

One Week Online Short Term Course  
On

## Innovation and Research in Welding, Joining and Cutting Technology

(Sponsored by TEQIP III)

07-11 September, 2020

Coordinators

Dr. Chinmaya Kumar Sahoo

Dr. Bipul Das



Organized by



Department of Mechanical Engineering

In Association with

Institute Innovation Cell

National Institute of Technology Silchar

Silchar – 788010, Assam, India

(An Institute of National Importance)

www.nits.ac.in

### Topics to be Covered

- Challenges of steel based Additive Manufacturing
- Laser micro-machining of advanced material
- Weld based cladding: challenges and opportunities
- Plasma & Laser Cutting – Modern Day Innovation
- Robotic Welding & Industry 4.0
- Role of interdisciplinary research in friction stir welding
- Condition monitoring of welding processes
- Composite material applications in mechanical and bio medical engineering
- Future research opportunities in conventional welding processes
- Numerical modelling of welding processes

### Organizing Committee

**Chief Patron:** Prof. Sivaji Bandopadhyay  
Director, NIT Silchar

**Chairman:** Prof. Fazal A Talukdar  
President, Institute Innovation Cell (IIC), NIT Silchar

**Convener:** Dr. Agnimitra Biswas, HoD, ME Department

**Advisors:** Prof. R. Gupta, Prof. K. M. Pandey, Prof. R. D. Misra,  
Prof. P. K. Patowari, Prof. K. K. Sharma

**Faculty Members:** Dr. K. Chakraborty, Dr. P.Choudhury, Dr. L.Roy,  
Dr.S.Halder, Dr. S.Debbarma, Dr. D. Bhanja, Dr. S. Bhowmik, Mr. D.H. Das, Mr. S.K. Pattanayak, Dr. S. Nath, Dr. A.B. Deoghare, Dr. S. Dey, Dr. P.R. Randive, Dr. P.D. Roy, Dr. S.R. Maity, Dr. Biplab Das, Dr. S. Pati, Dr. Y. Singh, Dr. B.Das, Dr. C.K.Sahoo, Dr.A.Paul, Dr. A Bisoi, Dr. S.Sharma, Dr. S.Kar

### Who can apply?

This course is open to faculty members, scientists, industry personnel and the students including research scholars, PG and UG students of recognized technical institutions, who are interested in welding, joining and cutting technology and its applications in the field of engineering and research.

### How to apply?

Registration for the workshop can be done by filling the Google Registration Form using the following link:

<https://forms.gle/zjqekaRLmPdpYoJS9>

Last Date of Registration: 04/09/2020

Confirmation to the Participants: 05/09/2020



**Workshop platform:** Workshop will be organized through Google Meet. The webinar link will be shared with the participants in their registered email id 24 hours before commencement of the talk.

**Number of participants is limited to 200 approx.**

### Certification

E-Certificates will be issued to all the active attendees with minimum 75% attendance and as per rules of the host institute.

### Contact Us

#### Coordinators

**Dr. Chinmaya Kumar Sahoo**

E-mail: [cksahoo@mech.nits.ac.in](mailto:cksahoo@mech.nits.ac.in)

Contact: +91 9040486943

#### Dr. Bipul Das

E-mail: [bipul@mech.nits.ac.in](mailto:bipul@mech.nits.ac.in)

Contact: +91 7002192310



### About NIT Silchar

National Institute of Technology, Silchar is one of the 31 National Institutes of Technology of India and was established in 1967 as a Regional Engineering College in Assam. In 2002, it was upgraded to the status of National Institute of Technology and was declared as Institute of National Importance under the National Institutes of Technology Act, 2007. NIT Silchar is a fully residential campus situated on the banks of river Barak and on a sprawling campus spread over 625 acres of land surrounded by scenic tea gardens on the outskirts of Silchar. NIT Silchar has secured 9th position among NITs, 46th in Engineering and 94th in Overall category in NIRF 2020 ranking.

### About Department of Mechanical Engineering

The Department of Mechanical Engineering is one of the oldest and finest Departments in the region. The workshops of the Department contain highly sophisticated machines presenting a unique and unparalleled quality. The Department offers a four year B. Tech. Programme in Mechanical Engineering, and a two year M.Tech. Programme in Thermal engineering, Design and Manufacturing, CAD/CAM and Automation, Materials and Manufacturing Technology, and Ph.D. Programme in related research topics.

### About the Course

The online short term course on “Innovation and Research in Welding, Joining and Cutting Technology” is scheduled to be held during 07-11 September 2020. Experienced experts from IITs, NITs, and reputed universities are invited online to deliver expert lectures. This course will open up several new paths of research and applications, in the field of welding, joining and cutting for PG, Ph.D. scholars, faculties, independent researchers and industry personnel from engineering and industry sectors.

### Course Objectives

- ✓ The course will enrich the ideas for research & innovation in the field of Welding, joining and cutting technology
- ✓ The course will include discussions on product driven applications of welding and cutting technology
- ✓ Recent industrial developments in the field of welding and joining will be explored in this course
- ✓ The course will introduce different cutting edge technologies developed in welding and Joining
- ✓ The course will highlight the need for interdisciplinary research in the field of welding, joining and cutting technology

### Tentative Schedule

| Date       | Lecture Time               |                           |                          |
|------------|----------------------------|---------------------------|--------------------------|
| 07/09/2020 | L1<br>10:45 AM – 12:15 PM  |                           | L2<br>3:30 PM – 5:00 PM  |
|            | L3<br>10:30 AM – 12:00 PM  | L4<br>12:30 PM – 1:30 PM  | L5<br>3:30 PM – 5:00 PM  |
| 08/09/2020 | L6<br>10:30 AM – 12:00 PM  | L7<br>12:15 PM – 1:30 PM  | Break                    |
|            | L9<br>10:30 AM – 1:00 PM   | L10<br>12:15 PM – 1:30 PM |                          |
| 09/09/2020 | L12<br>10:30 AM – 12:00 PM |                           | L8<br>3:30 PM – 5:00 PM  |
|            | L11<br>10:30 AM – 12:00 PM |                           | L13<br>3:30 PM – 5:00 PM |

### Invited Speakers



Prof. Amitava De  
IIT Bombay



Prof. P K Patowari  
NIT Silchar



Prof. Sukhomay Pal  
IIT Guwahati



Prof. Biswanath Dolo  
Jadavpur University



Dr. Swarup Bag  
IIT Guwahati



Dr. Harshit K Dave  
SVNIT Surat



Dr. Manoj Masanta  
NIT Rourkela



Dr. mahadev Shome  
TATA Steel



Dr. Sumit Bhowmik  
NIT Silchar



Dr. A B Deoghare  
NIT Silchar



Mr. Utkarsh Landekar  
Messer India



Mr. Amitava Das  
Fronius India



Dr. C K Sahoo  
NIT Silchar



Dr. Bipul Das  
NIT Silchar