Uni. British Columbia, Canada, M.S., \$21,400 stipend)	15%

- A One Day Online **National Symposium** on Mathematical Modelling of Industrial Problems on the Eve of International Mathematics Day, on 14th March 2022.
- A One Day (Hybrid Mode) **National Symposium** on “Modern Mathematical Methods in Science and Engineering”, On the Eve of International Women in Mathematics Day, May 11, 2022.

राष्ट्रीय प्रौद्योगिकी संस्थान वारंगल National Institute of Technology Warangal

TECHNOZION'22

TAMBOLA

19th February, 2022

CASH PRIZES:

1st : 4.5K
2nd: 3K
3rd: 2K

For any queries, contact to:
Shreya Singh: 88516 56889
Manish Khulbe: 91409 81857
Aman Kumar: 70425 75520
mathsa@nitw.ac.in



#146 Participants

राष्ट्रीय प्रौद्योगिकी संस्थान वारंगल National Institute of Technology Warangal

Technozion'22

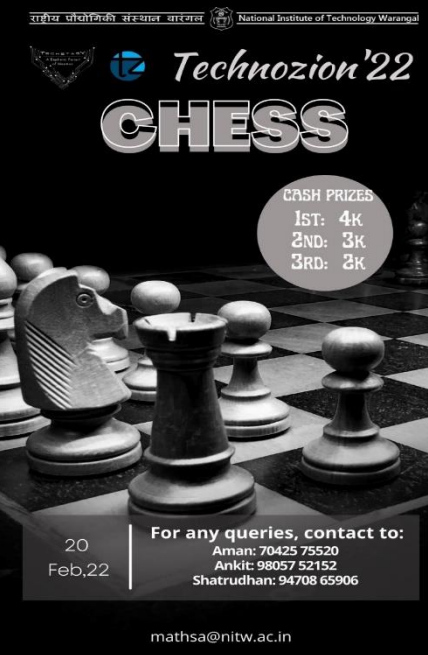
CHESS

CASH PRIZES

1ST: 4K
2ND: 3K
3RD: 2K

20 Feb,22

For any queries, contact to:
Aman: 70425 75520
Ankit: 98057 52152
Shatrudhan: 94708 65906
mathsa@nitw.ac.in



#134 Participants

TECHNOZION'22

THE MATHEMATICS DEPARTMENT
of
NIT WARANGAL
presents

MATH-रं-JUNG

A FUN MATHEMATICAL TRIVIA

On 20th February | 11AM

EXCITING CASH PRIZES AT STAKE!

1ST Rs 3500/-
2ND Rs 2000/-
3RD Rs 1000/-

Register on :

Muskaan Makhija 8587927701
Raman Kumar Bansal 7404711512
mathsa@nitw.ac.in



#961 Participants

- **Prof. J.V.Ramana Murthy** - **nominated** as a member in **expert committee** for conduct of virtual visit to evaluate/assess the fresh application received from ***Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu*** for offering programmes under Open and Distance Learning mode as per UGC.
- **Prof. D. Srinivasacharya** - **recognized** as top 2% Scientist in Stanford University Ranking.
- **Dr. Ch. Ramreddy** - **awarded** “Young Researcher (Sciences)” during Faculty Awards -2019” by NIT Warangal, January 2022.

- **Increasing in placement** 50% (Sci. Comp.) and 44% (Appl. Math.) in comparison with previous year.
- **Started** Integrated M.Sc., and Minor in Mathematics for B.Tech.
- **Conducting** FDP, STTP, International/National Conferences under E&ICT, TLC, CCE/CCP in **collaboration** with other Depts. of NITW; Colleges and Universities outside NITW.
- **National Symposium** on “Modern Mathematical Methods in Science and Engineering”, On the Eve of **International Women in Mathematics Day**, May 11, 2022.
- **Invited talk** on Menstrual Hygiene - Issues, Challenges and Solutions, May 11, 2022.

Thrust areas of Research

- **Numerical Analysis**
- **Fluid Mechanics**
- **Computational Fluid Dynamics**
- **Operations Research**
- **Fuzzy Sets and Systems**
- **Mathematical Modelling**
- **Algebraic Coding Theory**
- **Cryptography**
- **Differential Equations**

Facilities available in these Thrust areas of Research

- **Faculty**
- **Server**
- **Workstation**
- **Computational Lab**
- **ANSYS**

- **Short Term**
 - **Requirements**
 - **Space:** Seminar Room; Faculty Rooms, Library
 - **Modernization** of Faculty Rooms and Computational Lab
 - **Areas of Expertise – Statistics, Analysis, Algebra, Theoretical Computer Science**
 - **Initiating for STEM and I-STEM: Projects/conference/workshop etc.**
 - **FIST program, CSIR lab in collaboration with Physics and Chemistry Depts.**
- **Medium Term**
 - **BTech in Mathematics and Computing**
 - **PG Diploma in Mathematics and Computing in Finance**
- **Long Term**
 - **Centre for**
 - **CFD with HPC (collaboration with Civil, Mech, Chemical, Biotech)**
 - **Mathematical Modelling**
 - **Integrated PhD Programme with Fellowship**
 - **MTech in Industrial Mathematics through GATE**

- **Collaboration with IIGM and IGCAR**
in terms of project and publications.
- **Publications with International Faculty.**

- **Space** – Faculty room, Computational Lab, Centres, HOD, Seminar Hall, Scholars rooms, Meeting room.
- Faculty **rooms** for the **International Faculty**.
- **Budget** for establishing Mathematical Modeling LAB, CFD and HPC Centres.
- **Creche** for the faculty kids.

- **100% placements for M.Sc. Math and Sci. Comp.; 80% for M.Sc. AM**
- **International Internship for PG students**
- **M.Sc. project work:- publications and collaboration with Industry and other Depts of NITW**
- **Multidisciplinary collaboration with other departments of NITW, National and International Universities**
 - **ISTAM Conference along with Civil & Mechanical Departments**
 - **Establish CSIR lab in collaboration Physics and Chemistry Depts.**
 - **Quality education for School Children**
- **Trying to achieve short term goals**
 - **Requirements**
 - **Space:** Seminar Room; Faculty Rooms, Library
 - **Modernization** of Faculty Rooms and Computational Lab
 - **Areas of Expertise** – Statistics, Analysis, Algebra, Theoretical Computer Science
 - **Initiating** for **STEM** and I-STEM: Projects/conference/workshop etc.
 - **Applied** and waiting for the sanction of **FIST** program

Quality Education, Livelihood and Creative Opportunities

Objectives:

- To inculcate scientific temper among the Govt. run High School (under privileged) students and teachers (including Residential/Ashram Schools in remote areas) by demonstrating curriculum based and popular science experiments and guest lectures
- Organizing interactive workshops for students and teachers in selected Govt. schools
- Organizing field visits to District Science Museums, Higher Education Institutes, Agriculture Tours etc.

Target Group: Students and Teachers of the Govt. High Schools and Residential Schools

Methodology:

- Minimum Four visits in a month to the selected high schools and demonstration of experiments along with guest lectures
- Organization of at least one workshop per month
- Periodic Organization of Scientific Field Visits

Departments involved: Chemistry, Physics, Mathematics, Biotechnology



Department of Physics

Annual Presentation 2021-2022

(From June 2021 to July 2022)

23rd September 2022

Prof. T.Venkatappa Rao

Head of the Department

Outline of Presentation

- ❖ Faculty
- ❖ Research Grants
- ❖ Patents
- ❖ Book Chapters
- ❖ Publications
- ❖ Problems- solutions

Faculty Details

➤ Faculty

- Professors: 8
- Associate Professors: 3
- Assistant Professor: 6
- **Total: 17 (Women:03)**

➤ **Total Sanctioned Strength:20**

➤ Adhoc Faculty: 3

➤ PDF: 2

➤ Women Scientist-B: 1

New Research Projects sanctioned: 2021-2022

- **Dr. Surya K Gosh**, received a grant of **Rs. 17** Lakhs from SERB to work on “Dynamics in Complex Environments: from single particle to giant polymers”.
- **Dr. V. Jayalakshmi**, received a grant of **Rs. 37.4** Lakhs from DBT to work on “Design and Development of cost-effective Label-free detection of Alzheimer’s biomarkers using liquid crystals”.
- **Dr. Vijay Kumar**, received a grant of **Rs. 17.75** Lakhs from SERB (SRG) to work on “Machine learning assisted structured light demultiplexing using nanostructures”.
- **Dr. D. Haranath**, received a grant of **Rs. 40** Lakhs from SERB(CRG) to work on “Development of Rare-Earth Free Long Afterglow Phosphors for Signage and Strategic Road Safety Marking Applications”.

TOTAL GRANT SANCTIONED IN THIS ACADEMIC YEAR: 112.15 LAKHS

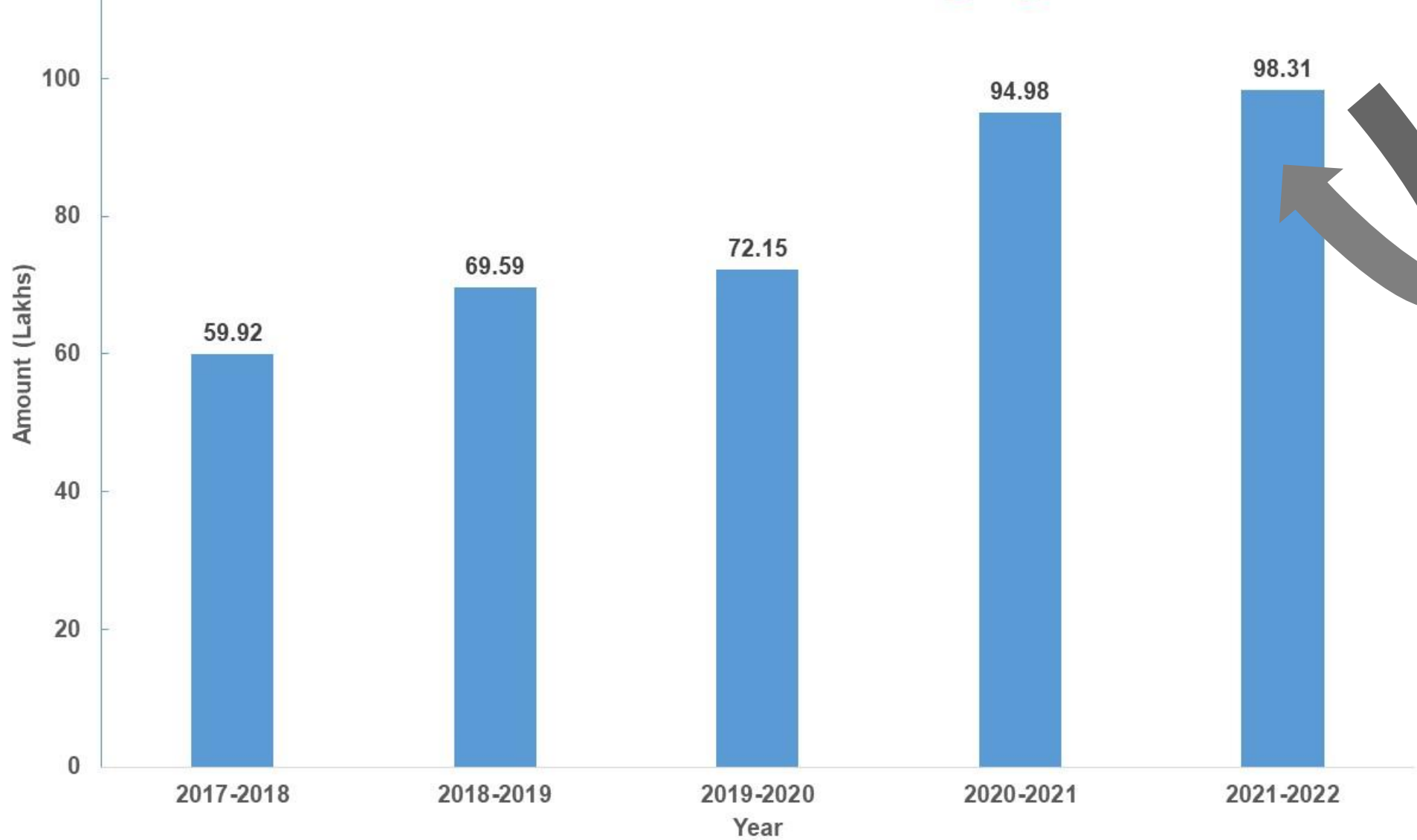
Ongoing Research Projects

- **Dr. Surya K Gosh**, received a grant of **Rs. 37** Lakhs from Extreme Science and Engineering Discovery Environment (XSEDE), USA & Microsoft Azure, USA to work on “Computational structure-based drug design: Identifying antivirals from natural products targeting sars-cov-2 . (Biotechnology department, NIT Warangal)
- **Dr. Sourabh Roy**, received a grant of **Rs. 39** Lakhs from SERB to work on “Stable Generation of Optical Vortex Beams using Long Period Grating inscribed Few-Mode Optical Fiber.
- **Dr. T. V. Appa Rao**, received a grant of **Rs. 34.5** Lakhs to work on “Development of fully bio-based and biodegradable polymer and bamboo fibers composites for commercial applications.
- **Dr. Kusum Kumari**, received a grant of **Rs. 37.53** Lakhs from SERB-SERI to work on “Interface Engineering with CVD grown MoS₂ ultra-thin layers for the Improvement of Perovskite Solar Cell Performance”.
- **Dr. Abdul Azeem**, received a grant of **Rs.43** Lakhs from SEBR to work on “Development of fully bio-based and biodegradable polymer and bamboo fibers composites for commercial applications. (Inter Institutional).

- **Dr. P. Syam Prasad**, received a grant of **Rs.32** Lakhs from SEBR to work on “Synthesis and nonlinear optical studies on MoO₃ based Lead silicate glass ceramics for applications in NLO devices.
- **Dr. Surya K Gosh**, received a grant of **Rs. 17** Lakhs from SERB to work on “Dynamics in Complex Environments: from single particle to giant polymers”.
- **Dr. V. Jayalakshmi**, received a grant of **Rs. 37.4** Lakhs from DBT to work on “Design and Development of cost-effective Label-free detection of Alzheimer’s biomarkers using liquid crystals”.
- **Dr. Vijay Kumar**, received a grant of **Rs. 17.75** Lakhs from SERB (SRG) to work on “Machine learning assisted structured light demultiplexing using nanostructures”.
- **Dr. D. Haranath**, received a grant of **Rs. 40** Lakhs from SERB(CRG) to work on “Development of Rare-Earth Free Long Afterglow Phosphors for Signage and Strategic Road Safety Marking Applications”.

Overall amount of running projects: 337.18 LAKHS
In addition, FIST Project: 275 LAKHS
Women Scientist: 34 LAKHS

Statistics of Amount Released from Funding Agencies Year wise



*In addition,
FIST project
and Women
Scientist*

Patents filed/Published/Granted



- **Dr. P. Abdul Azeem**, P. Srinath, **KVG Reddy**, S Rajkumar, Sushil Patel, Krishnam Raju and M Bramanandam for an invention entitled “Calcium Silicate Based Nano Crystalline Ceramics: A Cost effective Method For The Preparation Using Natural Resources” application number 201941036738 for the term of 20 years from the 12th day of September 2019 in accordance with the provisions of the Patents Act,1970, Patent No. : 376586, **GRANTED OCTOBER 2021**

Books and Book Chapters

- **Songhitha Mehar, Saraswarathi Kailasa, T. Venkatappa Rao, Venkateswara Rao Kalagadda**, Have published a book chapter “Synthesis Approaches, Architecture Design Paradigms and Characterization of Nanostructure Materials for Supercapacitor Applications”, Nanostructured Materials for Energy Storage, Volume-II 2022-2023 Wiley –VCH Verlag Sons ISBN: 9783527350674.
- **Ashish Kumar and Tumu Venkatappa Rao**, have published a book chapter “Electron Beam Irradiation Induced Compatibilization of Poly (lactic acid) based Blends”, Published in Applications of High Radiations Synthesis and Processing of Polymeric Materials, 30 March 2022.
- Jean Maria Fernandes, **D. Paul Joseph**, M. Kovendhan have published a book chapter entitled ‘Metal oxide charge transport layers for halide perovskite light-emitting diodes’, in the book ‘Metal Oxides for Next Generation Optoelectronic, Photonic and Photovoltaic Applications’, Elsevier S&T Books, Edited by Vijay Kumar, Vishal Sharma, Hendrik C. Swart, Subrata Das (In Press).
- S. Divyadharshini, Rekha Pachaiappan, Jean Maria Fernandes, R. Rathika, **D. Paul Joseph**, M. Kovendhan, has published a book chapter entitled ‘Potential impact of smart-hybrid supercapacitors in novel electronic devices and electric vehicles’, in the book ‘Smart Supercapacitors’, Edited by Chaudhery and M. Basheer Ahamed (Elsevier, In Press).
- P.E. Saranya, Rekha Pachaiappan, Jean Maria Fernandes, Reddivari Muniramaiah, **D. Paul Joseph**, M. Kovendhan, has published a book chapter entitled ‘Historical Perspective of Electrochemical Energy Storage Devices’, in the book ‘Smart Supercapacitors’, Edited by Chaudhery and M. Basheer Ahamed (Elsevier, In Press).

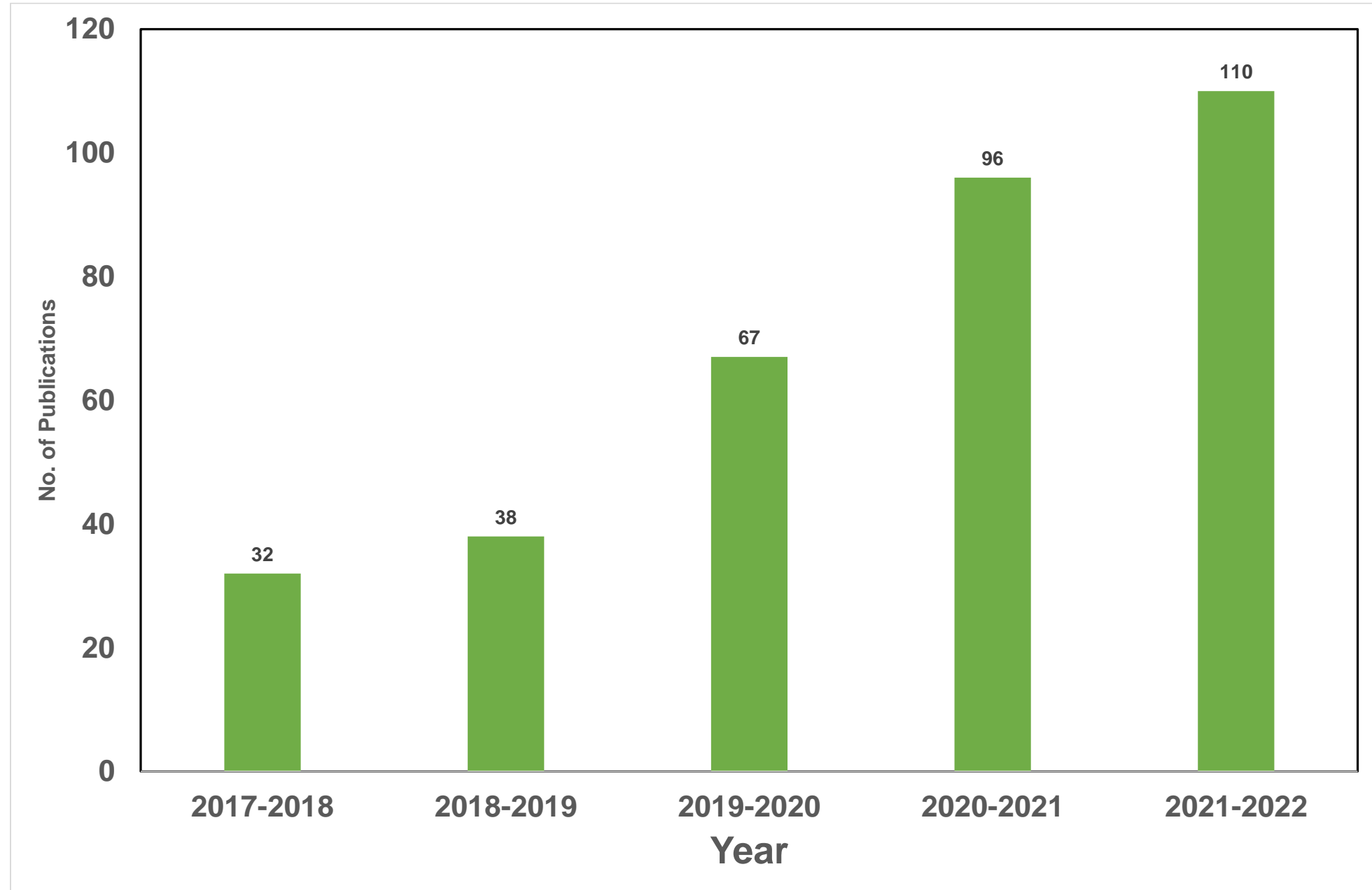
- R Rakesh Kumar, K Uday Kumar and **D Haranath**, Synthesis, Characterization and Applications of ZnO-TiO₂ Nanocomposites, Nanoscale Compound Semiconductors & their Optoelectronics Applications, **Year** 2022, **Pages** 271-314, [DOI:https://doi.org/10.1016/B978-0-12-824062-5.00011-7](https://doi.org/10.1016/B978-0-12-824062-5.00011-7)
- SK Chirauri, M Rakshita, **D Haranath**, An Insights into Non-RE Doped Materials for Opto-Electronic Display Applications, Emerging Materials, **Year** 2022, **Pages** 433-472, [DOI:https://doi.org/10.1007/978-981-19-1312-9_12](https://doi.org/10.1007/978-981-19-1312-9_12)
- HB Savita Sharma, K Uday Kumar, **D Haranath**, R Rakesh Kumar, Organic-inorganic perovskites nanogenerators for energy harvesting applications, Advances in Energy Research, **Volume** 35, **Year** 2022, **Pages** 189-214
- Kumar R.R.;Kumar K.U.;**Haranath D.**, Synthesis, Characterization, and Applications of ZnO-TiO₂ Nanocomposites, Nanoscale Compound Semiconductors and their Optoelectronics Applications, **Year** 2022, **Pages** 271-314, [DOI:10.1016/B978-0-12-824062-5.00011-7](https://doi.org/10.1016/B978-0-12-824062-5.00011-7)
- Mishra S.;**Haranath D.**, Synthesis, Properties, and Applications of Zinc Sulfide for Solar Cells, Nanoscale Compound Semiconductors and their Optoelectronics Applications, **Year** 2022, **Pages** 47-66, [DOI:10.1016/B978-0-12-824062-5.00007-5](https://doi.org/10.1016/B978-0-12-824062-5.00007-5)

