

Registration Guidelines:

No Registration fee for workshop and accommodation will be provided for all students. All students are eligible for this workshop and travel allowance (TA), reimbursement (sleeper or 3rd AC) for their journey to and from NIT Warangal through the shortest route as per SERB and Gol norms. Accommodation will be provided at NIT Warangal Hostel. The maximum number of participants is limited to 25 and candidates will be selected on a merit basis. Only selected candidates will be informed by email.

While filling out the application form, the candidate must upload their student ID card, NOC letter duly signed by the competent authority, and the Latest CV.

Registration link

https://docs.google.com/forms/d/e/1FAIpQLSc93htZS61kEKE6wTf2GqICB3D-FBxE0ugxSZF7K98qrhPjng/viewform?usp=pp_url

Topics to be Covered

- Address the effects of FGMs and create prevention awareness
- Global Perspective of FGMs
- One dimensional FGMs
- Nano Technology
- Modelling of FGMs
- Power metallurgy & Processes
- Design for Additive Manufacturing
- Layered fabrication 3D Printing Process Parameters and selections
- Mechanical Characterization
- Tribological characterization
- Hybrid layer Manufacturing
- FSEM Analysis
- FGMs case studies in Automobile, Aerospace,
- Applications of FGMs

Application Deadline:

05th March 2024

Announcement to Shortlisted Candidates:

10th March, 2024

Application Link:

<http://surl.li/qvxju>

Who can Attend:

B.Tech (Final Year) Mechanical Engineering, PG and Ph.D. students of areas of mechanical Engineering and related interdisciplinary areas.

Recently completed PG scholars are also eligible to apply. Candidates who have completed Ph.D. will not be considered. The number of seats is limited to 25.

Contact Details:

Chief Patron:

Prof. Bidyadhar Subudhi,
Director, NIT Warangal

Patron:

Prof. V Suresh Babu
Head, MED, NIT Warangal

Coordinator:

Dr. G. Raghavendra

Department of Mechanical Engineering
National Institute of Technology, Warangal
Telangana-506004
Ph. No. 9985803317.
Email: raghavendra.gujjala@nitw.ac.in

Co-coordinators:

**Prof. Syed Ismail, Prof. Satish Ben,
Prof. Ch Sampath Kumar and Prof. Thamarai Selvan**

Department of Mechanical Engineering
National Institute of Technology, Warangal
Telangana - 506004

Student coordinators:

Rakesh .K : +91 80199 99584
Satish Jain : +91 72774 27037
Daloji Locharla : +91 88972 92561



High End Research Training Programme

for
**Recent Advancements
in FGMs Fabrication
and Characterization**

on

**18th March 2024
to
24th March 2024**



Coordinator:

Dr. G. Raghavendra

Organized By

**Department of Mechanical Engineering
National Institute of Technology, Warangal.**

(Sponsored by Science and Engineering Research
Board, Government of India)

Venue:

**Department of Mechanical Engineering
National Institute of Technology,
Warangal Telangana-506004**

Accommodation:

Accommodation will be provided by the NIT Warangal inside the campus or outside as per the availability. The lodging and boarding charges will be borne by the host institution NIT Warangal from SERB fund.

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 20 technical education institutions in India. There are 14 departments offering eight undergraduate and 31 post-graduate programmes besides doctoral programmes. About 5000 students across the country and about 500 international students study on the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state-of-the-art library, seminar halls, guest houses and research laboratories. . About Warangal: Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is two km away and Warangal Station is 12 km away) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile Kakatiya dynasty. It is a seat of tourist attractions with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Laknavaram Lake located in a radius of 30 kms.

About the Department:

The Department of Mechanical Engineering was established in the year 1959. The department presently offers one Under Graduate Programme, i.e., B.Tech in Mechanical Engineering with an intake of 170 students, seven M.Tech programs - Thermal Engineering, Manufacturing Engineering, Computer Integrated Manufacturing, Machine Design, Automobile Engineering, Materials and Systems Engineering Design, Additive Manufacturing – one P.G Diploma in Additive Manufacturing and one Ph.D programme. At present, the Department has 50 faculty members with research expertise in different specializations of Mechanical Engineering.

About the KARYASHALA:

The KARYASHALA scheme by SERB, Government of India is meant for skill development training on topics required for scientific research work. It is an effort to improve the research productivity of promising PG and Ph.D. students from universities and colleges through high-end workshops on specific themes. This program aims to provide opportunities to acquire specialized research skills.

About the Course:

The main objective of the proposed programme on Recent Advancements in FGMs Fabrication and characterization is to enable the researchers and faculty members to gain exposure on basics of FGMs, and insightful developments in the fabrication of the FGMs, and characterization of the FGMs. It is extremely beneficial for a wide variety of the researchers who are working in materials. Most industrial applications demand materials that possess a variation of properties between the outer surface and the innermost surface. Researchers have developed coatings and laminates to obtain a variation of properties. However, these materials have poor adhesion and internal stress concentration zones at the interfaces. To overcome the limitations, a novel material was proposed termed functionally graded materials (FGMs). The speakers involved are highly qualified from IITs and NITs who have profound knowledge in the areas of FGMs and Tribology.

About the Warangal:

Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is two km away and Warangal Station is 12 km away) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile Kakatiya dynasty. It is a seat of tourist attractions with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Laknavaram Lake located in a radius of 30 kms.

Resource Persons:

Subject experts from prestigious academic institutions (like IITs, NITs, etc.), R&D organizations, and industries will deliver the workshop contents. The event organizer and student volunteers will mentor the hands-on sessions.





High End Research Training Programme
for
Recent Advancements in FGMs Fabrication and Characterization
(Physical Mode)

DECLARATION FORM

1. Name (In Block Letters):
2. Date of birth:Gender:
3. Category (M.Tech/M.E/M.S./Ph.D. student):
4. Institution:
5. Department:
6. Mobile:
7. e-mail:
8. Specialization:
9. Accommodation is required (Yes/No).....
10. Official Address:
-

Declaration: The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the program and shall attend the course for the entire duration.

Name & Signature of the candidate

No Objection Certificate (NOC) from Project Supervisor/HoD/Head of Institution

I hereby certify that Mr./Ms. is a
..... (M.Tech/M.E/PhD) student of
..... I have no objection to him/her undergoing a high-end workshop (if selected)
on **“Recent Advancements in FGMs Fabrication and Characterization”** from **18th to 24th March 2024**.

Place:

Name & Signature of Project

Date:

Supervisor/HoD/Head of Institution

(Department/Institute Seal)