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Azadi Ka
Amrit Mahotsav



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

Warangal - 506 004, Telangana

Synergistic Training Program Utilizing the Scientific and
Technological Infrastructure (STUTI)

Call for Registration and Participation Training Program on R&D Equipment

Theme: Learning the Technology and Applications of DST Sponsored
Advanced Instruments

Program Dates: September 19-25, 2022

Venue: NIT Jalandhar

Register before: 19th Aug 2022



Scan to
Register



No Registration Fee

Click to register: <https://forms.gle/ys5B1VSyFWETsCg6A>

Objectives of the Program:

- To enable the participants to understand the principles, applications, and hands-on experience on sophisticated analytical instruments.
- To gain knowledge about the in-depth analysis of the characterization techniques using high-end analytical instruments.
- To interact with eminent professors/scientists/ industrial research personnel and discuss real-time research and make collaborations.
- To encourage the participants to utilize the facilities and enhance the research temper.
- To create a research-friendly atmosphere by letting the creative minds of the country exchange ideas and share their knowledge among their fellow participants.

Eligibility Criteria:

- Persons of Indian origin.
- Faculty / Scientists / Post-Doc Fellows / Ph.D. Fellows / Industry Persons / M.Sc. students/ MTech. students who are actively involved in research and development (R&D) in the fields of **Chemistry, Physics, Instrumentation**, or any relevant area.

Important Instruction:

Fill in the prescribed bio-data form attached with this brochure and get it endorsed by the head of the institution. And keep the scanned copy ready, which needs to be uploaded during registration.

Organized by
NIT Jalandhar (Spoke), NIT Warangal (Hub)
Funded by
DST, Govt of India

About NIT Jalandhar:

Dr B R Ambedkar National Institute of Technology was established in the year 1987 as Regional Engineering College and was given the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Education (MoE), New Delhi. (Earlier Ministry of Human Resource Development) Government of India has declared the Institute as “Institute of National Importance” under the act of Parliament-2007. The institute offers B. Tech. programmes in nine Engineering disciplines. In addition to B.Tech. programmes, the Institute offers MBA, MSc, M.Tech and Ph.D. programmes in all nine Engineering disciplines (PhD Full time with teaching assistance and part-time PhD programmes for working professionals).

About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College, was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate, 35 post-graduate programs and guiding 952 PhD scholars besides post-doctoral programs. About 6864 students across the country including international students’ study on the campus. It is a fully residential campus spread across 250 acres with excellent infrastructure in the form of state-of-the-art library, seminar halls, guest houses and research laboratories.

STUTI Team:

Patron

Prof. Binod Kumar Kanaujia

Director, NIT Jalandhar

Chairman

Prof. N. V. Ramana Rao,

Director, NIT Warangal

Co-Chairman

Prof. V. Rajeswar Rao,

Dean (R&C), NIT Warangal

Principal Investigator

Prof. N. Narasaiah,

Dept. of Metallurgy and Material Engineering

Coordinators

Dr. T K Sai, *Principal Scientific Officer, NITW & Co-PI, STUTI*

Prof (HAG) Balbir Singh Kaith, *Dept of Chemistry, NITJ*

Prof (HAG) N C Kothiyal, *Dept of Chemistry, NITJ*

Prof (HAG) S P Singh, *Dept of Civil Engineering, NITJ*

Dr Raman Bedi, *Associate Professor, Dept of Mechanical Engineering, NITJ*

Organizing Secretaries

Dr Rakesh Kumar,

Assistant Professor, Department of Chemistry, NIT J

Dr Sadhika Khullar,

Assistant Professor, Department of Chemistry, NIT J

Program Coordinators

Sri Harish Madupu,

Technical Officer, CRIF, NIT Warangal

Sri D. Ravikumar

Technical Officer, CRIF, NIT Warangal

Note:

- The shortlisted candidates will be intimated through mail. All the selected participants have to submit the uploaded bio-data form physically for the confirmation of participation.
- Non-local participants are eligible for boarding/ lodging at NITJ on double sharing basis.
- For domestic travel of participants, the reimbursement for train/bus tickets is allowed as per actual up to 3AC fare (for outstation participants only).