Publications

- **JOURNAL PUBLICATIONS: 110**
- **Impact factor : 0.8 to 10 (Eg. Applied surface science, Aging Research Reviews, Journal of Material Chemistry C, etc)**
- **CONFERENCE PUBLICATIONS: 8**

***All are Scopus/SCI Indexed**

Publications 2017-2022



Ph.D.s completed 2021-2022



- 1. J. Vishnu – Prof D. Haranath
- 2. P. Srinath –Prof Azeem & Prof KVG Reddy
- 3. Dr. Guguloth Lalsingh - Dr. Kusum Kumari
- 4. T. Ramesh -Prof LRG Reddy
- 5. M.K. Gupta: Prof.D. Dinakar
- 6. A. Sravanthi- Prof RLN Sai Prasad
- 7. N. Purushotham Reddy – Dr. D. Paul Joseph
- 8. M. Shiva Prasad – Prof. B. Sobha
- 9. G. Laxminarayana – Prof KVG Reddy
- 10. D. Gyneshwar – Prof. K. Thangaraju
- 11. V.D.R. Pavan – Prof. Sourabh Roy
- 12. M. Nagaraju – Prof. L.R.G. Reddy & Dr. Kusum Kumari
- 13. Ashutosh Panchal – Prof. KVG Reddy
- 14. M. Gopal Krishna Murthy – Prof. D. Dinakar

PG & Ph.D. students in the Department

- **Ph.D.**

- **Completed: 62**

- **Ongoing: 61 (Full time + Part time)**

- **MSc (Tech)**

- **Intake: 60 (Through JAM Exam)**

- **Total students in roll: 150**

- **% Placement: 82 (27 students in Industry; 7 students in higher studies)**

- **Integrated M.Sc**

- **Intake: 20 (Through JEE Mains)**

Awards, Outreach Activities, Achievements and Distinctions

- **Prof. Sourabh Roy** received the letter of appreciation with **Excellent Grade** from BRNS in compilation of the funded project.
- **Prof. Syam Prasad Visiting Professor-AGH** University of Science and Technology-Poland, Six months research assignment- (July-Dec 2021).
- **Prof. P. Abdul Azeem** selected as Associate Fellow Telangana Academy of Sciences
- **Prof. Dinakar Dantala**, JNTU Hyderabad BOS Member for B.Tech. syllabus of affiliated colleges on May 19th and 20th, 2022.
- **Prof Dinakar Danatala**, Chaired international conference at MS University Baroda, 18th & 19th July 2022
- **Prof Dinakar Dantala**, Evaluator, RUSA Proposals, AN University, Guntur
- **Prof D Haranath**, National Innovative Research Excellence Award-2022 in Physics (2022)
- **Prof D Haranath**, R&D Board Member of Gemmological Institute of India, (a Govt. of India Undertaking), Mumbai, India
- **Prof D Haranath**, World Ranking of Top 2% Scientists, Database published by Stanford University
- **Prof. Abdul Azeem** is BoS member for Nehru Institute of Technology, Coimbatore, Tamilnadu and Bapatla Engineering College, Bapatla for UG
- **Prof. T. Venkatappa Rao** is BoS member for Osmania university Engineering college, Hyderabad.
- **Dr. Hitesh Borkar** received **Top Cited Paper Award 2022** for Structural transformations and physical properties of $(1-x) \text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3-x\text{BaTiO}_3$ solid solutions near a morphotropic phase boundary, in **J. Phys.: Condens. Matter**, **31**, 075401 (2019). IOP Publishing

Invited talks / Expert lectures by the faculty members

- Prof. Sourabh Roy has delivered an online invited lecture at FDP “Physical Systems and Mathematical Modelling (PSMM-2022)” organized by NIT Calicut, Jan, 2022.
- Prof. Sourabh Roy has delivered an online invited lecture at FDP “Effective online teaching and conducting examinations with Moodle LMS” organized by NIT Silchar July, 2021.
- Dr. D. Paul Joseph has delivered a WEBINAR at the UGC HRDC XIII Refresher Course in Physics on 12th Nov 2021 on the topic ‘Novel materials and thin films – Facile and Cost-effective Approach’, Forenoon session.
- Dr. D. Paul Joseph has delivered a WEBINAR at the UGC HRDC XIII Refresher Course in Physics on 12th Nov 2021, on the topic “UV-Vis-DRS Spectrometer - Bandgap estimation for thin films and powders - Live online Demo (Lab Session)”, Afternoon session.
- Dr. D. Paul Joseph has delivered a WEBINAR at the Workshop on Physics of Materials and Devices on 10th Dec. 2021, JNTU Ananthapur, on the topic “Novel Nano-dimensional Thin Films and Materials”.
- Dr. D. Paul Joseph has delivered a WEBINAR at the 4th International Conference on Recent Advances in Mathematical Sciences & Applications (RAMSA-21), 2021 on the topic “Alternative transparent conducting thin film electrodes – Elucidation of stabilization and properties”
- Dr. D. Paul Joseph has delivered a lecture at the Science Week under STUTI-2021 for school students on 22-02-2022 forenoon on the topic ‘Heat’ at NIT-Warangal.
- Dr. D. Paul Joseph has delivered a WEBINAR at the workshop ‘Novel Electrochemical Energy Devices for Storage, NEEDS-2022’, on 9th April 2022 on the topic “Alternative components for energy harvesting devices”.
- Dr. D. Paul Joseph has delivered a WEBINAR on 23rd April 2022 Forenoon on the topic “Optical and four probe data analysis” at the two day ‘workshop on characterization techniques (Hands on training) under the DBT-Star college scheme organized by the Dept. of Physics, Sri. S. Ramasamy Naidu memorial College, Sattur, Tamilnadu.
- Dr. D. Paul Joseph has delivered a live online Demo on 23rd April 2022 afternoon on the topic “UV spectroscopy and electrical characterization” at the two day ‘workshop on characterization techniques (Hands on training) under the DBT-Star college scheme organized by the Dept. of Physics, Sri. S. Ramasamy Naidu memorial College, Sattur, Tamilnadu.

- **Dr. D. Paul Joseph has delivered a lecture on 23rd July 2022 at the online FDP on “Analytical techniques for Nano-materials”, organized by E & ICT Academy, NIT-Warangal, during 18th to 25th July 2022 on the topic “Nano-dimensional thin films for Modern Technology - Basics and Applications”.**
- **Prof.Dinakar Dantala,Guest Lecture on Optical fiber and their applications at Aurora Technological & Research InstituteHyderabad on 11th April,2022**
- **Prof.Dinakar Dantala,Delivered lecture on “Optical Fibers and their applications” at MG University, Nalgonda on 28th July 2022.**
- **Prof Dinakar Dantala,Guest Lecture at Chaitanya Deemed University on 3rd April,2022 on “Appraisal about Ph.D. & Research for PG Students, Research Scholars”**
- **Prof Dinakar Dantala.Guest lecture at Chaitanya Degree college” Engineering awareness camp: 24th August 2022,Organized by Eenadu newspaper.**
- **Dr. Hitesh Borkar delivered contributory talk on “Synergistic Effect of Electrical Poling on Dielectric Properties of Al-Doped NBT-BT Lead-free Electroceramics” in 65th DAE-Solid State Physics Symposium December 15 -19, 2021 DAE Convention Centre, Anushaktinagar, Mumbai**
- **Dr. Hitesh Borkar, has delivered “Pyroelectricity in lead-free optically active electroceramics” in Third Indian Materials Conclave and the 32nd Annual General Meeting of MRSI, IIT Madras will be held in virtual mode during December 20-23, 2021**
- **Prof D Haranath delivered Invited Talk on “Intellectual Property and Youth Innovating for Better Future”, during One Week Training programme on Sophisticated Instruments DST-STUTI 2022 program being organized by Innovation Centre, Bundelkhand University Jhansi on 17-09-2022**
- **Prof D Haranath delivered Invited Talk on “ Practical Application of Fluorescence and Case Studies” during A one-week training program on R & D equipment under STUTI-21-DST”, NITW, on 23-07-2022**
- **Prof D Haranath delivered Invited Talk on “ A Method of Designing Uniform Sized Phosphor Nanoparticles and Fabrication of an AC-Electroluminescent Device”, during 5th International Conference on Nanomaterials Science and Mechanical Engineering, University of Aveiro, Portugal, on 05-07-2022**

- Prof D Haranath delivered Invited Talk on “Superconductivity and its Applications” during 3-Week Industrial Training Program for Faculty of Physics of Govt Polytechnic Colleges in Telangana State Organized by HRDC & DoP, OU, Hyd, on 04-06-2022
- Prof D Haranath delivered Invited Talk on “Best Teaching Methods Through Innovative and Creative Thinking” during Orientation for Physical Science Teachers on Experimental Teaching in Physical Sciences organized by TS Residential School & Jr. College (Boys), Velair, Hanumakonda, on 03-05-2022
- Prof D Haranath delivered Invited Talk on “Intellectual Property Rights and Their Procedures” during Research Methodology teaching under Module-I of UGC-STRIDE(I) Program Bundelkhand University, Jhansi on 23-04-2022
- Prof D Haranath delivered Invited Talk on “Tips for Writing an Effective Research Article” during 5 Days FDP on "Writing and Publishing a Scientific Paper" - VIT-AP on 19-04-2022
- Prof D Haranath delivered Invited Talk on “Teaching and learning of Electroluminescence and its Applications” during A one week training program on R & D equipment STUTI-21-DST, NIT Warangal on 09-04-2022
- Dr. K. Uday Kumar, delivered Invited talk on topic “ Recent trends in electrochromic devices for smart window applications” during the one week FDP on Recent trends in smart materials and application by Vardhman college of engineering on 10/02/2022.
- Prof Abdul Azeem given live demo on on “ Fluorescence work station ” during A one-week training program on R & D equipment under STUTI-21-DST”, NITW, on 19-07-2022
- Prof Abdul Azeem given live demo on on “ Fluorescence work station ” during A one week training program on R & D equipment STUTI-21-DST, NIT Warangal on 09-04-2022
- Prof. Abdul Azeem has delivered a lecture at the Science Week under STUTI-2021 for school students on 22-02-2022 forenoon on the topic ‘Semiconductor physics’ at NIT-Warangal.
- Prof. Abdul Azeem has delivered a WEBINAR at the Workshop on Physics of Materials and Devices on 10th Dec. 2021, JNTU Ananthapur, on the topic “Fabrication of amorphous and crystalline materials for tissue engineering applications”
- Prof. Abdul Azeem has delivered a talk at A Three-day Indian National Science Academies’ Lecture Workshop On “Physics Behind Smart Materials” on 29th March, 2022 at Andhra Loyola college, Vijayawada, on the topic “Fabrication of amorphous and crystalline materials for tissue engineering applications”

Best student paper and other achievements

Sl No.	Name	Achievement Details	Date
1.	Koustav Dey	Invited Speaker at 17 th International Conference on Optics, Laser and Photonics, Osaka, Japan.	26-28 th June, 2021
2.	Koustav Dey	IOP Trusted Reviewer Award (Given to the top 2% reviewer in the world from IOP)	27 th July, 2021
3.	Koustav Dey	Received JSAP Travel grant of 10,000 JYEN to attend JSAP Conference	April 2022
4.	Venugopal Raskatla	Received 2022 SPIE Optics and Photonics Education Scholarship worth \$3000	March 2022

Students placements

Name of the student	Comnapany
Abhishek Vashist	Greensemiconductor Pvt Ltd,Banglore
Akash Anand	Medevplus,Banglore
Bargav Konwar	Greensemiconductor Pvt Ltd,Banglore
Deepak Kumar	Scaledge India PVt Ltd, Infocity,Odisha
Lekhansh Rana	TechieYAn Technology, Hyderabad
Manu Kumar Sharma	Park control and communication, Banglore
Mukul Suthar	Softnautics Pvt lmtd, Ahmedabad
Nutan Tripathy	CRI Havells, Banglore
Prity Kumari	Microchip Technology Pvt Lmtd
Vipin	Havells CRI, Banglore
Harish Kumar Patidar	Vyas/awant fellow
Ramavatar Singh	Avanti fellows
K M Priyanka	Varroc engineering ltd., Pune
Riyan Ibrahim	Minda Industries LTd, Creta divison, Pune
Jyotishma Sahoo	Honey well
Aurobindo C	Minda Industries LTd, Creta divison, Pune
Chandan Maurya	Avnanth Technologies pvt ltd, Hyderabad
Neha S Dambhare	Cadfem India Pvt Ltd, Hyderabad
Jiji V	Varroc engineering ltd., Pune
Manisha Bisht	Aakash Institute, delhi
MD Aftab Alam	Tractix Optodynamics LLP, Hyderabad
Mohammed Tariqul Islam	Tractix Optodynamics LLP, Hyderabad
Nikhil Tiwari	Asvin Tech
Sannu Kumari	Varroc engineering ltd., Pune
Siddhant Kumar	Visteons technical and service center, Chennai
Ankit Soni	Vtech Lasers and sensors, Netherland

Students and Higher Education

Roll No	Name	Project details	Placement details	Current Status
185924	Himangibahen Jitendrabhai Pandit	Optics and Photonics	Max Plank Institute, Germany	Ph.D.
185937	Suknaya Chaudhury	Optics and Photonics	University of Napoli, Italy	Ph.D.
195932	Venugopal Raskatla	Optics and Photonics	Southampton University, UK	Ph.D.

Department Outreach Activities SPIE & OSA

- International photonic associations
- Student chapters
- Last 15 Years
- Around 20 scholars/ M.Sc.Tech students visited different countries to present the chapter activities- free of cost.

Major Achievements for the year 2021-2022

- **Promotion of the faculty was really helpful for smooth running of the department - Thanks to the Director sir**
- **UV-Vis Spectrometer, FTIR, Nano particle analyzer, Distilled water set up, Four probe, Co2 Incubator, Furnaces etc were successfully installed.**
- **For Integrated M.Sc. Labs like Optics, Mechanics, EM Lab taken approvals and some of the equipment arrived.**
- **Computer programming lab was modernized**
- **After pandemic the M.Sc. Tech labs were brought back to working condition**

Short term goals of the Department

- **Number of projects submitted: 15 (worth of Rs. 3 Crores) (SERB/DBT/CSIR/BRNS/DST)**
- **Establishment of DST-FIST Lab with (FESEM and XRD)**
- **Targeting 100% industry oriented internships and placements to M.Sc. Tech students**
- **Training the Int M.Sc. Students to aim for research and teaching**
- **Updating the curriculum of M.Sc. Tech Engineering Physics to cater the demands of the industry**
- **Strengthening the Integrated M.Sc. Course curriculum**

Action plan to achieve short term goals

- **FESEM will be installed shortly; We are arranging required infrastructure.**
- **A team of faculty assigned to achieve 100% industry oriented placements.**
- **As per the requirement of Industry jobs syllabus modifications planned in the forthcoming senate meeting.**
- **Curriculum for the Integrated M.Sc. course revision requirements based on advice from the faculty who are teaching the course.**

Long term goals of the Department

- **Main focus on getting patents and technology transfer of the research**
- **Establishment of centers of Excellence in Opto-Electronics**
- **More collaborations/MoUs with Industry/National and International labs**
- **Starting of B.Tech. (Engineering Physics) and Post Graduate Diploma in Lens design**

Action plan to achieve Long term goals

- Encourage faculty to apply for more patents
- Identify the facilities required for the centers in the direction of generating income
- Invite National and International faculty to deliver talks such that we can show case our strengths to initiate collaborations
- Encourage industry and private engineering colleges to go for MoUs
- Fulfill the dream of Physics department to start B.Tech. (Engineering Physics) and Post Graduate Diploma in Lens design

Annual Academic Performance Appraisal 2021-2022 (Department of Chemistry)

By
Prof. Dhurke Kashinath
Head, Department of Chemistry
National Institute of Technology, Warangal-504006



Annual Academic Performance Appraisal 2021-2022 Presentations
Homi BhaBha Hall, NIT Warangal
23 Sep 2022



Vision and Mission

Vision:

Towards serving as a potential hub of knowledge in chemical sciences and allied areas so as to uphold and strengthen the vision of the institute as one among pillars while striving continuously in pursuit of excellence in chemical education, research, industry and all interfaces of chemistry with society

Mission:

- Imparting quality education in basic and applied chemistry to develop innovative, entrepreneurial and environment friendly graduates of chemical sciences of international standards.
- Offering relevant fundamental and applied attributes of chemistry to engineering students as an integral part of technical education.
- Promoting chemical industry and societal service towards environment-friendly and green chemical protocols by innovation and research in cutting edge areas of chemical and allied sciences
- Augmenting the country's needs (Atma Nirbhar Bharat) of human resources and scientific manpower in basic and advanced chemistry through learner-centric and modern education and research.



Department at glance

- Established in the Year - **1959**
- Started offering Chemistry Courses to All Branches of Engineering from the year - **1959**
- Research Activity started in the year - **1962**
- M.Sc. (Industrial Organic Chemistry) started in **1977 (Intake 10)**
- The M.Sc. Programme was renamed into M.Sc. Chemistry in (Drugs, Dyes, Pharmaceuticals & Pesticides) and M.Sc. Chemistry in (Modern Methods of Chemical Analysis) in **1999 (Intake 24 in each specialization)**
- M.Sc. (Organic Chemistry) and M.Sc. (Analytical Chemistry) **2014 (Intake 30 in each specialization)**
- M.Sc. 5 years Integrated course started in **2021 (Intake 20 each in Maths, Phy., Chem.)**
- Branch specific syllabus for 1 B.Tech. (**2021**)
- Department crossed 1000 publications **2021**
- Total number of Ph.D. awarded crossing 150 mark in **2022**



Department at glance

Programmes & courses offered:

UG (B.Tech.), 2 Years M.Sc. course (Organic and Analytical Chemistry),
5 Years Integrated M.Sc. and Ph.D.

