



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 : **Advanced Instrumentation: Theory and Practice**
Program Dates : **30th Jan to 5th Feb, 2023**
Venue : **Vellore Institute of Technology, Vellore, Tamil Nadu.**



Register before: 05th Jan, 2023



Scan to Register

No Registration Fee

Click to Register: <https://forms.gle/1c15xt3ZtQcDjuBp7>

Objectives of the Program:

- To enable the participants to understand the principles, applications, and hands-on experience on sophisticated analytical instruments.
- To help gain knowledge about the in-depth analysis of the characterization techniques using high-end analytical instruments.
- To facilitate interaction 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/ M.Tech. Students who are actively involved in research and development (R&D) in the fields of Physical/Chemical/Material Sciences, 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

Department of Physics, Vellore Institute of Technology, Vellore (Spoke) & NIT Warangal, Telangana (Hub)

Funded by DST, Govt of India

About Vellore Institute of Technology:

VIT was founded in 1984 as Vellore Engineering College by the Hon. Chancellor Dr. G. Viswanathan with the aim of providing quality higher education on par with international standards. VIT has been recognized as Institution of Eminence (IoE) by Government of India. Engineering and Technology subject areas of VIT are the 346th best in the world and the 9th best in India as per QS World University Rankings by Subject 2022. NAAC Accreditation with A++ grade in the 4th cycle. VIT ranked among the top 900 Universities of the world, one among the Top 10 and the only private institution of India (Shanghai ARWU Ranking 2021). The 12th best institution of India in Research and Engineering categories (NIRF Ranking, Govt. of India 2021) and ranked within the top 200 in Asia (QS- Asia University Ranking 2022)

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 Ph.D 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:

Chairman

Prof. N. V. Ramana Rao,
Director, NIT Warangal

Co-Chairman

Prof. Somasekhar V T,
Dean (R&C), NIT Warangal

Convener

Sri S Goverdhan Rao
Registrar, NIT Warangal

Principal Investigator

Prof. N. Narasaiah,
Dept. of Metallurgical and
Material Engineering,
NITW

Co-Principal Investigator

Dr. T K Sai,
Principal Scientific Officer,
CRIF, NITW

Program Coordinators

Sri Harish Madupu
Technical Officer, CRIF,
NIT Warangal

Sri Ravikumar D

Technical Officer, CRIF,
NIT Warangal

VIT Team:

Chief Patron

Dr. G. Viswanathan
Chancellor

Patrons

Shri. Sankar Viswanathan,
Vice President

Dr. Sekar Viswanathan,
Vice President

Shri. G.V. Selvam,
Vice President

Co-Patrons

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Vice Chancellor

Dr. Partha Sharathi Mallick,
Pro-Vice Chancellor

Dr. T. Jayabharathi,
Registrar

Convener

Dr. Arunai Nambiraj N,
Dean, SAS

Organizing Secretaries

Dr. James Jebaseelan Samuel E,
HOD, Dept. of Physics, SAS.

Dr. Mohana Roopan S

Associate Professor, Dept of chemistry,
SAS.

Program Coordinators

Dr. Ramesh Babu P,
Professor-Higher Academic Grade,
Dept. of Physics, SAS.

Dr. Senthilnathan K,

Professor, Dept. of Physics, SAS.

Contact Us:

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NIT Warangal.

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Dr. James Jebaseelan Samuel E,
VIT-Vellore.

Ph: 9444301541

Dr. Mohana Roopan S
VIT-Vellore.

Ph: 9865610356

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 Vellore Institute of Technology, Vellore, on double sharing basis.
- For domestic travel of participants, the reimbursement for train/bus tickets is allowed as per actual up to 3AC fare via shortest distance (for outstation participants only).

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 for training

- **Powder X-Ray Diffraction**
- **Single Crystal X-Ray Diffraction**
- **High Resolution Mass Spectrometer**
- **NMR Spectrometer**
- **Scanning Tunneling Microscope**
- **Atomic Force Microscope**
- **Atomic Absorption Spectrometer**

Powder X-ray Diffraction

Make: Bruker, Germany.

Model: Bruker D8 Advance

Applications: A rapid analytical technique primarily used for phase identification and quantification of Single crystalline and its unit cell dimensions.



Single Crystal X-ray Diffraction

Make: Bruker AXS GmbH, Germany.

Model: Bruker D8 QUEST

Applications: To determine poly-crystalline and single-crystalline materials. Used for the stress analysis of poly-crystalline Ceramic, Metal and Polymer powder samples and Pellet samples

High Resolution Mass Spectrometer

Make: Waters, USA

Model: XEVO-G2-XS-QTOF

Applications: To analyze complex chemical compounds, determine isotopes and to differentiate the isotopes, generating fragments pattern, and library matching for compound verification.



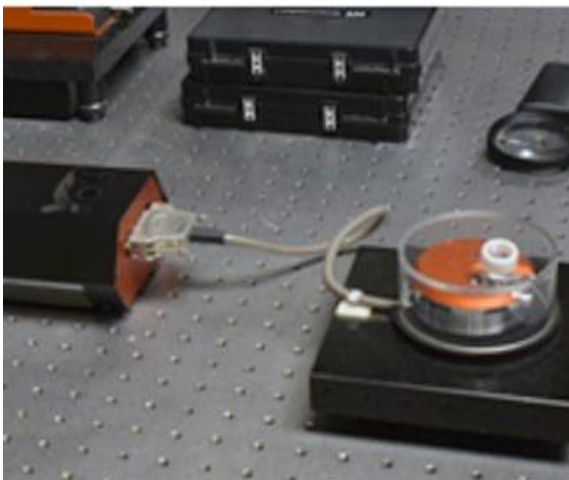


NMR Spectrometer

Make: Bruker, Germany

Model: AVANCE III 400 MHz, Bruker

Applications: To analyze and to determine the molecular structure of organic compounds. To determine the proton environment of organic compounds.



Scanning Tunneling Microscope

Make: Nanosurf AG Switzerland

Model: 23-06-154 Nanosurf easy Scan2

Applications: To analyze the friction, surface roughness, defects, and surface reaction in materials like catalysts. Important and powerful tool in Semiconductor and microelectronics.

Atomic Force Microscope

Make: Nanosurf AG Switzerland

Model: 60-14-080 NaioAFM

Applications: To image the surface topography by probe sample interaction, surface manipulation using force tips and even act as Force spectroscopy to measure forces between sample and probe.



Atomic Absorption Spectrometer

Make: VARIAN, USA

Model: VARIAN SPECTRAA240

Applications: To have quantitative analysis of the metal at trace and ultra-trace levels in a solution especially in biological samples.



BIODATA FOR STUTI-21 DST TRAINING PROGRAM

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/PERCENTAGE OF MARKS

EXPERIENCE					
Sr. No.	NAME OF THE ORGANISATION	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 REASEARCH

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

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

Date:
Place:

(Signature of the Participant)

(Head of the Institution)