Contact Us:

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Sri Harish Madupu, NIT Warangal

Sri D. Ravikumar, NIT Warangal

office_stuti@nitw.ac.in

About STUTI:

The Scheme 'Synergistic Training program Utilizing the Scientific and Technological Infrastructure' (STUTI) is intended to build human resource and its knowledge capacity through open access S&T Infrastructure across the country. As a complement to the various schemes of DST funding for expansion of R&D Infrastructure at academic institutions, STUTI scheme envisions a hands-on training program and sensitization of the state-of-the-art equipment as well as towards sharing while ensuring transparent access of S&T facilities.

Instruments covered under training:

Fluorimeter	Atomic Absorption Spectrophotometer
Drop Shape Analyzer	Field Emission Scanning Electron Microscope
Experimental Test RIG	MTS Servo Hydraulic 250 kN Fatigue Testing System
NaI Gamma Spectrometer	Rapid Chloride Permeability Tester
Gas Chromatography	100 kN/250 kN Close Loop Servo-controlled Actuator System
Powder XRD	

Drop Shape Analyzer

Make: Kruss Scientific

Model: DSA-25

Analysis/Application: Used to determine the hydrophilicity and hydrophobicity of the surface by the measurement of the contact angle of a sessile drop and the surface tension of a pendent drop. Almost all type of surfaces including polymers, metals, thin films and nanoparticles



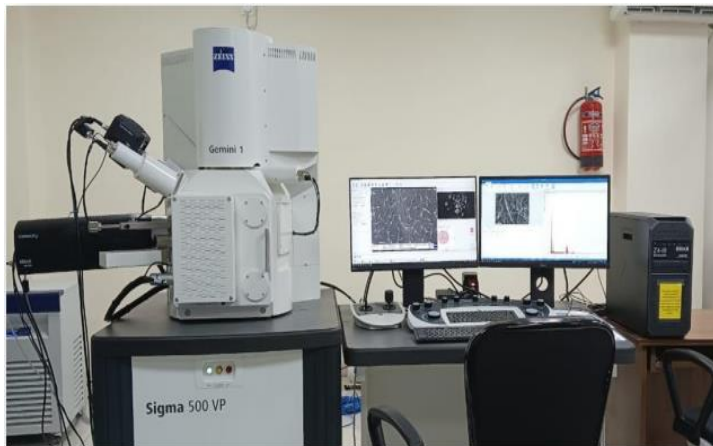


Fluorescence Spectrophotometer

Make: Agilent Technologies

Model: Cary Eclipse

Analysis/Application: Used for measurement of fluorescence of materials to study their photo physical properties. Suitable for testing of Organic and inorganic compounds, small polymers and composites, nanomaterials, biomolecules such as proteins, DNA etc.



Field Emission Scanning Electron Microscope

Make: ZEISS

Model: SIGMA 500VP

Analysis/Application: It is used for Microscopic feature measurements, Corrosion evaluations, Striation measurements for high-cycle fatigue fractures, Coating evaluations, Characterization of very fine specimen features and surface contamination analysis



Gas Chromatography

Make: Nucon

Model: 5765

Analysis/Application: This technique is used to separate and purify the different components from a mixture, To test the purity of a particular substance and To identify a compound. It is used for testing the samples in Pharmaceutical and Clinical Testing, Food and Beverage, Environmental and Chemical Industry, Drug Testing, Security, Forensics etc.

NaI Gamma Spectrometer

Make: Atomtex, Belarus

Model: NaI scintillation based gamma spectrometer

Analysis/Application: To check the suitability of soil in terms of radionuclide concentrations (^{226}Ra , ^{232}Th , ^{40}K) and corresponding dose rates for use as a construction material. To study the effect of fly ash addition in cement. To determine the concentration of natural radionuclides in dry, powdered food products





MTS Servo Hydraulic 250 kN Fatigue Testing System

Make:

Model: MTS Systems

Analysis/Application: The machine has the capability to carry out static as well as fatigue tests on a range of materials like Metals, Composites, Ceramics, Polymers etc. It is a high end research equipment with acceptability and installations in industries all over the world.

Powder X-Ray Diffractometer

Make: PANalytical

Model: Empyrean

Analysis/Application: This instrument is used to determine phase identity, crystal structure. Approximate percentage phase composition etc. characteristics of crystalline compound.