Faculty Strength: 18 (7+5+6)+2 Ad-hoc faculty (2 Women Faculty)

**Non Teaching staff: 9 (2 Technical Asst + 2 Technicians +
3 Jr Asst + 1 Asst SG-1 + 1 Care taker) (1 Woman Staff)**

Post Doctoral Fellows: 02 (Both Female)

**Number of Research Scholars: 74 (48 full time + 26 part time)
(51 Male +23 Female)**

- **Total number of Ph.D.s awarded: 147**
- **No. of Post Graduated Students: 1040**
- **No. conference, seminar, workshop organized: 47**
- **No. of Projects Awarded: 27 (Rs 9.6 Crores)**
- **Total No. Paper Published in Reputed Journal: 1100**



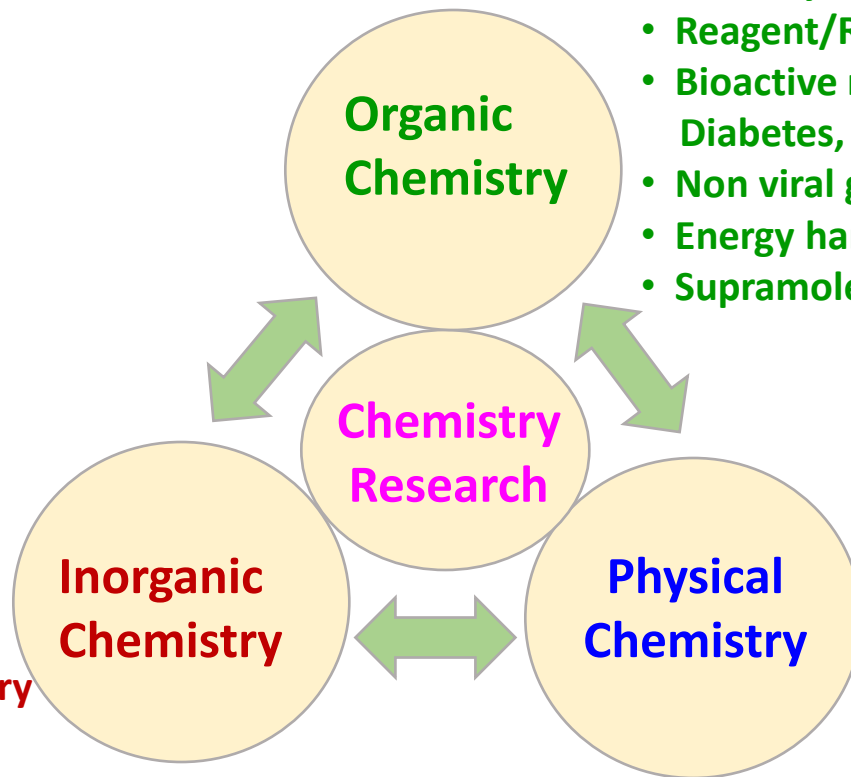
Strengths of the Department

- **Ph.D. degree from reputed institutes with Post doctoral experiences**
- **Guiding Research, publishing in high impact journals**
- **Good number of citations (and h-index)**
- **At least one ongoing/completed Research Project in the last 5 years**
- **Members of Editorial boards of Journals/ Rev./Books publishing**
- **Examiners for Evaluation of Ph.D. Thesis of various Univ./Institutes**
- **Members of Board of Studies at different Academic Institutions**
- **Actively involved in the Administrative work at the Institute level**
- **Involved in collaborative research work with India (ARCI, DRDO, DMRL, BITS, VIT, HCU) and abroad (Japan, Australia, South Korea, Singapore, USA) and industries (Waxpol, Biophore)**
- **Outreach activities**



Chemistry as Interdisciplinary Research: Current status

- Main group chemistry
- Organometallics
- Inorganic Materials
- Bioinorganic chemistry
- Analytical chemistry
- Environmental chemistry
- Nanocomposites



Materials chemistry
(Materials/Energy/Environment,
Sensors)

Drug Discovery
(Biology/Biotechnology)

- Synthesis of complex molecules, carbohydrates
- Reagent/Reaction/process development
- Bioactive molecules (Tuberculosis, Cancer, Diabetes, and Alzheimer's)
- Non viral gene delivery (Cancer)
- Energy harvesting and storage materials
- Supramolecular Chem. and Crystal Engg.

- Study of the reaction kinetics and dynamics
- Catalysis
- Electrochemical Biosensors
- pseudocapacitors
- Corrosion Science
- Computational chemistry and molecular modelling



Summary of Research Achievements

Items	Last 5 Years (Completed)	2021-22 (Ongoing/Completed)
No. of Sponsored Projects	19	13
Total value of the projects	3.27 Crores	6.8 Crores
Names of the funding agencies	DST, CSIR, UGC, MHRD, NRB, DRDO, DBT	DST (INSPIRE) SERB (EEQ, CRG, SRG) CSIR (EMR-II), DRDO
No.of patents awarded	8	1
No.of Patents applications submitted	-	4



Summary of Research Achievements

Academic Activity	2020-21	2021-22	Remarks
No. of Research Papers Published in International Journals	110	101	IF = ~ 4
No. of Research Papers Published in National Journals	0	0	
No. of Research Papers Presented in International Conferences	4	6	
No. of Research Papers Presented in National Conferences	5	3	
No. of Ph.D.s Awarded	9	7	



Collaborative Research Work In India and Abroad

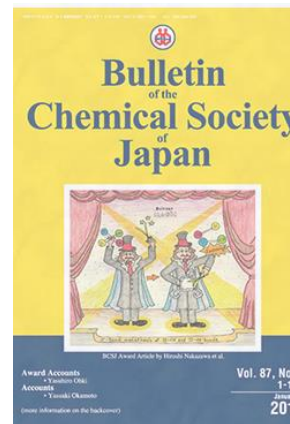




Strengths of the Department: Publications



ELSEVIER





Contributions towards scientific research

Name of the Faculty	Total No. of citations	h-index	i-10 index
Prof. K. Laxma Reddy	492	8	8
Prof. V. Rajeswar Rao	1158	15	39
Prof. KV Gobi	3685	35	60
Prof. PV Srilakshmi	327	10	11
Prof. Vishnu Sanker	2786	20	24
Prof. D. Kashinath	2587	12	16
Prof. N. Venkatathri	942	17	33
Dr. Raghu Chitta	3208	33	47
Dr. B. Srinivas	2125	19	24
Dr. K. Hari Prasad	519	13	14
Dr. S. Nagarajan	1246	20	38
Dr. Santosh Penta	341	9	9
Dr. M. Raghsudha	638	16	19
Dr. C Jugun Prakash	595	14	17
Dr. Ravinder Pawar	343	10	12
Dr. Mukul Pradhan	2405	25	46
Dr. Rajesh Khanna Gaddam	1201	21	21
Dr. V. Rajesh Kumar	513	12	13



Ongoing Sponsored Research Projects (INR 6.8 Crores)

FIST Level-1 (INR 1.50 Crores)

Title of the Project	Principle Investigator	Sanctioned Amount (in Lakhs)	Sanctioning Agency/ Period
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. Jugun Prakash	49.80	MHRD-SPARC
Synthesis and Anticancer Activity of Sugar-Based Natural Saffloflavonesides and Their Heterocyclic Analogs.	Dr. S. Nagarajan and Dr. Asim Bikas Das	38.06	DST-SERB
Multidimensional Spectroscopy	Dr. Raghu Chitta	55	Institute of Eminence
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	44	DST SERB
Development of Metal-Organic-Framework-Derived Hybrid Composite Materials as Bifunctional Electrodes for Production of H ₂ by Water Electrolysis'	Dr. Rajeshkhanna Gaddam	25.5	DST-SERB SRG



Ongoing Sponsored Research Projects (INR 6.8 Crores)

Title of the Project	Principle Investigator	Sanctioned Amount (in Lakhs)	Sanctioning Agency
Heterocyclic Based Peptidomimetics for Non-viral Gene Delivery	Prof. P. V. Srilakshmi	41.9	DST-SEB-ECRA
Oxidative photocyclization strategy to aromatic extension of coronalene	Dr. V. Rajesh Kumar	35	DST-INSPIRE
Strategy for the Synthesis of Indole fused Benzothiazepines and Benzothiazines and explore their biological activity	Dr. V. Rajeshkumar	25	DST-SERB SRG
Designing of Nanoreactors for Carbon Dioxide (CO₂) Conversion into Useful Chemicals	Dr. Ravinder Pawar	48	DST-SEB-ECRA
Metal Flatlands (Atomically Thin Two-Dimensional Metals): Designing, Properties and Applications.	Dr. Ravinder Pawar	41.17	DST-SERB
Novel Biocompatible Nanocomposites for SERS Based Sensing of Biomolecules and Toxic Metal Ions	Dr. M. Pradhan	35	DST INSPIRE



Citations for the Research Publications

S. No	Author(s) / Title	Journal	Year	Citations
1.	Kumar, Santosh; Surendar, T.; Baruah, Arabinda; Shanker, Vishnu , Synthesis of a novel and stable g-C ₃ N ₄ -Ag ₃ PO ₄ hybrid nanocomposite photocatalyst and study of the photocatalytic activity under visible light irradiation	JOURNAL OF MATERIALS CHEMISTRY A Vol. 1 (17), pp.5333-5340	2013	601
2.	Kumar, Santosh; Baruah, Arabinda; Tonda, Surendar; Kumar, Bharat; Shanker, Vishnu ; Sreedhar, B. Cost-effective and eco-friendly synthesis of novel and stable N-doped ZnO/g-C ₃ N ₄ core-shell nanoplates with excellent visible-light responsive photocatalysis	NANOSCALE Vol. 6 (9), pp.4830-4842	2014	423
3.	Tonda, Surendar; Kumar, Santosh; Kandula, Syam; Shanker, Vishnu , Fe-doped and -mediated graphitic carbon nitride nano sheets for enhanced photocatalytic performance under natural sunlight	JOURNAL OF MATERIALS CHEMISTRY A Vol. 2 (19), pp.6772-6780	2014	446
4.	Kumar, Santosh; Surendar, T.; Kumar, Bharat; Baruah, Arabinda; Shanker, Vishnu Synthesis of Magnetically Separable and Recyclable g-C ₃ N ₄ -Fe ₃ O ₄ Hybrid Nano composites with Enhanced Photocatalytic Performance under Visible-Light Irradiation	JOURNAL OF PHYSICAL CHEMISTRY C, Voll. 117(49), pp.26135-26143	2013	356
5.	Kannamba, B.; Reddy, K. Laxma; AppaRao, B. V. Removal of Cu(II) from aqueous solutions using chemically modified chitosan	JOURNAL OF HAZARDOUS MATERIALS, Vol. 175 (1-3), pp.939-948	2010	278



Patents Filed/Granted (4)

- 1. Venkatesh Ravula, Srilakshmi V Patri.** PROCESS FOR PREPARING FARNESOL-BASED CATIONIC LIPIDS FOR CARRYING NUCLEIC ACIDS IN TO DESIRED CELL LINES. Patent No.: AU 2021106376 A4, Granted on 21-08-2021.
- 2. Srinivas Basavoju, Allaka Bhargava Sai, Istarla Madhu Rekha, Dharmarajan Sriram, Gamidi Ramakrishna,** A METHOD FOR SYNTHESIS AND DEVELOPMENT OF THE THERAPEUTIC AGENTS IN TREATING TUBERCULOSIS USING QUINOLINYL SPIROQUINAZOLINONEOXADIAZOLES" Patent No.: 202241053187, Filed on 17.09.2022
- 3. N. Venkatathri, and S. Suresh,** An improved process for the synthesis of Porous crystalline Silicoalumino phosphate molecular sieves through Non-aqueous media. Patent No.: 202241053195.
- 4. Mukul Pradhan, S. Rudra, R. Chakraborty,** Synthesis of Graphitized Carbon from Biomass using Focused Sunlight in a Newly Designed Reaction Setup for Energy Storage Application. Patent No.: 202141054738, Filed on 26-11-2021.



Summary of Other Academic Activities

Academic Activity	2020-21	2021-22	Remarks
No. of Book Chapters	1	10	
Conferences/ Workshops/GIAN courses/FDPs Conducted (1 SPARC + 1 GIAN):	6	15	
No. of Awards/Recognitions to the Faculty and Research Scholars	6	12	
No. of Activities by Chemistry Association	7	11	
No. of Lectures by the experts from other universities/Institutes	2	2	



Other Academic/Outreach Activities

- Prof. Laxma Reddy (PI, SCoPE and Nodal officer RAA) and Prof. Ramachandraiah (Coordinator, SCoPE) involved in many programs through SCoPE and RAA
- Prof. Rajeswar Rao (Dean, R&C) involved in many programs through STUTI
- All Faculty of the Department delivered lectures in many national and International conferences/workshops/FDPs and Members of many Scientific bodies
- Dr. B. Srinivas (Faculty In Charge, NSS, Ek Bharat Shreshtha Bharat) and Dr. K. Hari Prasad (Faculty In-charge, Youth Red Cross) organized many programs
- Dr. Raghu Chitta is active member in International Porphyrin Chemistry Association
- Dr. S. Nagarajan is a elected member of INYAS
- Dr. M. Raghasudha delivered many lectures on Women Empowerment



Books and Book Chapters (10)

1. R. Chakraborty, and M. Pradhan have published a book chapter titled “Current status, Research gap and future scope of bismuth series for the treatment of environmental pollutants” in the book entitled "Bismuth-Based Materials for Environmental Remediation" by IOP Publishing Ltd 2022. pages: 11-33. <https://doi.org/10.1088/978-0-7503-5138-6ch11>.
2. Chakraborty, and M. Pradhan have published a book chapter titled “Phosphides and nitrides for visible light photocatalysis” in the book entitled "Nanostructured Materials for Visible Light Photocatalysis" by Elsevier Publishing Ltd 2022. pages: 197-250. ISBN: 978-0-12-823018-3, <https://doi.org/10.1016/B978-0-12-823018-3.00020-8>.
3. R. Chakraborty, and M. Pradhan have published a book chapter titled “Electrochemical techniques for photoelectrochemical water splitting” in the book entitled "Nanostructured Materials for Photoelectrochemical Water Splitting" by IOP Publishing Ltd 2021. pages: 2-28., <https://doi.org/10.1088/978-0-7503-3699-4ch2>.
4. Siva Prasad Y., Lalitha K., Sravya Chowdary A., Jugun Prakash C, Nagarajan S, have published a book chapter titled “Metals and Metal Complexes for Medicinal Applications” (Chapter 3), S. Rajendran et al. (eds.), in the book ‘Metal, Metal Oxides and Metal Sulphides for Biomedical Applications, Environmental Chemistry for a Sustainable World’ 58, by Springer, Cham. 2021, https://doi.org/10.1007/978-3-030-56413-1_3



5. Siva Prasad Y., Lalitha K., Thamizhanban A., Atul S., Muskan B., Nagarajan S, has published a book chapter entitled “Application of Metal and Metal Oxides in Sustainable Synthesis and Biology”, S. Rajendran et al. (eds.), in the book ‘Metal, Metal Oxides and Metal Sulphides for Biomedical Applications, Environmental Chemistry for a Sustainable World’ 58, by Springer, Cham 6, 2021, https://doi.org/10.1007/978-3-030-56413-1_9

6. Rebaka Vara Prasad, Rachamalla Arun Kumar, Devendra Sharma, Atul Sharma, Subbiah Nagarajan, have published a book chapter entitled “Sophorolipids and rhamnolipids as a biosurfactant: Synthesis and applications” Chapter 21 Editor(s): Inamuddin, Charles Oluwaseun Adetunji, Abdullah M. Asiri, in a book ‘Green Sustainable Process for Chemical and Environmental Engineering and Science’, Elsevier, 2021, Pages 423-472, ISBN 9780128233801, <https://doi.org/10.1016/B978-0-12-823380-1.00014-9>.

7. Rachamalla Arun Kumar, Rebaka Vara Prasad Subbiah Nagarajan have published a book chapter entitled “Antibiofilm activities against food pathogens” Chapter 23 Editor(s): Inamuddin, Charles Adetunji, in a book ‘Applications of Next Generation Biosurfactants in the Food Sector’, Elsevier, 2022, Pages 1-30, ISBN 9780128242834, <https://doi.org/10.1016/B978-0-12-824283-4.00009-5>



8. K Koteswara Reddy, K Yugender Goud, M Satyanarayana, Shekher Kummari, V Sunil Kumar, Harshad Bandal, Tippabattini Jayaramudu, Radha Devi Pyarasani, Hern Kim, John Amalraj, K Vengatajalabathy Gobi* Book Chapter-4 “Metal oxide-metal nanocomposite-modified electrochemical sensors for toxic chemicals” pp. 79-137 in *Metal Oxides in Nanocomposite-Based Electrochemical Sensors for Toxic Chemicals*, 2021, Elsevier. ISBN: 978-0-12-820939-4, 0128209399
9. Mahesh Kumar Ravva, Ravinder Pawar, Shyam Vinod Kumar Panneer, Venkata Surya, Kumar Choutipalli, Venkatesan Subramanian. Effect of Both Structural and Electronic Confinements on Interaction, Chemical Reactivity and Properties. Chapter 15, Pg No. 263-270, *Chemical Reactivity in Confined Systems: Theory, Modelling and Applications* (Book Editor(s):Pratim K Chattaraj, Debduitta Chakraborty), Publisher: Jhon Wiley and Sons Ltd).
10. Saikumar Manchala, Vijayakumar Elayappan, Hai-Gun Lee and Vishnu Shanker, Plasmonic photocatalysis: an extraordinary way to harvest visible light, Chapter-7, Pages 187-216, *Photocatalytic Systems by Design: Materials, Mechanisms and Applications*, 2021, Publisher Elsevier, DOI: <https://doi.org/10.1016/B978-0-12-820532-7.00020-5>



New Equipment/Software purchased/procured

1. Oil-free scroll compressor for 400 MHz NMR instrument (**Dr. K. Hariprasad**)
2. Electrochemical workstation (CH Instruments) procured under the DST SERB Grant DST/CRG/2018/002661 (**Dr. Raghu Chitta**)
3. Procured Solid-state probe for 400 MHz NMR Instrument under TEQIP-III Grants (**Dr. B. Srinivas**)
4. 3 Node Cluster procured under DST SERB Grant ECR/2018/002346 (**Dr. Ravinder Pawar**)
5. VASP software procured under DST SERB Grant ECR/2018/002346 (**Dr. Ravinder Pawar**)
6. 4 computing Nodes Cluster procured under DST SERB Grant EEQ/2019/000656 (**Dr. Ravinder Pawar**)
7. AMS-SCM software procured under DST SERB Grant EEQ/2019/000656 (**Dr. Ravinder Pawar**)
8. Electrochemical workstation (CH Instruments) procured under the DST INSPIRE (**Dr. Mukul Pradhan**)
9. Faculty Grant DST/ INSPIRE Faculty Award /2016/DST/INSPIRE/04/2015/003227.
10. BET instrument (**Prof. Vishnu, Dr. Mukul Pradhan**)
11. Liquid N₂ plant (DST FIST project) (**Prof. Vishnu, Dr. Nagarajan**)



New Equipment/Software purchased/procured



Oil-free scroll compressor for 400 MHz NMR instrument.



Super Computing



BET (Surface area analyzer)



Electrochemical Work Station



Awards/Recognitions/Achievements (Faculty):

1. **Dr. S. Nagarajan** has been selected as Indian National Young Academy of Sciences (INYNAS)-INSA, New Delhi, India for the period of 2021-2025
2. **Dr. S. Nagarajan** has been selected as Life Member of Association of Carbohydrate Chemists and Technologists (India) from 2022 onwards
3. **Dr. Raghu Chitta**, Selected as an Associate Fellow, Telangana Academy of Sciences, 2022.
4. **Dr. B. Srinivas** has been selected as Life Member of Chemical Research Society of India (CRSI) from 2020 onwards
5. **Prof. N. Venkatathri**, Best Science Researcher Award - 2019, National Institute of Technology Warangal in 2022.
6. **Prof. N. Venkatathri**, Guest Editor, Frontiers in Chemistry (Impact Factor: 5.545) during 2022.
7. **Prof. N. Venkatathri**, Associate Editor, Materials International, Romania, 2019 - till date.
8. **Prof. K. Laxma Reddy** Received Memento in the Workshop at Kolkata from Director, Vigyan Prasar, New Delhi



Students achievements:

Name	Project details	Placement details
Venkatesh Ravula	As Post-doctoral Associate	Instem Bangalore
Venkanna M	Research Scientist	GVK Bio, Hyderabad
Vinay Pogaku	Associate Scientist	GVK BioSciences, Hyderabad
Allaka Bhargava Sai	Associate Scientist	GVK BioSciences, Hyderabad
Dr. M. Saikumar	Postdoctoral fellow	Nano Biomimetic Material Lab Department of Chemistry & Nanoscience, Ewha Womans University Seoul-03760
Dr. G. Ambedkar	Ad-hoc Faculty	Department of Chemistry, NIT Warangal



Students Achievements:

S. No	Name	Achievement Details (Conference paper, best paper award, abroad visit, etc)	Date
1	A. A. Sangolkar, R. Agrawal, B. R. Pawar	6th International Conference on Recent Advances in Material Chemistry.	17th – 19th February, 2022
2	Pooja, R. Pawar	in National Conference on Molecular Modelling and Simulations 2022	02nd March, 2022

- Kumri Riddhi (FRANCE), Anuj, Srutashini Das (USA), Sakshi Jha (FINLAND), Niel Richard (FRANCE)
- Manoj (IIT Kanpur), Ritu Gupta (IIT Kanpur), Pratibha Gandhi (IISER Mohali),
- Priyanka (IIT Delhi), Arpit Agarwal (PMRF, IIT Bombay), Ramji Meher (PMRF), Srishti (TIFR)

Majority of the students are opting for teaching jobs with good salaries



Chemistry Association

- **Invited lectures (experts from other academic institutes and industry)**
- **Career guidance**
- **Chemistry experiments during Technozion and Techfest**



Requirements and Scope for the Improvement

- **Classrooms for Integrated M.Sc.**
- **Well-furnished HoD and Committee rooms**
- **Air conditioning for the computational, dry instruments laboratories**
- **Journal subscription from Wiley publications**
- **Research related equipment (Single crystal X-ray diffractometer, HRTEM, XPS, GC-MS, multi station reactors, Hydrogenation apparatus)**
- **MoUs with other academic institutions and industry**
- **Applied Research in collaboration with allied departments (within the institute), other academic institutes, R&D labs and industries**
- **Professor of Practice (for Industry oriented courses)**



Goals: Teaching

- **M.Sc. in Nanoscience and Nanomaterials**
- **M.Sc. In Medicinal/Pharmaceuticals Chemistry**
- **M.Tech. in Polymer Technology (in association Departments of Chemical and Materials Engg)**



Goals: Research

- **INTERDISCIPLINARY RESEARCH** in collaborations with **ALLIED DEPARTMENTS** like ChED, Bio-Tech, Phy, MME, MED, and CED
- **Integrated M.Sc.-Ph.D. program**
- **To establish center for Drug Design and Development**
in collaboration with Industry & other National Laboratories



- **To form a core group in materials chemistry**
in collaboration with Industry & other National Laboratories
towards the development of

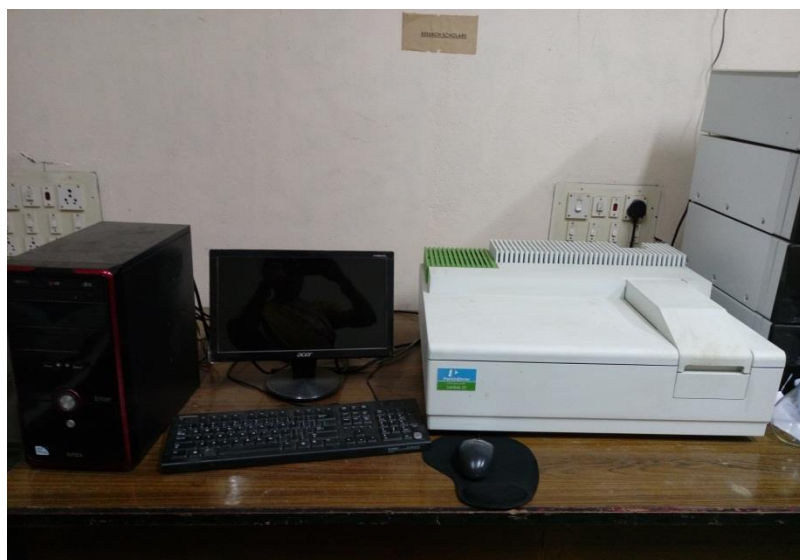


➤ **FT-Infra Red Spectrophotometer**



Faculty In-Charge	Dr. K. Hari Prasad / Dr. C. Jugun Prakash
Cost	Rs. 12.5 L
Year	2014
Specifications	<ul style="list-style-type: none"> • Detector Type: LiTaO₃ • Operating range: 5-45°C • Wavelength : 8,300 - 350 cm⁻¹
Applications	<ul style="list-style-type: none"> • IR spectra in the near-IR, mid-IR, and far-IR region • Solid samples, biological and materials – ATR facility.

