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: "Evaluation of materials properties under dynamic loading"

Program Dates: 19th – 25th January 2023

Venue: National Institute of Technology, Warangal

Register before: 25th- Dec- 2022

Scan to Register

No Registration Fee

Click to Register: https://forms.gle/kBRxHyiDuKgB4xtXA

Objectives of the Program:

To enable the participants to understand the basics and testing methodologies adopted for dynamic properties evaluation of materials.

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 fields of Metallurgical/ Mechanical/ Materials/ Civil Engeneering, 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

National Institute of Technology Warangal, Telangana

Funded by

DST, Govt of India

About Central Research Instrumentation Facility (CRIF):

Central Research Instrumentation Facility (CRIF) is an integrated facility to provide high-end analytical services to academic and industrial research. The CRIF works with a motto to bring out the research output of scholars matching the international standards. The central facility caters to the department requirements under a single umbrella by fostering interdisciplinary research. Students from the different branches of science and engineering come here for research and experimentation, creating a vibrant cross-disciplinary atmosphere. The CRIF is committed to expanding to facilitate state-of-the-art laboratory services to all academia and industries located across the country. The facility is spread across an area of 28000 sq. ft.

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:

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

Principal Investigator
Prof. N. Narasaiah,
Dept. of MME, NITW & PI, STUTI

Coordinators
Dr. T K Sai,
Principal Scientific Officer, CRIF, NITW & Co-PI, STUTI
Dr. B. Srinivasa Rao
Dr. Ajoy Kumar Pandey
Dr. R. Arockia Kumar
Associate Professors, Dept. of MME, NIT Warangal

Program Coordinators
Sri Harish Madupu
Technical Officer, CRIF, NIT Warangal

Sri Ravikumar D
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 National Institute of Technology, Warangal Telangana 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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Technical Officer, NIT Warangal

Sri Ravikumar D,
Technical Officer, 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 for training:

- **Creep fatigue crack growth (CFCG) testing systems**
- **X-ray diffraction unit (XRD)**
- **Servo-hydraulic fatigue test system**
- **Scanning Electron Microscope (SEM)**
- **Dynamic Mechanical Analyzer (DMA)**
- **Inductively coupled plasma - optical emission spectrometry (ICP-OES)**
- **Universal Testing Machine (UTM)**

Inductively Coupled Plasma Optical-Emission spectroscopy
Make: Agilent Technologies
Model: 700 series
Applications: This technique is used for quantitative and qualitative determination of elements present in the materials.

Scanning Electron Microscope (SEM)

Make: TESCAN

Model: VEGA3 LMU

Applications: To investigate and image surface topography and microstructures of samples (solid and powder) at high magnification.

X-Ray Diffraction (XRD)

Make: Panalytical

Model: X-pert powder

Applications: Powder XRD equipment can be used for the characterization of powder samples for the phase analysis, identifying crystalline phases and orientation and crystallographic information. This equipment can also capture data from the bulk polycrystalline samples after the required sample preparation. Structural properties such as Lattice parameters, Strain, Grain size, texture and epitaxy can be determined from the data. The XRD diffraction data will be provided to the user and the user can investigate the above materials' structure by analyzing the data.

Dynamic Mechanical Analyser (DMA)

Make: Metravib

Model: DMA25

Applications: This instrument is capable of determining glass and secondary transitions of polymers; determination of storage, loss and Young's modulus; damping coefficient and perform creep studies.

Universal Testing Machine (UTM)

Make: Jinan Testing Equipment Corporation

Model: WDW-100S

Applications: It can perform many standard tensile and compression tests on materials, components and structures. Physical and mechanical attributes of metals, alloys, finished solid products, etc., can be studied. Aforesaid tests can also be performed under sub-zero (-100 ^{o}C) and high-temperature (up to 1000 ^{o}C) conditions.

Creep fatigue crack growth (CFCG) testing systems

Make: Zwick Roell

Model: Kappa 100SS-CF

Applications: These systems are capable of performing tests such as Creep Fatigue Crack Growth (ASTM E 2760), Creep Crack Growth (ASTM E 1457), Fatigue Crack Growth Rate (ASTM E 647), Low Cycle Fatigue (ASTM E 606), Creep Fatigue Interaction (ASTM E 2714), Fracture Toughness (ASTM E 1820) in addition to the conventional Tension/Compression tests.

Servo-hydraulic fatigue test system

Make: BISS, Bangalore

Model: UT-04-0100 MEDIAN 100

Applications: This universal testing system is capable for performing tests for fracture toughness (ASTM E1820) and Fatigue Crack Growth Rate (ASTM E 647) measurements.

BIODATA FOR STUTI-21 DST TRAINING PROGRAM

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

DESIGNATION															

ORGANIZATION															

DATE OF ENTRY IN SERVICE														

CATEGORY (GENERAL / SC / ST / OBC)									

DATE OF BIRTH										

SEX (M/ F)		

COMPLETE ADDRESS (OFFICE)															

COMPLETE ADDRESS (RESIDENCE)															

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

CONTD. 2

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

CONTD.3

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)