100 kN/250 kN Close Loop Servo-controlled Actuator System

Make: Materials Test System, USA

Model:

Analysis/Application: It is a versatile system used for conducting static and cyclic flexural and compression tests. The system can run in displacement/strain/load control modes.



Rapid Chloride Permeability Tester (RCPT)

Make: GERMANN INSTRUMENTS

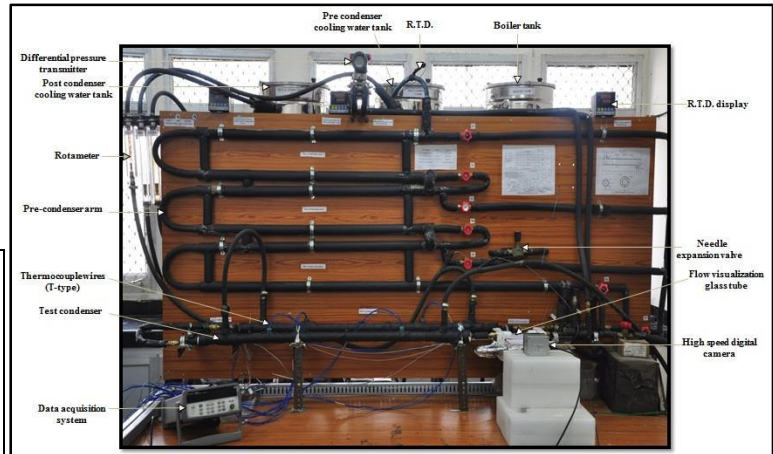
Model: ASTM 1202

Analysis/Application: It is used to measure the resistance offered by concrete to penetration of chloride ions. The resistance to chloride ions is measured in terms of charge passed through the concrete specimen in terms of 'Coulombs'.

Experimental Test Rig (Assembly)

Make/Model: Assembled Experimental Test rig system supported by DST, GOI (Department of ME)

Analysis/Application: It is used to predict the accurate value of heat transfer coefficient for a range of refrigerant at a broad range of Reynolds Nos.



Atomic Absorption Spectrophotometer

Make: Shimadzu

Model: AA-7000

Analysis/Application: It is used to estimate concentration of various chemical elements in aqueous solutions and to check the concentration of heavy metals in dry and wet food samples.

BIODATA FOR STUTI-21 DST TRAINING PROGRAM

NIT Jalandhar (SPOKE)

NIT Warangal (HUB)

September 19-25, 2022

NAME Prof./Dr./Mr./Ms.																			

DESIGNATION																			
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ORGANIZATION																			

DATE OF ENTRY IN SERVICE																			
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CATEGORY (GENERAL / SC / ST / OBC)																			
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DATE OF BIRTH																			
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SEX (M/ F)		
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COMPLETE ADDRESS (OFFICE)																			

COMPLETE ADDRESS (RESIDENCE)																			

CONTACT DETAILS	PHONE (O)	PHONE (R)	MOBILE No.	E-MAIL

EDUCATIONAL / PROFESSIONAL QUALIFICATIONS (GRADUATION ONWARDS)					
Sr. No.	EXAMINATION/ DEGREE	UNIVERSITY/ INSTITUTE	YEAR	SUBJECT	DIVISION/% OF MARKS

EXPERIENCE					
Sr. No.	NAME OF THE ORGANIZATION	DESIGNATION	FROM	TO	DUTY PERFORMED

TRAINING ATTENDED				
Sr. No.	YEAR	NAME OF THE TRAINING PROGRAMME	NAME OF THE INSTITUTE	DURATION

RESEARCH EXPERIENCE				
Sr. No.	YEAR	TOPIC OF RESEARCH	SPONSORING AGENCY	GIST OF RESEARCH

PAPER PUBLISHED / PATENT FILED/OBTAINED				
Sr. No.	YEAR	TOPIC OF PAPER/ BOOK	GIST OF PAPER	NAME OF JOURNAL/ MAGAZINE/ PUBLISHER

Briefly give details of significant contributions made by you in the field of Science & Technology during your career. (100 words)

Date:
Place:

(Signature of the Participant)

(Head of the Institution)