➤ **UV-Vis DRS Spectrophotometer**



Faculty In-Charge	Dr. Vishnu Shanker / Dr Ravinder Pawar
Cost	Rs. 14.8 L
Year	2012
Specifications	<ul style="list-style-type: none"> • Double-beam spectrometer • Power requirements: 100 V to 240 V • Ambient operating temp 15 °C to 35 °C • 20% to 80% relative humidity • Wavelength range: 200 – 900 nm
Applications	<ul style="list-style-type: none"> • To record absorption/transmittance spectra of the compounds • Pigments, plastics, paints , thin film materials

➤ ELISA Plate Reader



Faculty In-Charge	Prof. P V Srilakshmi
Cost	Rs. 2.5 L
Year	2016
Specifications	<ul style="list-style-type: none"> • Wavelength range: 400-750 nm • Measurement speed : 5s, 96- plate • Light source : Quartz tungsten halogen lamp • Detector: Eight(8) silicon detectors
Applications	<ul style="list-style-type: none"> • Enzymic activity • Biological and chemical processes of samples in microtiter plates

➤ Flash Chromatography

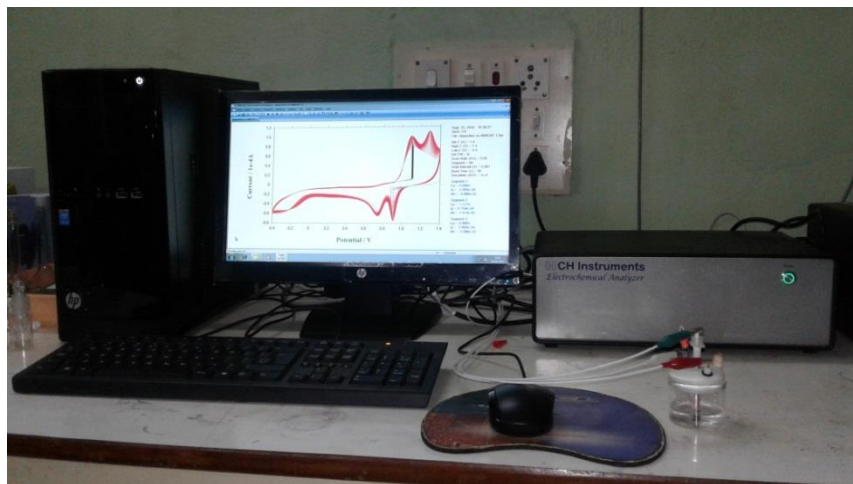


Faculty In-Charge	Dr. K. Hari Prasad
Cost	Rs. 18.2 L
Year	2013
Specifications	<ul style="list-style-type: none"> • R_f is a 10–100 mL/min, 150 psi system that pumps two solvents to form a binary gradient. • supports liquid or solid sample introduction, • fixed-wavelength UV detector (254 nm) and can be configured for full-spectrum (200–400 nm) UV detection
Applications	<ul style="list-style-type: none"> • Flash chromatographic separation • Detection by UV wavelength

➤ Fluorescence Spectrometer



➤ Electrochemical Workstation



Faculty In-Charge	Dr. Ravinder Pawar
Cost	Rs. 7.0 L
Year	2013
Specifications	<ul style="list-style-type: none">• Excitation: 200-750 nm• Emission: 200-650 nm• Sensitivity: S/N \geq 50• Lamp: 150W Xenon lamp• Spectral bandwidth: 12 nm
Applications	<ul style="list-style-type: none">• Emission/ Excitation spectra• Photo-reactive catalysts, Display devices, LEDs
Faculty In-Charge	Prof. K. V. Gobi
Cost	Rs. 7.4 L
Year	2015
Specifications	<ul style="list-style-type: none">• Potentiostat• Galvanostat• Potential Range: -10 to 10V
Applications	<ul style="list-style-type: none">• Sweep /Step/Stripping• Corrosion, redox enzymes• Electrocatalysts

➤ Rotating Disk Electrode



Faculty In-Charge	Prof. K. V. Gobi
CAI Facility	
Cost	Rs. 6.1 L
Year	2017
Specifications	<ul style="list-style-type: none"> • Rotation Speed (rpm) : 0 – 10000. • Output Potential: 0 - 10 V
Applications	<ul style="list-style-type: none"> • Investigating reaction mechanisms related to redox chemistry • Flow-cell analysis

➤ Sensitive Microbalance



Faculty In-Charge	Prof. P V Srilakshmi
Cost	Rs. 1.1 L
Year	2016
Specifications	<ul style="list-style-type: none"> • Delivers an incredible full resolution with a capacity of up to 0.1 μg readability (that's 0.0000001 grams); upto 200 mg.
Applications	<ul style="list-style-type: none"> • low weights – catalysis, thin-film coatings, adsorption anal.

➤ 400 MHz NMR Spectrometer



➤ ESR Spectroscopy



Faculty In-Charge

Dr. B. Srinivas

CAI Facility

Cost

Rs. 183 L

Year

2014

Specifications

- Frequency Resolution: <0.005Hz
- Phase resolution: < 0.006
- Receiver bandwidth: Up to 5 MHz
- Single phase console

Applications

- Can record ^1H , ^{13}C NMR, ^{15}N , ^{31}P spectra of compounds
- Variable temperature NMR

Faculty In-Charge

Prof. K. Laxma Reddy

CAI Facility

Specifications

- EStandard Frequency (X band) - 8.75-9.65 GHz
- Sensitivity - 7×10^9 spins/0.1mT
- Resolution - 2.35 (micro)T or better
- Temperature study - Any temp. from +200°C to liquid nitrogen temp.

Applications

- Molecular and Crystal Struc.
- Magnetic materials
- Reaction Kinetics
- Electron transport

➤ ORD-CD



Faculty In-Charge	Prof. A. Ramachandraiah
CAI Facility	
Specifications	<ul style="list-style-type: none"> • Cost : Rs. 55 L; Biologic Czech, MOS-500 Model • Three stage wavelength selection to bypass limitations prism-based. • Operating cost is less when operated below 195 nm.
Applications	<ul style="list-style-type: none"> • Enantiomeric compounds; Non-linear optical materials • Secondary structure of proteins, Ligand-Bio-receptor interactions

➤ Rotary Evaporator



Faculty In-Charge	Dr. K Hari Prasad
Cost	Rs. 4.6 L
Year	2014
Specifications	<ul style="list-style-type: none"> • Hand Lift • Height adjustment speed: Manual • Height adjustment mm:155 • Rotation speed rpm:20-280rpm • Heating Capacity:1300 W • Temp. range of the Heat bath:20-210°C • Temperature accuracy:±1K • Bath Temp. Display: digital • Volume heating bath:4.5 l • Supply power:1400 W
Applications	<ul style="list-style-type: none"> • Evaporation of the solvents from the reaction mixture

➤ HPLC



Faculty In-Charge	Prof. P V Srilakshmi
Cost	Rs. 7.5 L
Year	2013
Specifications	<ul style="list-style-type: none">• Detection Column: Esi Positive Mode• Column: 30 mmL × 3.0mmI.D.• Mobile Phase: (a) 1% aqueous solution of formic acid, (b) Acetonitrile• Flow rate: 0.5 mL/min.• Temperature: 50°c• Injection Volume: 1mL• Column Pressure: 14Mpa
Applications	<ul style="list-style-type: none">• Separation of compounds under high pressure; Biofuels,

➤ Gas Chromatograph



Faculty In-Charge	Dr. N. Venkatathri
Cost	Rs. 11.4 L
Year	2015
Specifications	<ul style="list-style-type: none">• Enlarged haptic color LCD• 3 inlets/detector installation• Flame ionization detector• Exceptional reproducibility: RSD (~0.0334)
Applications	<ul style="list-style-type: none">• Residual Solvent Analysis• VOC Analysis, Biofuels,• Pyrolysis GC Analysis• Fatty Acid Analysis

➤ Refrigerated Centrifuge



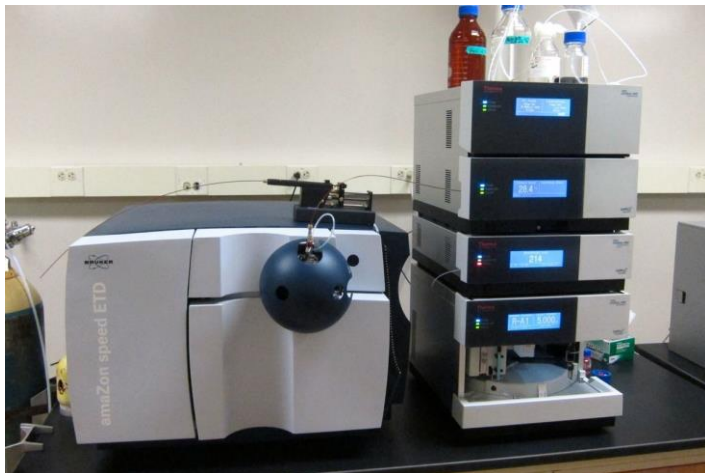
Faculty In-Charge	Prof. K. V. Gobi / Dr. Vishnu Shanker
Cost	Rs. 2.7 L
Specifications	<ul style="list-style-type: none">• Control: Microprocessor with variable frequency drive• Max Speed: 20000 rpm• Max RCF: 37000 x g• Temp. Control: -20°C to 40°C
Applications	<ul style="list-style-type: none">• High speed centrifuging applications even at lower temperatures

➤ Tubular Furnace



Faculty In-Charge	Dr. Vishnu Shanker/ Dr. M. Raghasudha
Cost	Rs. 2.3 L
Year	2017
Specifications	<ul style="list-style-type: none">• high-grade insulation materials - low energy consumption and high heating rates• The insulation and molybdenum disilicide (MoSi_2) At higher temperatures and in the presence of oxygen, MoSi_2 that protects the heating elements against further thermal or chemical corrosion; 1000 C.
Applications	<ul style="list-style-type: none">• an electric heating device used to conduct syntheses and purifications of inorganic compounds and occasionally in organic synthesis.

➤ **LC-HRMS Analyzer**
(CAI Facility)



Faculty In-Charge	Dr. D. Kashinath
Cost	Rs. 125 L
Year	2015
Specifications	Agilent Tech. USA; Q TOF 6530
Applications	<ul style="list-style-type: none"> • Molecular structure of Petroleum compounds, industrial products, pharmaceuticals, biomolecules • Purity of industrial products be established.

➤ **PARSTAT 4000A Electrochemical WS**
(CAM Facility)



Faculty In-Charge	Prof. K. V. Gobi
Cost	Rs. 24 L
Year	2015
Specifications	<ul style="list-style-type: none"> • Potentiostat • Electrochem. Impedance • -20 to 20V; 4 A ; upto 10 MHz
Applications	<ul style="list-style-type: none"> • Corrosion studies • Fuel cell development • Battery testing, EIS • Biofuel cells, Capacitors

➤ **TGA-DTA Analyzer**
(CAM Facility)



Faculty In-Charge	Dr. Vishnu Shanker
Cost	Rs. 16.0 L
Year	2015
Specifications	<ul style="list-style-type: none">• Up to 1200 °C
Applications	<ul style="list-style-type: none">• Composite materials• Finger print analysis• Drug compounds

Details of Sponsored Research Projects Completed During the Past Five Years (INR 3 Crores)

Title of the Project	Principle Investigator	Sanctioned Amount (Lakhs)	Sanctioning Agency
Development of Nano organized Electrochemical Impedance immunosensors for detecting Explosives and Biowarfare agents	Dr. K.V. Gobi	19.7	DRDO
Synthesis, Characterization and doping effect-studies of complex metal oxide nanoparticles	Dr. Vishnu Shanker	19.5	DST
Development of benzaoxazole, benzthiazole and benzimidazole based cationic amphiphiles for non viral gene delivery targeting to tumors	Dr. P.V. Srilakshmi	17.0	DST
Design and synthesis of new phenolic crown ethers and substituted porphyrins as multifunction additives	Dr. B. Rajitha	17.0	DST
Development of Methods of removal of Arsenic from Industrial Effluents by bio-sorption and species alteration	Dr. K. Laxma Reddy	15.0	MHRD
Synthesis and anti angiogenesis activity of New sulphur compounds from coumarins	Dr. V. Rajeswar Rao	11.0	CSIR

Cont.....
(INR 3 Crores)

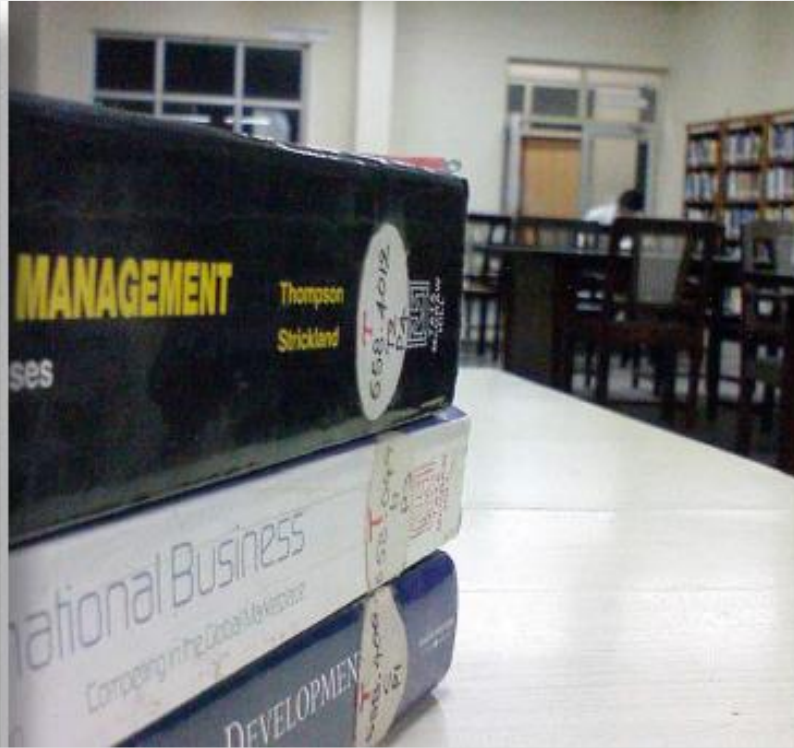
Title of the Project	Principle Investigator	Sanctioned Amount (Lakhs)	Sanctioning Agency
Rational Design and Synthesis of Targetable Cationic Peptide Amphiphiles for non-viral Gene Delivery	Dr. P.V. Srilakshmi	10.0	CSIR
Inhibitor formulation to combat corrosion and fouling of ship sea water cooling system	Dr. B.V. Appa Rao	9.9	NRB, Govt. of India
New heteroaryl styrylsulfones as anticancer agents	Dr. V. Rajeswara Rao	9.7	CSIR
Studies on Synthesis & Biological Activities of Fused Heteroaryl chromenes with New Reagents	Dr. B. Rajitha	9.0	CSIR
New Heterocyclic Quinones as Potential Antineoplastic Agents	Dr. V. Rajeswara Rao	7.6	UGC
Click reactions for the biorthogonal functionalization of peptides and proteins with transition metal complexes.	Dr. Jugun Prakash Chinta	35	DST

Cont.....
(INR 3 Crores)

Title of the Project	Principle Investigator	Sanctioned Amount (in Lakhs)	Sanctioning Agency/ Period
Design of chiral catalysts for the C-H activation	Dr. D. Kasinath	31.0	DST (2015-18)
Studies on promoter induced rapid non-aqueous media synthesis of efficient and eco-friendly SAPO-35 catalyst for methanol to olefin reaction	Dr. V. Narayanan	29.66	DST (2015-18)
Synthesis of kaitecephalin derivatives and their biological evaluation as glutamate receptor antagonists	Dr. D. Kasinath	24.0	DST (2014-17)
<i>N</i> -Heterocyclic Carbene Catalyzed Tandem [2+2] and [4+2] Cycloaddition Reactions: Application in the Synthesis of Bioactive Compounds	Dr. K. Hari Prasad	24.0	DST (2016-19)
Design, Synthesis and Biological Evaluation of Thiazolidinone-Tetrazolopyrimidine Hybrid Molecules as Anti-Cancer Agents	Dr. B. Srinivas	15.46	CSIR (2017-20)

Details of the Ongoing Sponsored Research Projects (INR 6.8 Crores)

Title of the Project	Principle Investigator	Sanctioned Amount (in Lakhs)	Sanctioning Agency/ Period
DST-FIST Program Level - 1	The Head	114.0	DST-FIST
Novel glycosylation methods and their application to biologically important molecules	Dr. Hari Prasad Kokatla	35.0	DST (2016-21)
Novel glycosylation methods and their application to biologically important molecules.	Dr. Hari Prasad Kokatla	35.0	DST-INSPIRE
Rongalite/Molecular Oxygen: A mild, low cost and green reagent for oxidation of organic substrates under sunlight.	Dr. Hari Prasad Kokatla	41.02	EMEQ-SERB



School of Management

Annual Academic Performance Appraisal 2021-2022



Agenda



#1 About
SoM



#2 Research



#3 Alumni



#4 Student
Activities



#5 Plan



RESEARCH &
CONSULTANCY (SRIC)

SCHOOL OF MANAGEMENT

SCHOOL OF
H & S S

About the School

Started as Center for Management Studies in September 2000

The Program was started exclusively for Engineering Graduates

Rephrased as School of Management from 2008

Nine Full time faculty with Industry and Research Experience



Faculty Resources (Til July, 2022)

Sanctioned Faculty : 15

Existing Faculty: 10

01 


Professor

03 

Associate Professors

06 

Assistant Professors

 05

Adhoc Faculty



Faculty Resources (As on date)

Sanctioned Faculty : 15

Existing Faculty: 9

02 

Professors

04 

Associate Professors

03 

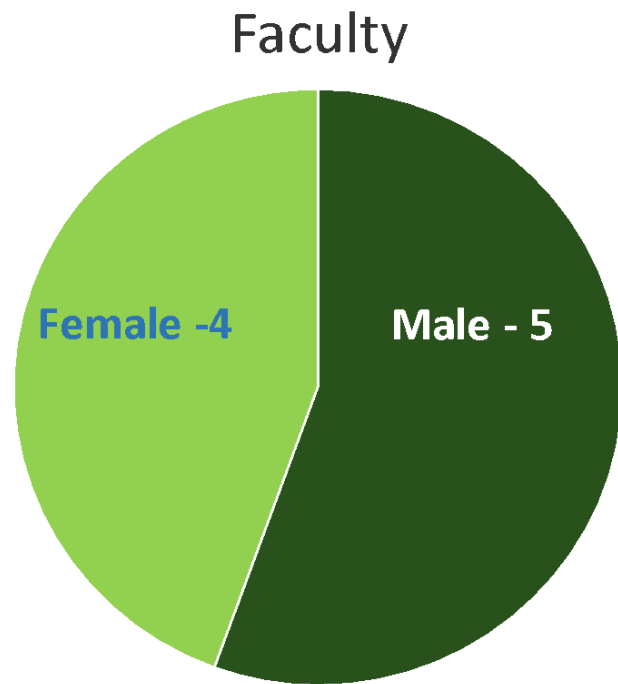
Assistant Professors

 06

Adhoc Faculty



Composition



Economics

Finance

Human
Resource
Management

Marketing
Management

Information
Systems

Operations
Management

Faculty Details



Prof. M. Ravindar Reddy

Areas of Interest:

Economics , Agriculture Economics , Rural Marketing



Prof. P. Ramlal

Areas of Interest:

Human Resource Management, Soft Skills, Corporate Training, Performance Management, Industrial Relations and Disability Studies.



