







NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

Warangal - 506 004, Telangana

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

<u>Call for Registration and Participation</u> Training Program on R&D Equipment

Theme: Advanced Fabrication and Characterization Techniques on Nano-materials Program Dates: 04th – 10th January 2023

Venue: Sathyabama Institute of Science and Technology, Chennai



Register before: 7th Dec 2022



Scan to Register

No Registration Fee

Click to Register: <u>https://forms.gle/iNg3jHag6CeT3R7WA</u>

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/ M.Tech. Students who are actively involved in research and development (R&D) in the fields of Material Sciences, Chemical Sciences, Life 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 Sathyabama Institute of Science and Technology, Chennai (Spoke) & NIT Warangal, Telangana (Hub) Funded by DST, Govt of India

About Sathyabama Institute of Science and Technology:

Sathyabama Institute of Science and Technology is one of the leading Higher Educational Institutions in India with a high reputation for teaching and research excellence. It is a Deemed to be University, established under Sec.3 of UGC Act, 1956 and has been accredited with 'A' Grade by the National Accreditation and Assessment council. It has been ranked in 40th position among the Universities in India by the National Institutional Ranking Framework (NIRF), Government of India for the year 2021. The Institution is Ranked in1001-1200 in QS World University Rankings, 2023 and Ranked 301-350 in the QS Asia University Rankings, 2022. It is awarded with Five Star ratings for Excellence by Quacquarelli Symonds (QS).Owing to its world class research facilities, state of the art infrastructure and admirable academic ambience, Sathyabama has become an attractive destination for the students across the world.

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.

<u>STUTI Team:</u>

Chairman Prof. N. V. Ramana Rao, Director, NIT Warangal Dr. T. Sasipraba, Vice Chancellor, SIST, Chennai

Co-Chairman

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

Conveners

Sri S Goverdhan Rao Registrar, NIT Warangal Dr. Vinita Vishwakarma, Professor, SIST, Chennai

Principal Investigator

Prof. N. Narasaiah, Dept. of Metallurgical and Material Engineering, NIT Warangal, STUTI

Co-Principal Investigator

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

Program Coordinators

Dr. Sudha Uthaman, Assistant Professor, SIST Dr. Sanjeevi Prasath. S, Assistant Professor, SIST Sri Harish Madupu, Technical Officer, CRIF, NITW

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 Sathyabama Institute of Science and Technology, Chennai 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:

Sri Harish Madupu, Technical Officer, NIT Warangal office_stuti@nitw.ac.in

Dr. Sudha Uthaman, Assistant Professor, SIST, Chennai Dr. Sanjeevi Prasath. S, Assistant Professor, SIST, Chennai

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:		
Confocal RAMAN Spectrophotometer	HPLC-PDA	HRSTEM
E-Beam / RF Magnetron	GC-FID	3D Printer
FESEM	AFM	Spectro-Fluorometer
FTIR	XRD	UV-Vis Spectrophotometer

E-Beam depot system

Make: FRANCE Model: MEB 600, Plassys

Applications: Optical thin film applications as laser optics and solar panels to eyeglasses and architectural glass





RF Magnetron

Make: PLAYYS FRANCE Model: MP 300

Applications: Optical Coating systems & thin film deposition



HRSTEM

Make: Thermofisher Scientific, USA Model: TALOS F200S G2

Applications: To image atomic structure of molecules

FESEM

Make: GERMANY Model: ZEISS SIGMA 300

Applications: Surface morphology, advanced coating thickness and structure uniformity determination





<u>AFM</u>

Make: Ireland Model: NTEGRA PRIMA-NTMDT Applications: Used for imaging of almost any type of surface, including polymers, ceramics, composites, glass and biological materials

Gas Chromatography-FID Make: Shimadzu, Japan

Model: GC 2010 PLUS Applications: Analysis of fertilizers, rubber, cosmetics, perfumes, food products





Confocal RAMAN Spectrophotometer

Make: Renishaw, UK

Model: Renishaw

Applications: To study the vibrational, rotational, and low-frequency modes of the molecules.

FTIR

Make: Japan

Model: JASCO, FTIR 6600

Applications: To quickly and definitively identify compounds such as compounded plastics, blends, fillers, paints, rubbers, coatings, resins, and adhesives





<u>XRD</u>

Make: Thermofisher Scientific, USA

Model: ARL EQUINOX 3000

Applications: Identification of unknown crystalline materials (e.g. minerals, inorganic compounds)

High Performance Liquid Chromatography-PDA

Make: Waters, USA Model: 2545 HPLC-PDA

Applications: pharmaceutical, bioanalytical, food and beverage, clinical, forensic, environmental and drug development.





Spectro-Fluorometer

Make: Hitachi Model: F-7100

Applications: Used in basic and applied research, biofuels analysis, biotechnology applications, quality control and high precision quantification of DNA and RNA



<u>3D Printer</u>

Make: Stratsys Model: J5 Applications: Ready-platform for manufacturing metals, continuous fibers, and plastics

UV-Vis Spectrophotometer

Make: Jasco, Japan

Model: V-670

Applications: Detection of Impurities, DNA & RNA analysis, Pharmaceutical analysis, Bacterial culture. Beverage analysis



BIODATA FOR STUTI-21 DST TRAINING PROGRAM

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

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

PAPER	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)