Dr. Padma K

Areas of Interest:

Economics , Financial Management



Prof. V. Rama Devi

Areas of Interest:

Organizational Behaviour; Human Resource Management; Performance Management; Employee Engagement; HR Analytics



Faculty Details (cont.)



Dr. Francis Sudhakar

Areas of Interest:

Consumer Behavior and Industrial Marketing



Dr. S. Lakshmi Tulasi Devi

Areas of Interest:

Corporate Finance , Risk Management and Financial Econometrics



Dr. G. Sunitha

Areas of Interest:

Behavioral Finance, Financial Markets



Faculty Details (cont.)



Dr. K Lakshminarayana

Areas of Interest:

Information Systems, Socio Technical systems and E-Governance



Dr. P Ramachandra Gopal

Areas of Interest:

Supply Chain Management, Sustainability, Quality Management and Business Research Methodology



Dr. T.Rahul

Areas of Interest:

Marketing, Analytics



Office Staff

- Ms. Hussna - Senior Assistant
- Mr. G. Sambaiah – Caretaker
- Mr. L. Naresh - Lab Assistant



Programmes offered

MBA started in the year 2000



Ph.D started in the year 2009



A magnifying glass with a black frame is positioned over a piece of white paper. The paper has the text "#2 Research" written on it in blue ink. The magnifying glass is held at an angle, and the text is clearly visible through the lens. The background is a plain, light-colored surface.

#2

Research

Research (2021-22)

Journal Publications
13

Conference Proceedings
03

Books and Book Chapters
07

Research Guidance
08 Ph.D scholars

Research Projects
4 projects – 6.90 Lakhs

Consultancy
1 – 1.41 Lakhs

Thrust Areas of Research

Economics

Econometrics

Accounting & Finance

Risk Management

Behavioural Finance

Investment Management

Human Resource
Management

Organizational Behaviour

Competency Management

Employee Engagement

Performance Management

Disability Studies

Corporate Social Responsibility

Marketing

Consumer Behaviour

Marketing Analytics

Marketing Research

Operations Management

Supply Chain Management

Quality Management

Information Systems

Socio-Technical Systems

E-Governance

Learning Framework

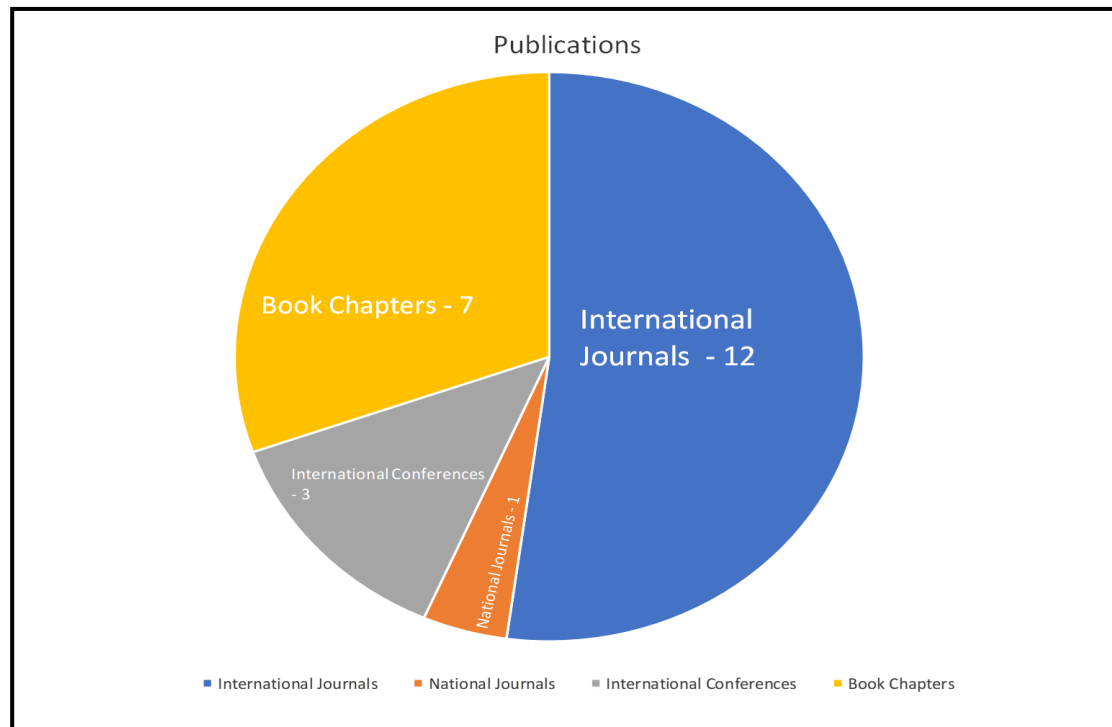
Social Projects

Research Projects and Consultancy

- **Dr. V. Rama Devi (PI) and Dr.T.Rahul (Co-PI)**- Project titled " Trans to Remote Learning Due to Covid19 – The Experiences of Faculty of Higher Education Institutions in India from ICSSR, New Delhi (Project Number: ICSSR/285/11/2021-22) (Completed) (Amount - Rs.1,90,000)
- **Prof. M. Ravindar Reddy (PI)** - Project entitled " A Study on Social Security for Women in Unorganised Sector in India from ICSSR (Completed) (Amount Rs.1,00,000)
- **Dr. K. Padma, Dr. PRC Gopal and Dr. T. Rahul** – " I m p a Study on Installation of CCTV cameras under CSR activities of Manakosam Project at Visakhapatnam Steel Plant (Completed) (Amount Rs.1,41,000)
- **Dr. G. Sunitha (PI)**- A Project on " S o l Power Fertilizer S p r a y sponsored by Unnat Bharath Abhiyan. (Ongoing) (Amount Rs.1,00,000)
- **Dr. V. Rama Devi (Co-PI)**- Project titled " A n t e c e and outcomes of E learning adoption by the students of Higher educational institutions in India 2022, sponsored by ICSSR, New Delhi as Project Co-director. (Project Number: ICSSR/285/11/2021-22 (Ongoing) (Amount Rs.3,00,000)



Publications



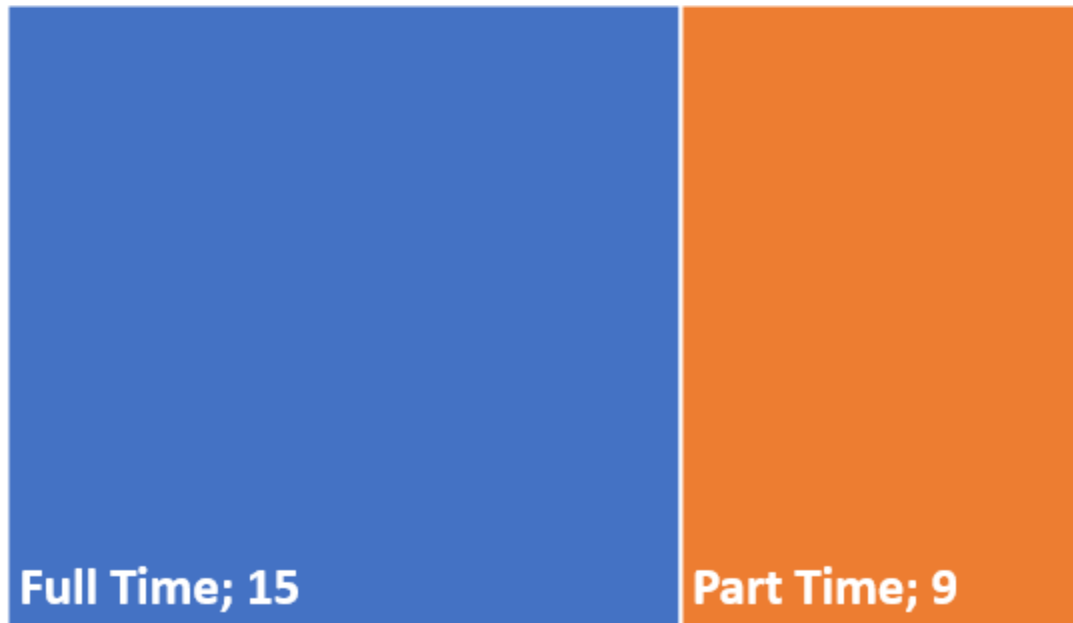
Research Publications

- International Journals- 12 papers were published in reputed journals – Scopus indexed/ABDC category
- National Journals - 1 Scopus indexed
- International Conferences - 3
- Number of Book Chapters - 7

Research Guidance

PhD students at SoM (24)

■ Full Time ■ Part Time



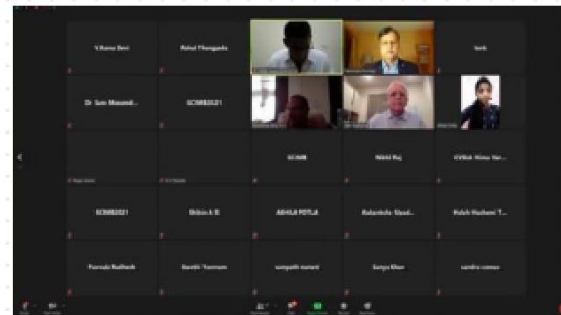
No. of students admitted during the academic year:

08

No. of students awarded during the academic year: **Nil**

Global Conference on Innovations and Business (GCIMB)

International Conference on “ Innovations in Management and Business (GCIMB) during 27th and 28th July, 2021 ” along with Chapman University and Howard University USA.



- 250 + participants
- 29 countries
- 99% of the participants expressed satisfaction and asked to organize similar events in the future



Book of Abstracts



Faculty Development Programmes

- FDP on **Statistics for Business Research & SPSS Applications** during July 18-25, 2022
- FDP on **Machine Learning and Energy Analytics** during Sep 12 –Dec 19, 2021
- FDP on **Business Analysis in Decision Making** during April 26–30, 2022.





Alumni

~700

CXOs

07

Entrepreneurship

06

#3 Alumni

Alumni (Class of 2020-22)

Total Students
39

Placed
35
Median :7.5 Lakhs/Annum
Max: 15 Lakhs/Annum

Entrepreneurship
01

Higher Education
01

Unplaced
02

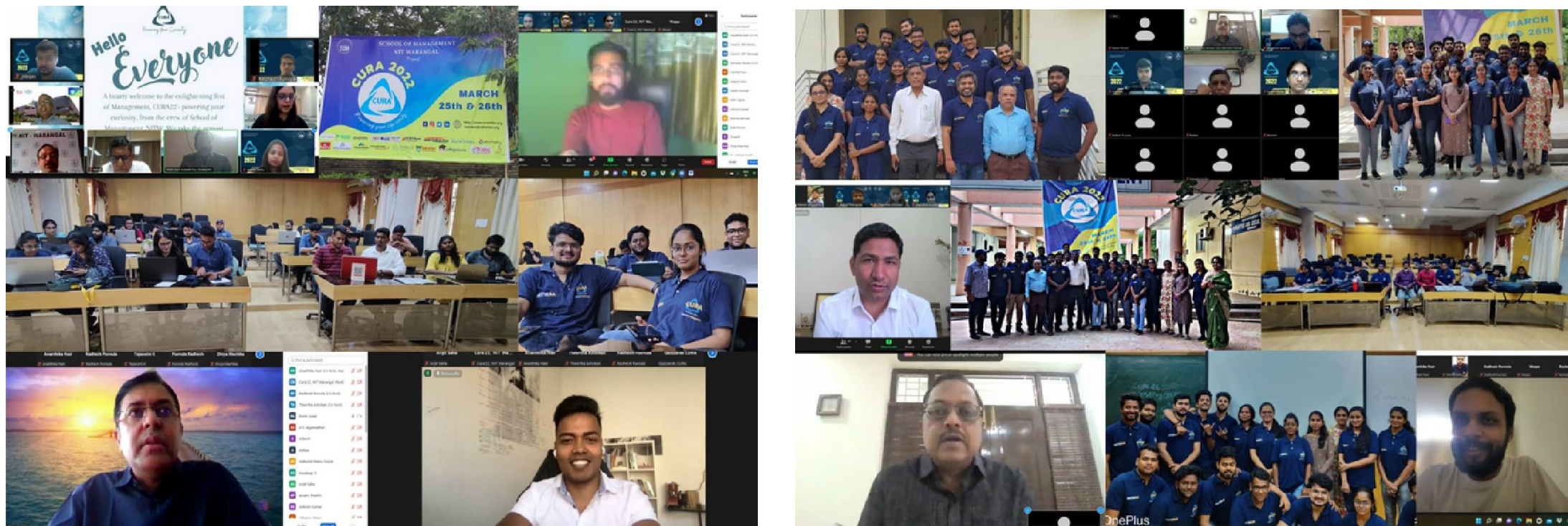
- Ms. Jessica Mettu - Master of Science in Business Analytics - University of Texas at Dallas, USA
- Mr. Aditya Kumar – Family Business ; Delhi

A group of students are gathered around a wooden table, focused on their laptops. In the foreground, a woman in a yellow sweater is typing on her laptop while a man with a beard looks on. In the background, other students are also working on their laptops. The scene is brightly lit, suggesting a modern, collaborative learning environment.

#4 Student Activities

Cura'22 – Management Meet

CURA, meaning thoughtfulness is a management event of School of Management. The 12th edition of the event was organized in virtual mode, abiding by the Covid-19 guidelines, on the 25th and 26th of March, 2022.



185 students from 43 B-schools; 10 events; 6 keynote sessions; 2 workshops

Student Achievements and Activities

The Abhiyan club organizes events on daily basis. Last year the club was able to organize **65** events. Some of the activities are:

- Book Reviews
- Industry Analysis
- Business News Review
- Case Studies
- Business Quiz using Kahoot
- Aptitude and Group Discussions
- Ad Making, Idea Pitches and strategy based games

Alumni Relations Team (ART)



Organized

- 16 sessions with industry leaders
- 2 sessions with CXOs
- 4 sessions with Alumni

A screenshot of a Zoom meeting. The main window displays a presentation slide titled "4. Reframe your failures". The slide content includes a diagram with four boxes: "Overcome your fears", "Overcome your setbacks", "Reframe the event", and "Practice resilience". Below the diagram is a framed box containing the text: "Label the event; not the individuals", "I failed at securing the deal", "I am a failure", and "Adapted from The Growth Mindset, Carl Dweck". The bottom of the slide has a footer with "© ICFP/ICM/ICM/ICM" and "Building Tomorrow's Leaders - Building Communities of Leaders - Transforming the Nation". The Zoom interface shows a participant grid on the right with names: Riddhi Parikh (active), Adarsh Saha, Rama Lingewara Sharma, RACHANA RAYALA, Rahul Thangeda, Mohul Mishra PH0008, 16 others, and You. The bottom status bar shows the time "11:56 AM" and the ID "dip-kexk-irc".

Corporate and Leadership Webinar Series

Saurav Sarkar (Manager at Axis Bank)
Topic: Leadership and Technology
Financial Industry
Date: 19 September, 2021

Ashish Kumar (Assistant Manager at TCS)
Topic: Bridging the gap between Academia and Industry in India
Date: 10 October, 2021




Corporate and Leadership Webinar Series

Rajesh Srinivasan (Modern Marketing Strategist)
Topic: Rules of Modern Marketing
Date: 21 November, 2021




**SCHOOL OF MANAGEMENT
NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL**

TOPIC OF DISCUSSION
BRAND BUILDING IN TODAY'S TIME

31 OCTOBER 2021, 10:00 AM

LEADERSHIP WEBINAR SERIES
#3.21

Sanchita Ganguly (Brand Building Head - UltraTech)
Topic: Brand Building in today's time
Date: 31 October, 2021

Namrata Dhasmana (Global People - Business - Culture Leader)
Topic: Strength based Leadership)
Date: 7 November, 2021



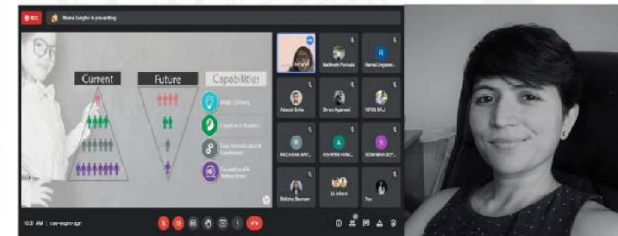
**SCHOOL OF MANAGEMENT
NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL**

TOPIC OF DISCUSSION
STRENGTH BASED LEADERSHIP

07 NOVEMBER 2021, 10:00 AM

LEADERSHIP WEBINAR SERIES
#3.20

Prabhat Kumar Bhakat (Procurement & Supply Chain Strategist, Start-up Enthusiast & Mentor)
Topic: Digital Supply Chain Management
Date: 5 December, 2021



Meera Sanghvi (Lead - Robotic Process Automation, HP)
Topic: Skills needed for the Workforce
Date: 14 November, 2021



**SCHOOL OF MANAGEMENT
NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL**

TOPIC OF DISCUSSION
Brand Management in Corporate World

16 JANUARY 2022, 11:00 AM

LEADERSHIP WEBINAR SERIES
#3.36

Sushant Dayal
 Category Head for Nutrition at Amway | FMCG Specialist | Digital Marketing



**SCHOOL OF MANAGEMENT
NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL**

TOPIC OF DISCUSSION
Building Resilience for Peak performance

09 JANUARY 2022, 10:00 AM

LEADERSHIP WEBINAR SERIES
#3.35

Shreshtha Mittal
 Performance Coach, ACC (ICF) | Speaker | Ex-HR (Pillitteri, Wipro) | Breast Cancer Activist



Newsletter Team



- Newsletter team collates information pertaining to department and shares it with alumni of the department and on social media handles. The first issue came in May 2020.

10 Issues in three volumes have been published

Social Outreach Team



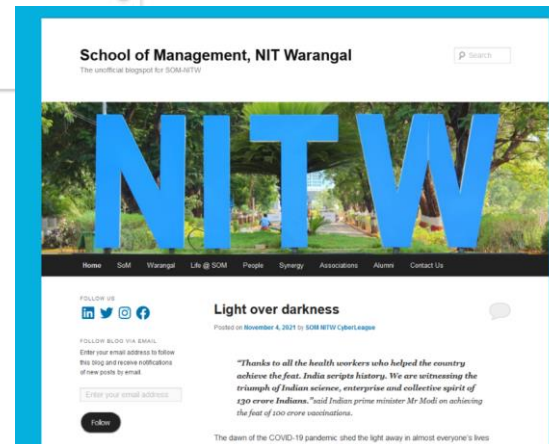
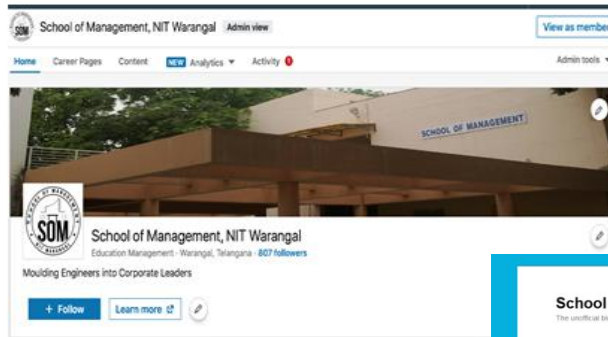
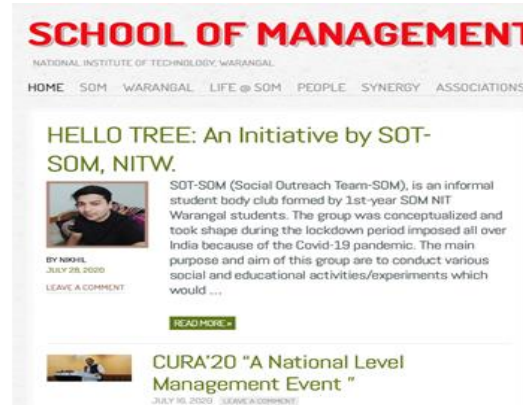
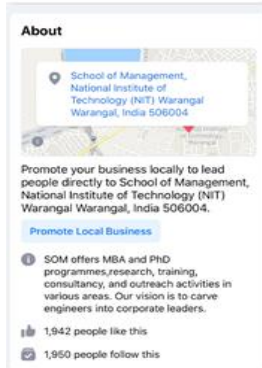
Plantation Drive

Around 65 plants were planted in two phases by our alumni, students and their families during July 2nd week of 2021.

- Social Media campaigns were run on “Stop food wastage”



Branding and Social Media Team



- A department blog where articles are written by students

- SoM page on facebook, LinkedIn and Instagram are regularly maintained.

- Facebook has 1940 followers

- LinkedIn has 2778 followers (We stand first among all management Departments in terms of followers at NITs)

- Instagram has 277 followers (lost our page at 750 followers and we restarted)



- Presence on
- Facebook
 - Instagram
 - LinkedIn
 - Twitter
 - Youtube
 - Blog

Summary

Summary over the last two years			
Sl. No		2021-2022	2020-2021
1	No. of students Admitted	24	39
2	No. of Full time Faculty	10	10
3	No. of Ad -hoc Faculty	5	05
4	No. of Research Projects	4 - 6.9 Lakhs	02 2.8 Lakhs
5	Passed out students	39	39
6	No. of Publications	16	11
7	No. of PhDs Completed	0	02
8	No. of Book Chapters	7	02
9	No. of Expert Lectures	17	10
10	Abhiyan Club Activities	65	70
11	No. of FDPs	3	02
12	Consultancy	1-1.41 Lakhs	00
13	No. of Students Placed	35	30

#5 Plan



	M	T	W	T	F	S	S
1							1
2	2	3	4	5	6	7	8
9	9	10	11	12	13	14	15
16	16	17	18	19	20	21	22
23	23	24	25	26	27	28	29
30	30	31					

Strengths

A good **blend of Academic and Industry experience**: Average experience of the faculty is 20 years

Students stand as a big motivation: **Student teams & activities** that encourage learning by doing

Analytics Lab with SPSS and AMOS software

Innovative **curriculum – Labs, Mandatory non-credit courses and contemporary electives in accordance with NEP**

Wi-fi enabled class rooms

Professors of Practice

Improvement in placements





ACTION PLAN

Action Plan (Short term)

- CAT institutional registration
- Procurement of softwares, access to Harvard case studies and databases
- Early MBA admission notification
- Registration of Alumni Association
- Initiatives to strengthen industry collaboration - conduct MDPs/EDPs and enrich consultancy assignments
- MoUs with various companies – (HPCL, G & G companies, Vistex, etc.)
- Enhance research activities and encourage inter-disciplinary research
- Increase the reach of the department
- Launch simulation, media and personality development lab
- Departmental level medal to motivate students
- Organize international conferences

Action Plan (Medium term)

- Prepare and apply for NIRF ranking
- Introduce certificate and diploma programs
- Introduce new PG programs – Executive MBA program; Business Analytics/Functional Analytics, MBA (Logistics), MBA (Healthcare), MBA (Tourism), Integrated B.Tech-MBA
- Institutional membership of professional bodies – AIMA, SHRM, NHRDN
- Development of Case centre

Action Plan (Long term)

- Exchange programs
- Programs in collaboration with institutes and industry
- Accreditation - Association of MBAs (AMBA), Association to Advance Collegiate Schools of Business (AACSB), QS rankings
- Launch management journal
- Centres of excellence in management

Annual Academic Performance Appraisal (2021-22)

Presented by

Dr. K. Madhavi

Head

Department of Humanities & Social Sciences

National Institute of Technology, Warangal

Date : 23-09-2022

Brief History of the Department

The Department of Humanities and Social Sciences at NIT Warangal was started in 2009. The Department offers courses across the board ranging from basic to advanced courses in English Communication and Two Foreign languages catering to diverse needs of students across UG /PG and PhD levels. Besides, the Department also offers research programs in the broad areas of ELT, British literature and American literature through regular, part time and self- finance modes.

This academic year as per NEP guidelines 2020, the Department of Humanities and Social Sciences has revised the syllabi of existing courses and has designed 16 new courses at UG/PG/PhD levels. As part of curriculum revision the department has also designed a Minor program to be offered at UG Level titled 'Professional Communication Skills for STEM. The Department of H&SS constantly strives to impart quality education and life skills that enable students to become successful on the personal, academic, and professional fronts.

Faculty Details

S No.	Category	No. of Faculty/Non-teaching staff
1	Sanctioned Strength of Faculty	07
2	Regular Faculty	06
3	Regular Faculty with PhD	06
4	Women Faculty	05
5	Adhoc Faculty (2 for English and 1 for German)	03
6	Visiting Professor for Foreign and Classical language (French and Sanskrit)	02

Details of the Students

S No.	Category	No. of students
1	Number of PhDs Completed during the academic year	01
2	Number of new Ph.D students admitted	07
3	Present strength of PhD students	20

Details of the Programmes being offered by the Department

1. Minor Programm-01
2. PhD (ELT, Literature and Linguistics)

Research Projects

- Number of new Projects sanctioned (current review year): 02
- Number of Ongoing Projects: 02
- Number of completed projects: 02

Number of Publications (Faculty)

- (a)International Journals: 02
- (b) National Journals:03
- (c) International Conferences: 0
- (d) National Conferences: 0
- (e) Books : 01
- (f) Book chapters : 03

Research Projects and Patents

Patent

- Patent applied by *Dr. B. Spoorthi*, Assistant Professor, Department of H&S, National Institute of Technology, Warangal for Analysis of Translation Quality Based on the Mean Dependency Distance got published.

New Lab Equipments/software/Workstations Installed

- Language Research Laboratory, under non plan grants worth 874500=00 during 02-11-2021
- VIRLECS (Virtual Lab for developing English Communication Skills) developed by *Dr. B. Spoorthi* using Free and open-source software (FOSS) with SEED fund of Rs. 2.00 Lakhs sanctioned by the Institute.

Conferences, Workshops, FDPs, Webinars organized by the Department

- Webinars - 2
- Training Programmes - 2
- Outreach Programmes - 2
- International Conference - 1

Number of the Expert Lectures/ Guest Talks/webinars delivered by the faculty

- Expert Lectures - 11
- Guest Talk - 4
- Plenary Address - 1

Awards, Outreach Activities, Achievements and Distinctions of Faculty members

Prof. Madhavi Kesari has received ‘Best Performer Faculty Member ’ certificate during the One Week (Virtual) International Workshop on "Bridging Industry and Academia in Language Studies" organized by Amity University Jaipur, Rajasthan, from 15th July – 21 July 2021.

Dr. R. Vennela has been invited as a honorary Hornby grant awardee to present her project findings (Virtual) on “Preparing a school dictionary resource for low resource contexts: steps and challenges” on 14th July 2022 at the XX EURALEX Conference, Leibniz-Institute for the German Language (IDS), Mannheim, Germany.

Dr. R. Vennela has been presented the *A.S.Hornby Dictionary Research Award* for the year 2020-21 by the A.S.Hornby Educational Trust, United Kingdom.

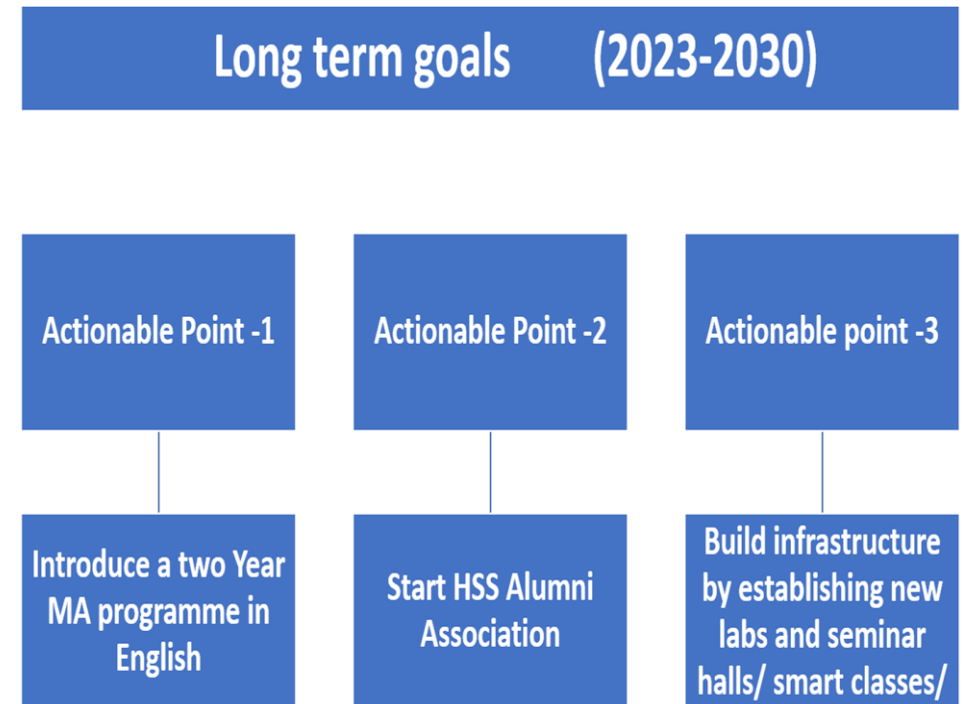
Strategic Planning WG

Recommendation	Status	Plan of Action
Department of HSS will be strengthened by recruiting faculty from different disciplines like Psychology, Philosophy,, Sociology, languages, arts, education etc, expanded renamed as Department of Liberal Arts	In Progress	Faculty recruitment in allied subjects shared for upcoming recruitment
Starting new programs/ courses by the department	In Progress	16 New courses launched by Department of HSS across levels for academic year starting 2021-22
Non-formal Proficiency short term courses to be offered to internal (students) and external participants. Example: Language Proficiency (English, French, German, Spanish, Sanskrit etc.), short term course on building Employability skills, IELTS/GRE, basics of coding etc.	In Progress	Proposed SPL Center to offer courses in Foreign and Classical Languages, Skill and Personality development
Critical thinking, Emotional Intelligence, Sustainable Development Goals; and Social Emotional Learning to be integrated into curriculum	In Progress	Course and Creative thinking, with elements of SEL and EQ introduced

Plans for future: 2023-24

- PhD/PG Level expansion to allied areas in Language and Literature: Culture studies, Film Studies, Comparative Literature, Translation Studies, TESOL, English Literature, English Language, Journalism, Linguistics, and Applied Linguistics ó provided faculty strength increases.

Actionable Points	Short Term (2020-2023)
Student Strength and Infrastructure	
NIT Warangal will initiate steps to become Research-intensive university by 2030.	To collaborate with HSS departments of all/other NITs and conduct Yearly 'Research Conclave' to strengthen the research base and network.
Its present student strength is about 6000 and aims to enhance to 20,000 by 2030. On campus student strength will be enhanced to 10,000 and another 10,000 students will be engaged through online/distance learning mode.	Collaborate with University of Cambridge UK., to offer Proficiency courses at advanced and intermediate levels. Offer 'Language proficiency' courses and increase the intake of external (diploma/certificate course) students. conducting lecture series/seminars and conferences on "Multilingual engineering curriculum: towards inclusive higher education".
Infrastructure facilities will be augmented for the additional intake proposed	Strengthen & build the Department with a Library, Discussion/Seminar Rooms, GD room, Interview rooms etc
Existing Laboratories will be strengthened with new equipment/replacing old equipment and new laboratories will be established	Acquire infrastructure and equipment (with independent, operational computers for students) for a fully functional language lab



Non academic workload of faculty

Name	Role	Role	Role	Role	Role	Role
Dr. K. Madhavi	Head	Coordinator, ERP for SMILE Project for Institute MIS	Member Core Steering Committee (SCoPE)			
Dr. M. R. Viswanathan	Coordinator, LMS					
Dr. B. Spoorthi	Faculty Coordinator, Center for Career Planning and Development (CCPD, NITW)	Core Member, TLC	Member, Library Advisory Committee	Faculty Advisor, Literary and Debating Club	Core Member, Social Media Committee	Course Coordinator – PhD (PhD Institute level courses)
Dr. P. Madhumathi	Warden, Ladies Hostel	Faculty Advisor, Music Club	Member, IIAC			
Dr. R. Vennela	Warden, Ladies Hostel	Dept. Incharge, Stores & Purchase	Co ordinator, LMS	Coordinator, ERP for SMILE	Faculty Advisor, Minor Program, H&SS	NBA Coordinator for HSS

Challenges & Recommendations

- Difficulties/Problems and other issues if any: Request for department premises: space crunch, need for renovation, need for faculty clusters, need for regular faculty recruitment,
- Plans for future: 2022-23 – PhD/PG Level expansion to allied areas in Language and Literature: Culture studies, Film Studies, Comparative Literature, Translation Studies, TESOL, English Literature, English Language, Journalism, Linguistics, and Applied Linguistics – **provided faculty strength increases.**

ACADEMIC APPRAISAL PERFORMANCE

PHYSICAL EDUCATION

Presented by

Head, Department of Physical Education

STAFF STRUCTURE

Faculty

Dr. P. Ravi Kumar (Professor)

Dr. Dhayanithi (Professor & Head)

Dr. P. Madhusudhan Reddy (Professor)

Dr.P.Prasanth (Sr.SAS Officer)

Dr.D.Hari (SAS Officer)

Mr. Ningthoujam Khagemba Singh (SAS Assistant)

Mr. Gadde Subhash (SAS Assistant)

Mr. A. Rakesh (SAS Assistant)

Daily wage Employee

Shri. L Ramesh

Shri. P. Koteswara Rao

Non-Teaching Staff

Shri. D. LAL, Sr. Care Taker

Shri. S. Prasad, Sr. Care Taker

Outsourcing Persons

Shri. E. Satish

Shri. M. Raju

Shri. S. Vinod

Shri. K. Ajay

ACTIVITIES OF THE DEPARTMENT

- Facilitating the student and staff community for the utilization of the available infrastructure facility in the institute to be physically fit and wellbeing.
- To Prepare institute teams towards participation in the Extramural Competitions like Inter NIT or Inter Universities and other local tournaments in various sports and games.

ORGANISATION OF TOURNAMENTS

- Conducting of Intramural competitions for students community and friendly matches to Staff.
- Organising Extramural competitions like Inter NIT or Inter Universities and other local tournaments.
- Friendly matches with other institutions for the students.
- Conducting fitness activities for the staff and Students.
- Organising Sports activities of various Departments & Associations.

EXTRA ACADEMIC ACTIVITIES

- Conducting Induction Programme for 1st year students and going for Talent Identification.
- Conducting regularly Extra Academic Activities programmes for the 1st year students which is a mandatory one. The 15 sections are divided among following 8 faculty members:
 - Dr. P. Ravi Kumar
 - Dr. R. Dhayanithi
 - Dr.P.Madhusudhan Reddy
 - Dr.P.Prasanth
 - Dr.D.Hari
 - Mr. Ningthoujam Khagemba Singh (SAS Assistant)
 - Mr. Gadde Subhash (SAS Assistant)
 - Mr. A. Rakesh (SAS Assistant)

INFRA STRUCTURE INDOOR FACILITIES

- **2 Table Tennis Halls.**
- **1 Chess and 1 Carrom Hall.**
- **1 Yoga Hall.**
- **1 Meditation Hall.**
- **3 Shuttle Badminton Courts.**
- **2 Gym Halls.**
- **4 Faculty Rooms.**
- **2 Store Rooms.**
- **1 Games Boys Room.**

IN THE STADIUM

- **Multipurpose Ground Facility with flood lights which accommodates standard 400 Mts. Track.**

Kho-Kho Ground, Football, Cricket field and with 2 artificial turf net practising Cricket pitches.

- **Galleries of sufficient seating capacity in the stadium along with a walking track.**

- **2 Synthetic Top surface Basketball Courts with flood lights and sitting galleries. (With Flood Lights)**
- **2 Volleyball Courts 5 Tennis Courts (2 Synthetic, 1 Concrete and 2 Clay Courts), 2 Ball Badminton Courts. (With Flood Lights)**

INFRA STRUCTURE FACILITIES IN AND AROUND HOSTEL BLOCKS

- 5 Badminton courts inside Chemical & Metallurgical Buildings
- 2 Shuttle courts and 1 Tennikoit court inside the Ultra Mega hostel.
- In Ultra Mega hostel 2 clay Volleyball Courts and Basketball court.
- Multipurpose Ground with flood lights to play any sort of sports and games (rear side of the ultra mega hostel).
- Gym facilities 2 common halls in the mega hostels and 2 rooms in the ultra mega block 1 hall in the DASA hostel.

15 Table Tennis tables were placed as detailed below:

- 4 Table tennis in Ultra mega hostels
- 3 in the mega hostel
- 2 T.T Tables in the DASA Hostel, 14th Block, 13th Block, 12th Block 11th Block, 2nd block and 1st block.

INFRASTRUCTURE FACILITIES IN GIRLS HOSTELS

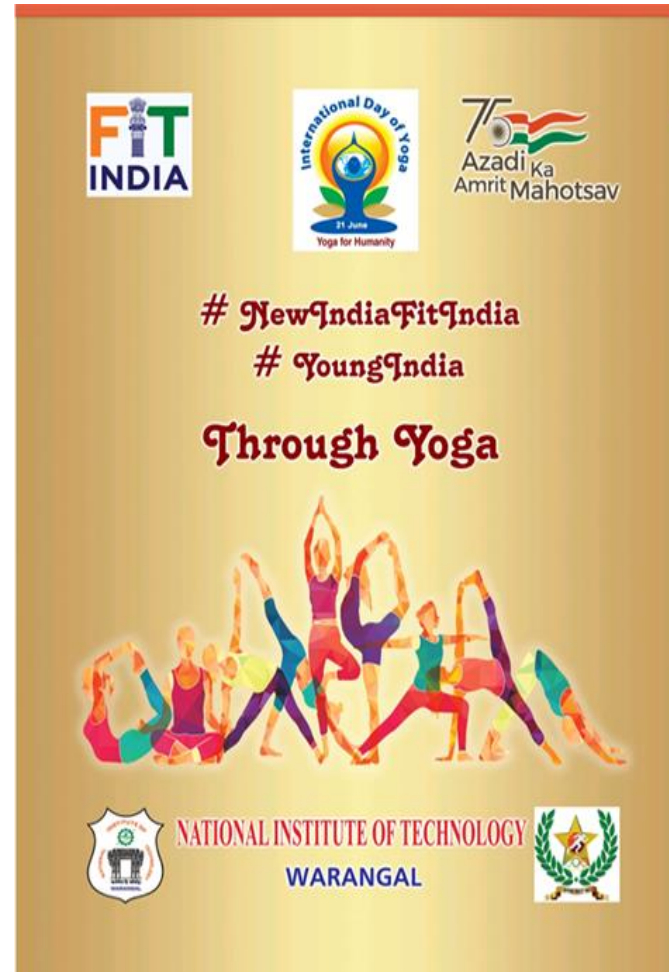
- **1 Concrete Basketball Court with floodlight facility.**
- **1 Volleyball Court**
- **3 Gym rooms in the ladies hostels**
- **1 Tennikoit Court**
- **2 Table Tennis Tables**

Sports facility and other facility for Faculty, Staff and their family members

- Multi Gym facility in Faculty club, Billiards, Table Tennis, Chess, Carrom.**
- Separate Indoor Badminton court in Faculty club.**
- Separate Volleyball court in Faculty club.**
- Children's skating area and park.**
- 3 Open Gym facilities in the campus are under progress.**

BOOK RELEASED

In connection with International Day of Yoga, book on “NEW INDIA, FIT INDIA- YOUNG INDIA- THROUGH INDIA” Compiled and Edited by Prof. P. Ravikumar been released by Hon’ble Director, Prof. N. V Ramana Rao on the eve of International Day of Yoga celebration on 21st June 2022.



Prof. P. Ravikumar, Professor, DPE and Executive member of NAAPES attended the Annual Executive Board Meeting on 18th July 2022 held at Manipal University, Manipal, Karnataka. Also he has interacted with the Sports Science students of Manipal Academy of Higher Education, Manipal campus.





వ్యాయామ విద్యపై దృష్టి సారించాలి

వరంగల్ నిట్ ప్రొఫెసర్ రవికుమార్

చిలువూర్, జూలై 5: మండలంలోని ఆయా గ్రామాల్లో గల ప్రభుత్వ ప్రాథమిక, ఉన్నత పాఠశాలల్లో వ్యాయామ విద్యపై పీఈటీలు దృష్టి సారించాలని వరంగల్ నిట్ కళాశాల ప్రొఫెసర్ రవికుమార్ అన్నారు. మంగళవారం మండలంలోని చిన్నపెండ్యాల ప్రభుత్వ పాఠశాలను సందర్శించిన ఆయన విద్యార్థులతో కాసేపు ఆటలు ఆడించారు. ఈ సందర్భంగా రవికుమార్ మాట్లాడుతూ విద్యార్థులు సెల్ ఫోన్లు, ట్యాబ్ లలో పొందుపరచే ఆన్లైన్ గేమ్స్ ఆడకుండా, సూర్యరశ్మి ప్రసరించే సమయంలో ఆటలు ఆడుకోవడంతో పాటు, వ్యాయామ విద్యను అలవర్చుకోవాలని సూచించారు. పీఈటీలు సైతం విద్యార్థులపై ప్రత్యేక దృష్టి సారించాలని సూచించారు. ఆనంతరం హెచ్ఎం రవీంద్రరావు ప్రొఫెసర్ రవికుమార్ ను శాలువాలతో సన్మానించారు. కార్యక్రమంలో ఉపాధ్యాయులు వంశీకృష్ణ, రాజు, షమీమ్, భవాని, స్వప్న, లక్ష్మీనారాయణ, ఉమ పాల్గొన్నారు.



విద్యార్థులతో వ్యాయామం చేయిస్తున్న ప్రొఫెసర్ రవికుమార్

పాఠశాల సందర్శన

చిల్వూరు: విద్యార్థి దశలోనే వ్యాయామంపై అవగాహన కలిగి ఉండాలని వరంగల్ నిట్ ప్రొఫెసర్ రవికుమార్ అన్నారు. మండలంలోని చిన్నపెండ్యాలలోని ప్రభుత్వ ఉన్నత పాఠశాలను మంగళవారం ఆయన సందర్శించారు. ఈ సందర్భంగా హెచ్ఎం రవీంద్రరావు అధ్యక్షతన ఏర్పాటు చేసిన సమావేశంలో మాట్లాడుతూ ప్రస్తుతం విద్యార్థులు ఆన్లైన్ గేమ్లపై మోజు పెంచుకున్నారని, దీనివలన అనర్థాలే తప్ప ఎలాంటి ఉపయోగం ఉండదన్నారు. ప్రతీ విద్యార్థి గంట పాటు వ్యాయామం చేయాలని



విద్యార్థులతో ప్రొఫెసర్ రవికుమార్

దీనివలన ఎంతో బాగుంటుందని తెలిపారు. ఉపాధ్యాయులు వంశీకృష్ణ, రాజు, షమీమ్, భవాని, స్వప్న, లక్ష్మీనారాయణ, ఉమ పాల్గొన్నారు.

External Assignments by the Department

Faculties

- Prof. P. Ravi Kumar, was **Key note speaker** at SK University, Ananthapur, AP on the eve of National Sports Day 29th August 2021.
- Prof. P. Ravi Kumar, **Key note speaker** at Chaitanya University on the occasion of Orientation programme for New students batch of 2021-22.
- Prof. P. Madhusudan Reddy, presented the paper in International Conference titled “**Effect of Combined Mental and Physical practice on learning motor skills in Volleyball**”, organized by International Society of Sports Psychology 15th world congress, Taipei from Sep 30th to October 4th 2021.
- Dr.P.Prasanth, Dr.D.Hari and Dr.Ravi Kumar have given **lecture on Motivation, Career guidance and Fitness** to the B.P.Ed students of Vagdevi College of Physical Education during the orientation programme on 22nd Oct 2021.
- Prof. P. Ravikumar, was invited as Resource Person for the Faculty Development Programme “**Body Posture Issues & Remedies for Software Professionals**”, Organised by NBKR Institute of Science & Technology, Wakadu, Nellore on 16th March 2022.
- Prof. P. Ravikumar, was invited as Chief Guest to Inaugurate **The National Chess Tournament** for Degree Colleges 2021-22 on 10th June, Organised by Pingle Govt College for Women, Warangal.
- Prof. P. Ravikumar, Dr.P.Prasanth, Sr.SASO and Dr.D.Hari, SASO, Department of Physical Education visited Z.P.H.S Chinna Pendiya, Warangal Rural on 5th July 2022 as part of **Research work**.

- Prof. P. Ravikumar, Executive member of NAAPES attended the **Annual Executive Board Meeting** on 18th July 2022 held at Manipal University, Manipal, Karnataka.
- Dr. P. Prasanth, Sr. SAS Officer has attended the **All India Inter NIT Sports Board Meeting** held at National Institute of Technology Uttarkhand from 14th June to 15th of June 2022.
- Prof. P. Ravikumar, given a talk on **“Importance of Physical Fitness”** to the newly joined Non-teaching staffs on 22nd June 2022.
- Dr. D. Hari, SASO, Department of Physical Education participated in Three Days online Seminar on **“Yoga for Mind and Nutrition for the body”**, held on 27 to 29th June 2022 organised by Dayanand College, Hisar, Haryana on the occasion of 8th International Day of Yoga 2022.
- Prof. P. Ravikumar, given a talk on **“Importance of Physical Wellbeing”** to the newly joined Non-teaching staffs on 22nd June 2022.
- **Prof. P. Ravikumar**, was holding the position of **Chairman**, Board of Studies in Physical Education, Kakatiya University since January, 2020.
- *Prof. P. Ravikumar, Editor-NAPCESS- Journal of Physical Education and Sports Science, ISSN 2229-7049 (Print)*
- *Prof. P. Ravikumar, Editor-NAPCESS- Journal of Physical Education and Sports Science, ISSN 2229-7316 (On line).*
- *Prof. P. Ravikumar, Associate Editor-NAPCESS- International Journal for Innovative Research in Multidisciplinary Field, ISSN 2455-0620 (Scientific Journal Impact Factor: 6.719).*

Students/Faculties sports achievements in Intercollegiate level

- Badminton and Table Tennis teams of NIT Warangal have participated in the **KITS ZONE SPORTS TOURNAMENT (Inter Collegiate)** organised by KITS Huzurabad from 16th to 17th March 2022 and Secured first position in both events.
- Badminton and Basketball (Men & Women), Volleyball Men and Kabaddi Men teams have participated in the **KITS TROPHY 2022** Inter Collegiate tournament from 23rd to 24th of March 2022 organized by KITS Warangal. Badminton, Basketball (Men & Women) teams secured First position.
- Dr.Prasanth.P, Sr. SASO, has participated in **1st Pan India Masters Tournament** from 13 to 15th May 2022 held at Bangalore.
- Mr. G. Subhash, Mr. A.Rakesh and N.K.Singh SAS Assistants have participated in Bicycle Rally organized by Nehru Yuva Kendra, Warangal on the occasion of **World Bicycle Day** on 3rd June 2022.
- Dr.P. Prasanth, Sr.SASO participated in **25 km Bicycle Rally (Cyclothon 2022)** on 26th June 2022 organised by Police Department, Warangal.

ACTIVITIES ORGANISED IN THE INSTITUTE BY THE
DEPARTMENT OF PHYSICAL EDUCATION

- **Scholars Premier League**, 11th Season (SPL 2021) for Ph.D students organized by the Department of Physical Education from 14-12-2021 to 02-01-2022.
- Virtual Surya Namaskara was organized by the Department on the occasion of "**Makara Sankranti**", 14-01-2022, as a part of Azadi Ka Amrit Mahotsav.
- **Traditional Games of India** for the children's are demonstrated by the kids of Faculty and Staff of the NIT Warangal Campus on the occasion of **73rd Republic Day Celebration** on 26th Jan 2022.
- **Faculty Premier League-2022** (1ST FPL- Cricket) was organized by the Department of Physical Education from February 23rd to 30th 2022.
- **Faculty Badminton Premier League** (FPL-1) was organized from 25th to 26th March 2022.
- **Intra Badminton Premier League (IBPL-2022)** for the Students and Staff was conducted from 1st to 3rd April 2022.
- Organized **NITW Football Premier League** from 17th to 24th April 2022.
- **Chess Premier League** for the students was organized on 19. April. 2022.

- Yoga postures display through standees installed inside the campus in various places on 28th April 2022 to till 21st June 2022 to promote IDY 2022 in connection with **8th International Day of Yoga 2022**.
- Organised Two weeks Yoga workshop on “**Yoga for Health and Wellbeing**” from 23rd May to 5th June 2022 for Faculty, Staff and Family members in connection with 8th International Day of Yoga 2022.
- Organised 21 days Yoga workshop on “**Yoga for Health and Wellbeing**” for all students (UG, PG & Research Scholars) from 1st June to 21st June 2022 in connection with 8th International Day of Yoga 2022.
- Organised **Yoga Competition** for NITW Students, Faculty, Staff and their family members on 17th June 2022 in connection with 8th International Day of Yoga 2022.

Proposed courses to be introduced on Sports in future

- Sports Engineering.
- Sports Management
- Yoga Education for fitness & Wellness.
- Restoration of PhD in Physical Education and Sports,
(Ph.D was existing during the year 1999-2003)
- M.P.Ed- Masters in Physical Education
(2 Year course).

PROPOSALS TOWARDS THE DEVELOPMENT OF INFRASTRUCTURE FACILITIES

S. No	Description	Amount Approximate
1.	Multi Purpose Indoor Games Complex.	2.00 Crores
2.	Standard Swimming Pool (50 Mts.).	7.00 Crores
3.	Hockey Field and 2 Handball Courts with Flood Lights.	2.00 Crores
4.	400 Mt 8 lane Synthetic track.	5.00 Crores
5.	Synthetic top surface on the existing Basketball Court with Flood Lights in ladies Hostel.	50 Lakhs
6.	Outer Walking Track around the Stadium.	25 Lakhs
7.	Tera coat surface (3+2=5 Badminton courts inside Biotechnology and Metallurgy buildings).	15 Lakhs
8.	Outdoor Gym facilities near children's park, Outside quarters, near Biotechnology and Metallurgy buildings- (Work Under Process).	10 Lakhs
9.	Establishing Counseling center and Psychological Laboratory.	10 Lakhs

Sports and Extra Curricular Activities and NIRF points

1(d) Metric for Sports and Extra-Curricular facility (SEC) – 10 marks

Extra curricular activities may typically include, but not limited to Clubs/Forums, NCC, NSS etc.

Parameters to be used: sports facilities area per student (A); actual expenditure per student on Sports and EC activities (B); and number of top positions in inter-college sports and EC events (C). Each parameter to be evaluated on a percentile basis to obtain the percentile parameter $p(A)$, $p(B)$ and $p(C)$. Weights assigned to the 3 components are 0.5, 0.25 and 0.25 respectively. $p(C) = 1$, if a college has at least 3 winners of a state level or national event.

$$\text{SEC} = 10 \times [p(A)/2 + p(B)/4 + p(C)/4].$$

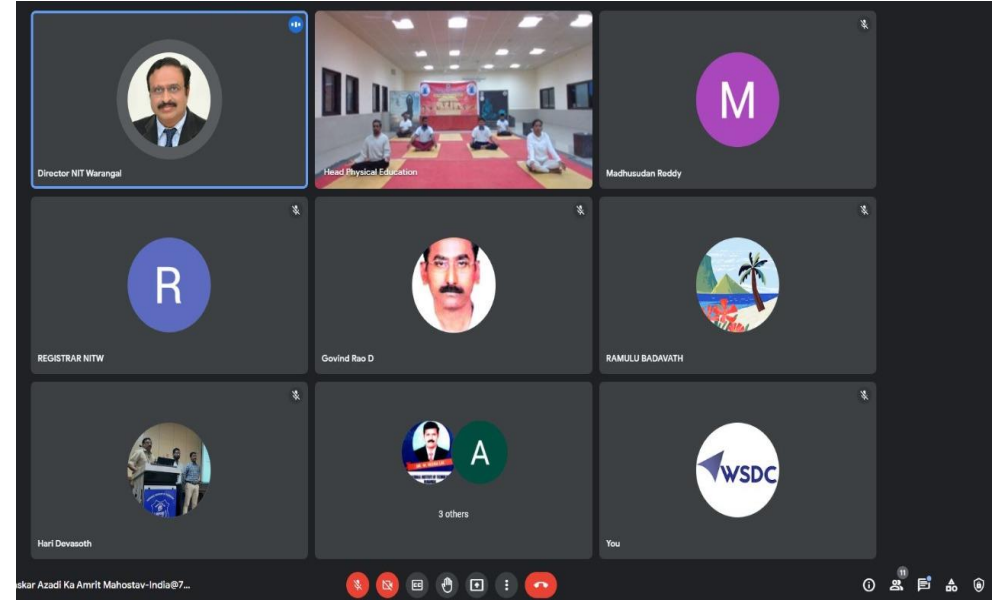
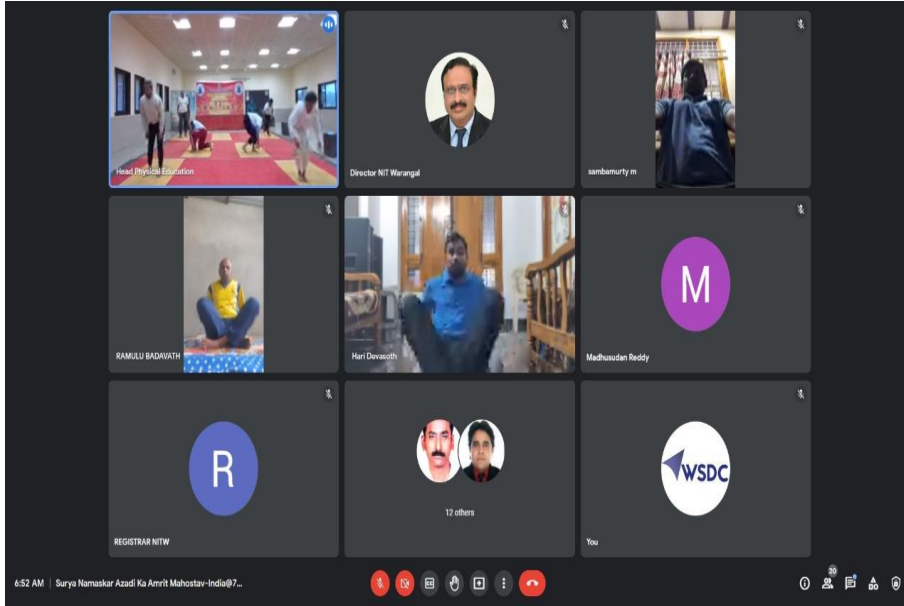
Data Collection: To be obtained from the institutions. Only institutions who maintain these data on a publicly visible website would be eligible for this ranking.

Data Verification: By ranking agency on a random sample basis.

NEP and Physical Education

- Under NEP, students are given increased flexibility and choice of subjects to study, particularly in Physical Education: Mainly it is to create their own paths of advance study and life plans.
- There will be no hard separation among 'curricular' 'Extra curricular' or Co-curricular' among arts, humanities and sciences or between 'vocational' or 'academic' streams. Physical Education will be incorporated throughout the curriculum.
- To become successive in this rapidly changing world HEALTH & NUTRITION, PHYSICAL EDUCATION, FITNESS, WELLNESS and SPORTS also more important to carry forward through out life, including during advance studies too.
- Qualified Physical Education personals are recruited for proper system to adapt.
- All Multidisciplinary universities need to produce good teachers (in various subject including Physical Education) collaborating with Professional courses.
- Aim to establish Physical Education Research Department to carrying out cutting – edge research in various aspects of Education programmes in collaboration with Other Departments.

International Day of Yoga 21st June 2021



60th Open National Athletic Meet@NITW (Race Walking) September 2021



Inauguration of Badminton Court- October

2021



Scholars Premier League- 21st December 2021 to 2nd January 2022



INTRA BADMINTON PREMIER LEAGUE-2022



NITW FOOTBALL LEAGUE- April- 2022



KITS SPORTS EVENT- NIT Warangal team in glance after winning in Basketball and



INTERNATIONAL DAY OF YOGA EVENTS FROM MAY TO 21ST JUNE 2022

Standees of Yoga banners inside campus



YOGA WORKSHOP FOR FACULTY & STUDENTS



YOGA WORKSHOP FOR STUDENTS & RESEARCH SCHOLARS



YOGA COMPETITION FOR STUDENTS, FACULTY AND STAFF



Closing ceremony of International Day of Yoga- 2022



Centre for Career Planning and Development (CCPD)

(formerly Training & Placement Section)



Dr. M Joseph Davidson

Head, Centre for Career Planning and Development,

NIT Warangal – 506 004,

Mobile: 9490165357.

Acknowledgement

Director – for his kind support and Liberal Policies

Deans, Registrar, Heads and Faculty Members

Dr K Kiran Kumar – Head(CCPD) in the Reporting Period

All the Student Placement Associates during 2021-22

Type of Jobs Offered to Students:

- Core
- IT
- Business
- Analytics
- Banking
- Teaching

Type of Recruiters visit NIT Warangal for on-campus Placements:

- Government
- PSU
- MNC
- Private
- NGO



CENTRE FOR CAREER PLANNING AND DEVELOPMENT
NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

Placements

1100+

Internship

300+

NIT Warangal

Placements

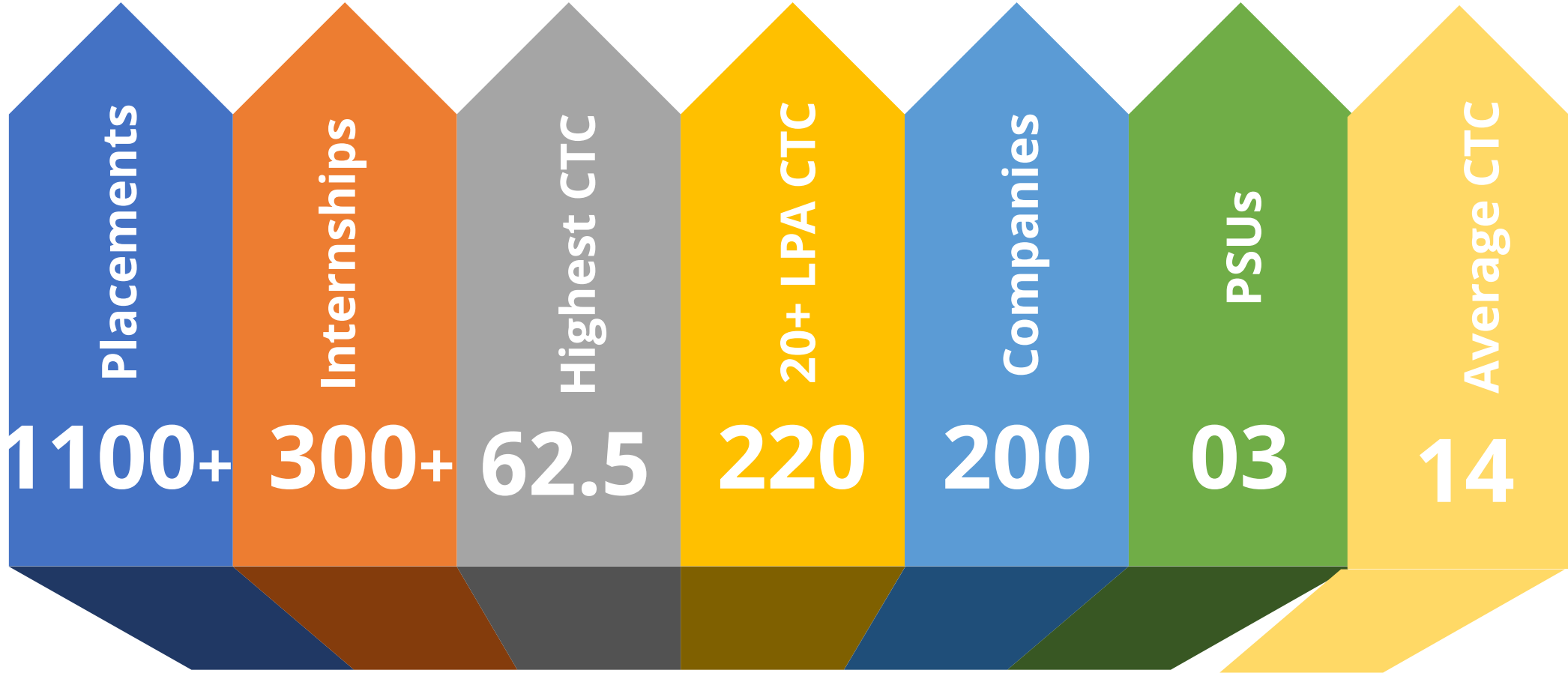
2021-22

Companies

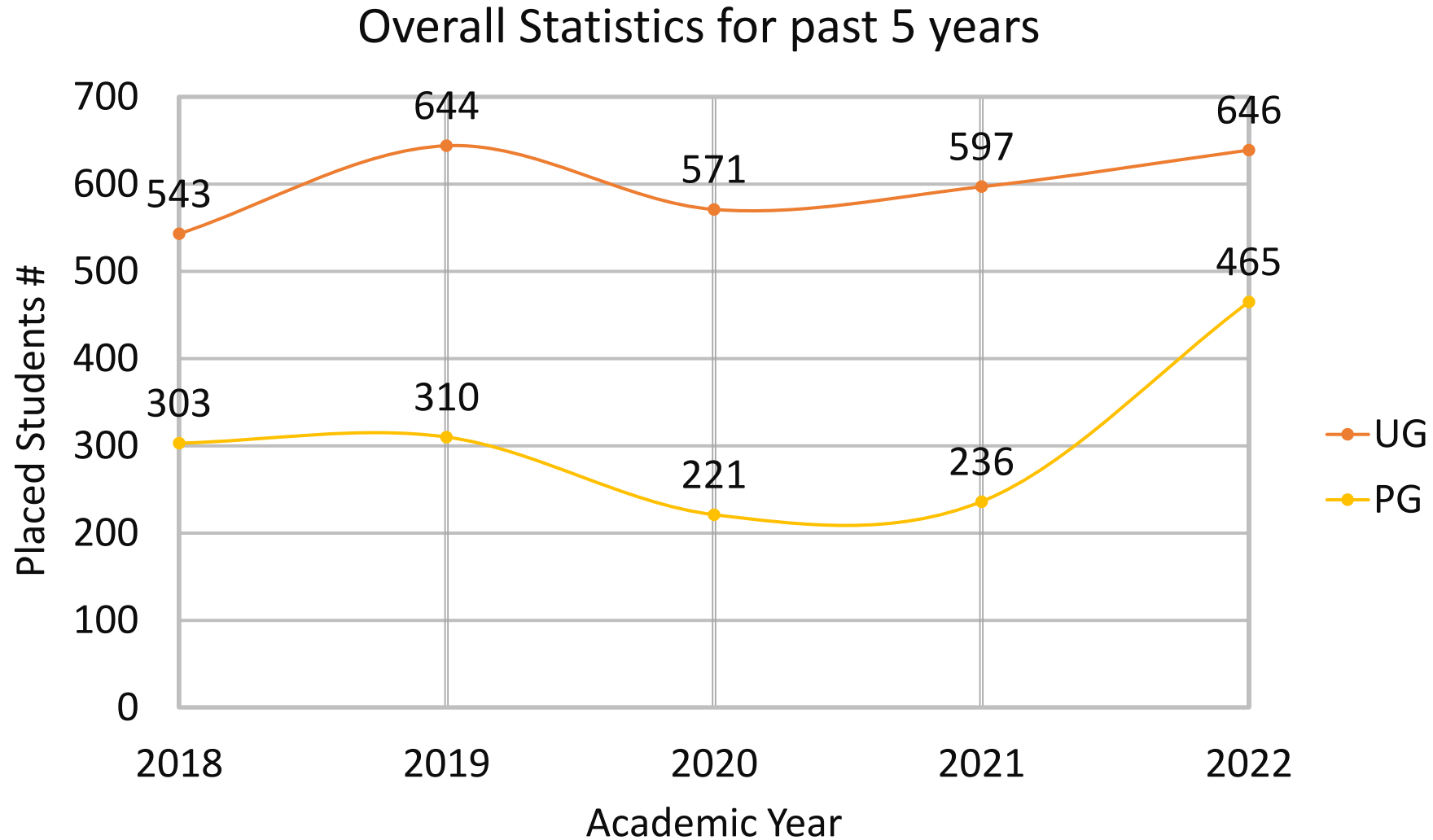
200+

20+ LPA CTC

220+ Students



Placement Statistics for past 5 years



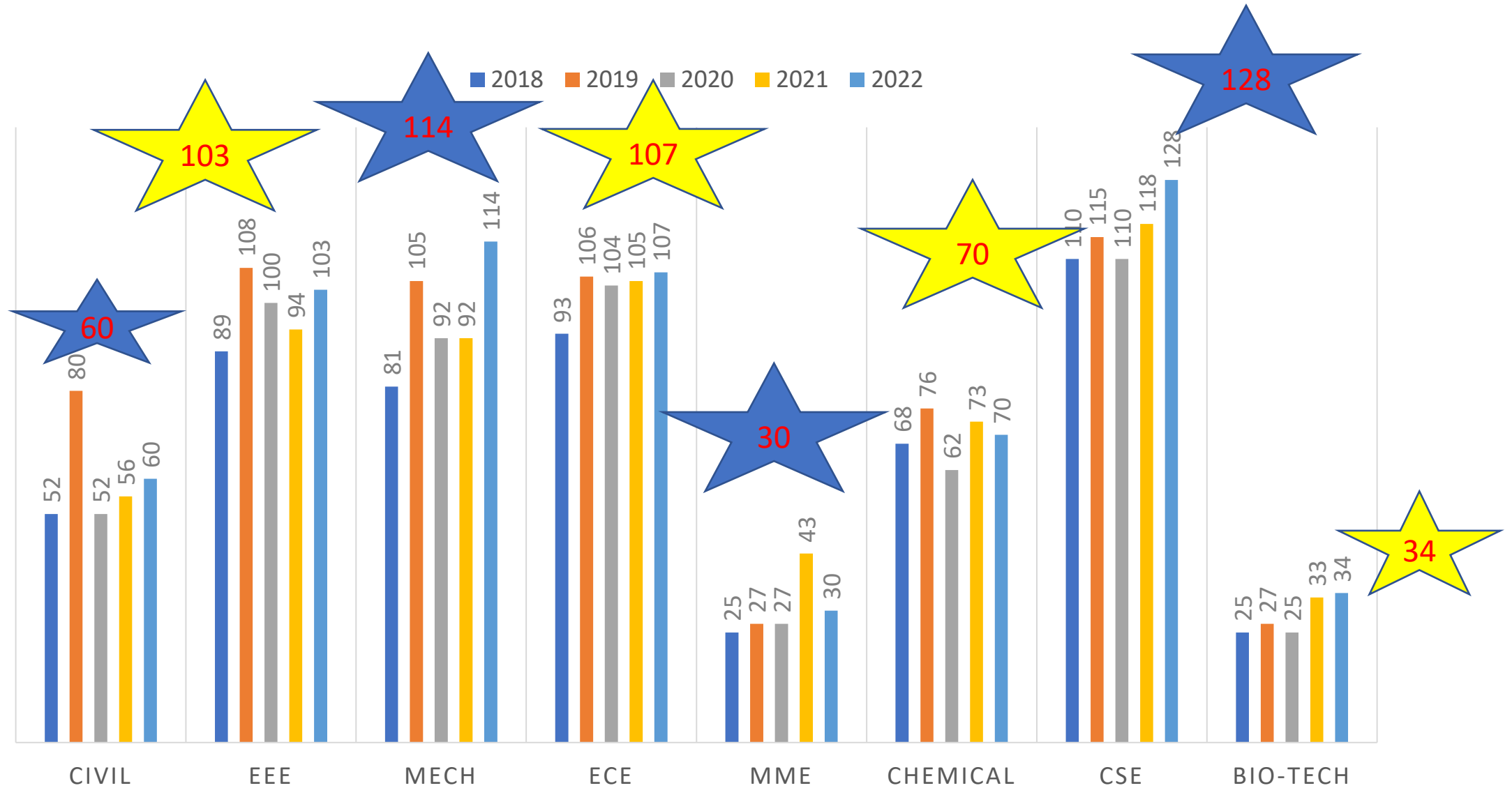
UG Placement Statistics for 2021-22

Branch	Total Students (Eligible*)	Placed	Max. Sal LPA	Avg. Sal. LPA
Civil Engg.	109(73)	60	16	8.93
EEE	133(113)	103	32.5	15
Mechanical Engg.	154(119)	114	37	11.05
ECE	140(113)	107	45.03	18.96
MME	57(38)	30	32	12.83
Chemical Engg.	103(74)	70	26.1	10.09
CSE	143(129)	70	62.5	25.5
Bio-Technology	60(42)	34	31.5	10.62

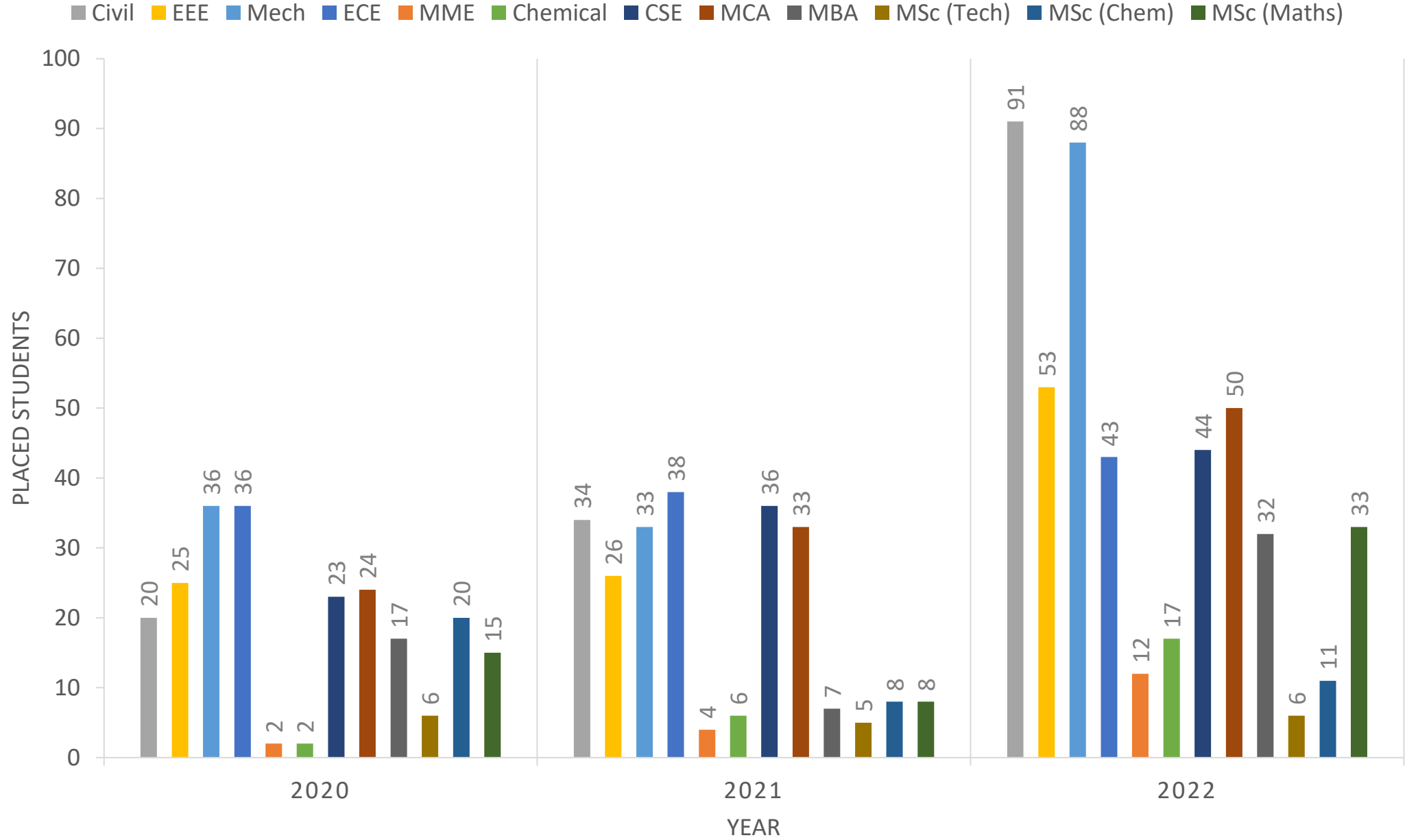
* Includes students with CGPA ≥ 6.5 and who participated in all Campus Placement Drives. If a Company has offered a job to a student having CGPA < 6.5 , it is included in both placed as well as registered counts.

Placement Percentage (UG): 84%

Number of BTech students placed for the past five years



PG Placements Statistics



Sl. No.	Course	Branch	Total Students	Total Students (Eligible*)	Placed	Percentage	Max. Sal (LPA)	Min. Sal. (LPA)	Median (LPA)	Avg. Sal. LPA	Total
1.	B.Tech.	Civil Engineering	109	73	60	82.2	16	3.75	8.1	8.93	646
2.		Electrical & Electronics Engineering	133	113	103	91.2	32.5	4.75	12	14.94	
3.		Mechanical Engineering	154	119	114	95.8	37	4.5	10	11.05	
4.		Electronics & Communication Engineering	140	113	107	94.7	45.03	6	17.73	18.96	
5.		Metallurgical & Materials Engineering	57	38	30	78.9	32	6	10.5	12.83	
6.		Chemical Engineering	103	74	70	94.6	26.1	4.5	9.02	10.09	
7.		Computer Science & Engineering	143	129	128	99.2	62.5	6.5	25.4	25.5	
8.		Bio-Technology	60	42	34	81	31.5	6	9.02	10.62	
9.	M.Tech (Civil)	Water Resource Engineering	27	19	7	36.8	16	5	8	9.37	91
10.		Environmental Engineering	27	27	18	66.7	10	5	8	7.03	
11.		Engineering Structures	27	26	19	73.1	8.6	4	6.3	6.55	
12.		Geo-Tech. Engineering	25	21	5	23.8	12	5	7	7.8	
13.		Transportation Engineering	25	21	14	66.7	16	4.2	6	7.99	
14.		Construction Technology & Management	25	22	17	77.3	16	6	7	8.94	
15.		Remote Sensing & GIS	19	18	8	44.4	16	7.56	10	11.05	
16.		Waste Management	16	15	3	20	12	6	12	10	
17.	M.Tech (EEE)	Power Systems Engineering	19	19	13	68.4	19.5	7	10	11.06	53
18.		Power Electronics and Drives	30	28	21	75	19.5	4.2	10	10.23	
19.		Smart Electric Grid	21	22	19	86.4	15	5	10	10.47	
20.	M.Tech (Mech.)	Thermal Engineering	16	16	14	87.5	10	5	7	7.54	88
21.		Manufacturing Engineering	20	19	15	78.9	12.5	4.8	10	9.19	
22.		Computer Integrated Manufacturing	20	16	10	62.5	14.06	5	6.75	7.8	
23.		Machine Design	20	18	15	83.3	12	5	10	8.57	
24.		Automobile Engineering	18	16	15	93.8	16	4.8	10.23	10.06	
25.		Materials & Systems Engineering Design	14	13	11	84.6	12	6.75	10	9.32	
26.		Additive Manufacturing	8	8	8	100	12	4.8	9	8.01	

Sl. No.	Course	Branch	Total Students	Total Students (Eligible*)	Placed	Percentage	Max. Sal (LPA)	Min. Sal. (LPA)	Median (LPA)	Avg. Sal. LPA	Total
27.	M.Tech (ECE)	Electronic Instrumentation	24	23	13	56.5	31.5	7.5	15	17.7	43
28.		VLSI System Design	19	18	13	72.2	32.7	15	20.46	21.64	
29.		Advanced Communication System	21	19	17	89.5	31.5	6.75	11	15.37	
30.	M. Tech. (MME)	Industrial Metallurgy	19	17	5	29.4	12	4.8	5	7.36	12
31.		Material Technology	19	16	7	43.8	16	4.3	4.8	9.08	
32.	M.Tech. (Ch.E)	Chemical Engineering	20	15	9	60	19.62	4	6.5	8.23	17
33.		Process Control	13	17	8	47.1	15	5.5	10	10.7	
34.	M.Tech. (CS&E)	Computer Science & Engineering	23	23	22	95.7	45.03	4.5	18.66	21.9	44
35.		CS & Information Security	23	23	22	95.7	45.03	10.23	17.2	22.13	
36.	M.Tech (BT)	Bio-Technology	15	14	6	42.9	12	6.5	10	9.25	6
37.	M.C.A.	Master of Computer Applications	55	50	50	100	36	6.5	10	13.4	50
38.	M.B.A.	Master of Business Administration	39	37	32	86.5	15	5	6	6.99	32
39.	M.Sc. (Math)	Applied Mathematics	26	25	11	44	12	6	10	8.63	33
40.		Mathematics & Scientific Computing	27	24	22	91.7	32	6.75	11.4	11.48	
41.	M.Sc. (Tech.)	Engineering Physics	40	36	6	16.7	17	7	8.2	9.64	6
42.	M.Sc. (Chem.)	Analytical Chemistry (MMCA)	27	23	6	26.1	16	4.8	5.5	7.2	11
43.		Organic Chemistry (DDPP)	26	21	5	23.8	16	6	6	9.2	

Placement activities for AY 2022-2023

- Placement season started in August 2022
- No. of Companies visited so far: nearly 55
- No. of students placed so far: 380+
- No of students got/doing internship: 340+
- Students with CTC more than 19.9 LPA are >200

Online Tests – Pre Placement Talks

- As far as possible, Online Tests (OTs) are scheduled after the class hours ie either before 8 AM or, between 5 PM – 11 PM.
- Due to more number of companies visiting the campus, some times CCPD is conducting parallel drives.
- Due to this, sometimes CCPD schedules either PPT or OT during class hours if the after class hours slot is hectic.



**CENTER FOR
INNOVATION
INCUBATION**

MIND MAP

YEAR AT A GLANCE

**ANNUAL ACADEMIC
PERFORMANCE REPORT
2021-22**

CONTENT



- 1 Events
- 2 Webinars
- 3 Workshops
- 4 Startups
- 5 Patents
- 6 Resources and Facilities
- 7 UG Research Association
- 8 External Representation
- 9 Collaborations
- 10 Mission and Vision

EVENTS (8 MAJOR EVENTS)



Ideathon

Empowering students' ideas
4th – 5th September '21



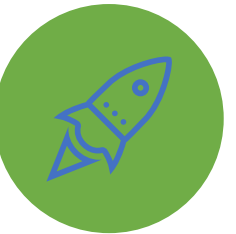
Case Study Competition

Analysis of startups
18th September '21



Ecovision Student talk

Presenting ideas related to sustainability
30th October '21



Shark Tank

Startup ideas pitching event
19th – 10th February '22



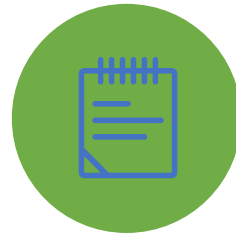
Polyglot Challenge

Promoting Indian languages among youth
14th September '21



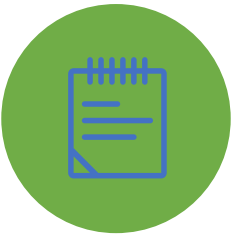
Ecovision

Promoting sustainable development
25th – 30th October '21



Open House

Awareness program regarding CII
18th -19th December '21



Firefly Hackathon

Major annual flagship event
February – April '22

WEBINARS (10 WEBINARS BY EXTERNAL EXPERTS)



Ideation Talk

21st August '21



Data Science & AI ML roles

12st February '22



Entrepreneurship 101

Aman Dhattarwal (ApniKaksha)

February '22

Harishankar Karunanidhi (HackerRank)- 11th February '22

Yuvan Arvind (Student Entrepreneur) - 15th February '22

Aditya Arora (Faad Network)

February '22

Vatsal Kanakiya (100X.VC)

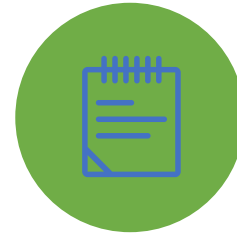
'22

Shobana Prakash (100X VC)



Innovative Challenges & Research Opportunities

23rd December '21



Auroras Talks Series

- Startups for next generation
- Technologies that are in focus for decades to come

25th – 30th October '21

- 8th

- 23rd

- 3rd March

- 5th March

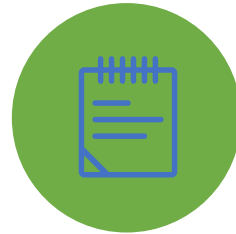
WORKSHOPS

(7 WORKSHOPS BY INTERNAL AND EXTERNAL EXPERTS)



Market Research Workshop

18th September '21



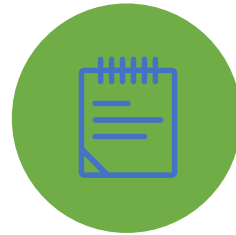
Pitching Workshop

5th March '22



Ideation Workshop

21st August '21



Firefly Live QnA

14th April '22



Sustainable Innovation Practices

24th October '21



Business Model Canvas Workshop

28th July '22



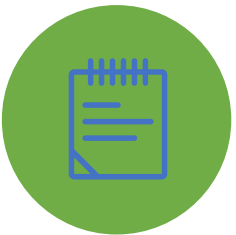
No-Code Workshop

18th February '22

STUDENT-RUN STARTUPS



BugClaim



GBit Studios



Founder's Bay



Doge Home



Fash Back



Engagely

Faculty/ALUMNI-RUN STARTUPS



Sigma Store



Skylark Labs



EPICK Bikes



Sky e its



Kalam Books



Cusmat



Hemal Tech Solutions



Geo Spatial Technologies



Teraiot

PATENTS



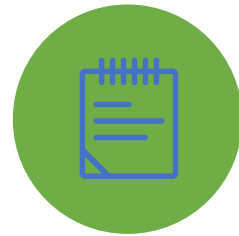
Total Patents: 73



Granted: 9



Renewals: 3

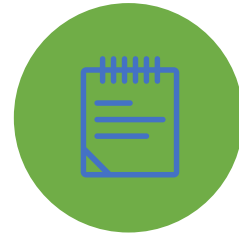


**New Patent
Applications: 16**

RESOURCES AND FACILITIES



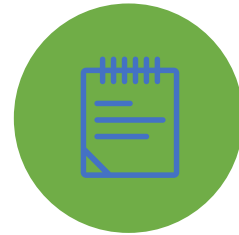
Rapid Prototyping Lab



Machine Learning Lab



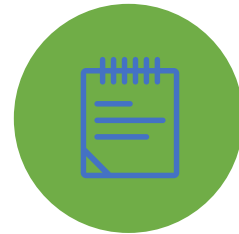
Hardware Shop



Podcast Set-up



3D Printer



Laser Cutter

UNDERGROUND RESEARCH ASSOCIATION



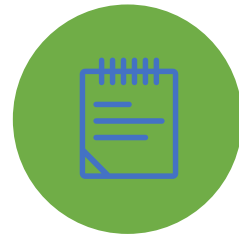
Ronin Racing



Robotics Club



Team Mechaholics



Team Mechxhausters

EXTERNAL REPRESENTATION BY

IG



Balavikas International Center (BVIC), Hyderabad



Smart India Hackathon (SIH)

15 TEAMS REPRESENTED NIT WARANGAL AND 1 TEAM GOT WINNERS CERTIFICATE



Azadi Ka Amrut Mahotsav - Amrut Bharat App

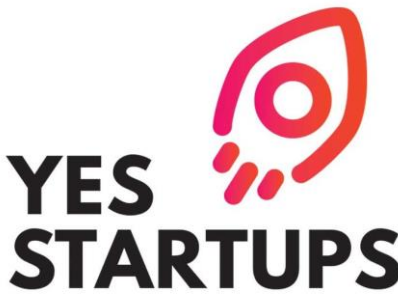


WE HUB Hyderabad Conferences

COLLABORATIONS



Filecoin



MISSION AND VISION

Our Mission



To provide the necessary infrastructure, mentorship, seed funding, and resources & facilities to convert innovative ideas into working prototypes, independent businesses, or products in line with our entrepreneurial vision.



**CENTER FOR
INNOVATION
INCUBATION**

Our Vision



To accelerate the development of the technology and startup culture among students and promote the entrepreneurial ecosystem at NIT Warangal.



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Published by Institute Information Advisory Committee (IIAC), NIT Warangal

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