

'Future Scope in Engineering Materials and Tribology'

TEQIP III Sponsored
One Week Online Short Term Course
On
***'Future Scope in Engineering Materials
and Tribology'***
September 15–19, 2020



ORGANIZING TEAM

Patron

Professor (Dr) Lalit Kumar Awasthi
Director, Dr B R Ambedkar NIT, Jalandhar

Chief-Convener

Dr Dinesh Shukla
Associate Professor and Head,
Department of Mechanical Engineering

Convener

Dr Sumit Sharma
Assistant Professor, Department
of Mechanical Engineering

Coordinators

Dr Saurabh Kango
Assistant Professor, Department of
Mechanical Engineering

Dr Nitin Sharma
Assistant Professor, Department
of Mechanical Engineering



Organized By:

Department of Mechanical Engineering
Dr B R Ambedkar National Institute of Technology
Jalandhar, Punjab, India- 144011

'Future Scope in Engineering Materials and Tribology'

ABOUT NIT, JALANDHAR

Dr B.R. Ambedkar National Institute of Technology Jalandhar (NITJ) was established in the year 1987 as Regional Engineering College and was conferred the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Human Resource Development, New Delhi. The Government of India has declared the Institute as an "Institute of National Importance" under an act of Parliament in 2007. As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers B Tech, M Tech, M Sc, MBA and PhD programmes in several disciplines of Engineering, Technology and Sciences.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering offer B. Tech, M. Tech and PhD programmes. The B.Tech programme is accredited by the NBA. The Department has experienced and enthusiastic faculty members. The Department have good facilities for CAD, Simulation, material testing (DMA, UTM, etc.) and pursue research in the areas of Mechatronics, Robotics, System Dynamics & Control, Modeling and Simulation of Physical Systems, Alternate Fuel for IC Engines, Synthesis and Application of Carbon Nanotubes, Renewable Energy, Welding Technology, Simulation and Modeling, Heat Transfer, Fluid Dynamics, Combustion, Computational Fluid Dynamics, Friction Stir Welding, Heat Exchangers, Alternative Refrigerants, Flow Condensation & boiling, Thermal System Simulation, Emission Control, Fuel Efficient Engines, Composites and Tribology.

OVERVIEW OF COURSE

Composite Materials: Polymer, ceramic and metal matrix composites, green composites, fibrous and particulate composites, hybrid composites, self-healing composites, micro and nano composites, nano-electronics and nano-mechanics. Multiscale Modelling of Materials: Molecular dynamics, Density functional theory analysis, Monte Carlo technique of atomistic modeling, meso-scale modeling, Finite element modeling (FEM) of materials. Mechanical Properties: Fracture and damage, fatigue, dynamic fracture, dynamic behavior, interfaces and interphases, creep and aggressive environment.

Tribology: Friction, wear, lubrication, surface texturing, hydrophobic and super-hydrophobic surfaces, amphiphobic surfaces, Oleophobic surfaces, fluid-film bearings, porous bearings, Rheology of Non-Newtonian fluids. Tribological investigations of Composite Materials.

OBJECTIVES OF THE COURSE

1. The main objective of this STC is to provide a unique platform to facilitate the scientists, researchers, academicians, industrialists and students to share the recent advancements and the challenges in technological development of tribology of materials.
2. To exchange innovative ideas among the researchers in the area of tribology of materials around the country.
3. To provide an opportunity to national experts to share their experiences and success stories.

Who can attend this STC?

PG Students/Research-Scholars/ Industry Professionals/ Faculty Members can attend this online STC.

Registration: Kindly register through the following link: <https://forms.gle/QkxUmNW4fsTW67vN8>

Note: There is no registration fee for attending this STC.

Schedule of Lecture	Timings
Tuesday, 15 Sept.	Session I: 10:30 AM to 12:00 PM Session II: 3:00 PM to 04:30 PM
Wednesday, 16 Sept.	Session I: 10:30 AM to 12:00 PM Session II: 3:00 PM to 04:30 PM
Thursday, 17 Sept.	Session I: 10:30 AM to 12:00 PM Session II: 3:00 PM to 04:30 PM
Friday, 18 Sept.	Session I: 10:30 AM to 12:00 PM Session II: 3:00 PM to 04:30 PM
Saturday, 19 Sept.	Session I: 10:00 AM to 11:30 AM Session II: 12:00 PM to 01:30 PM

Contact Us:

Dr Saurabh Kango
Department of Mechanical Engineering
Ph: 9882728386
Email: kangos@nitj.ac.in

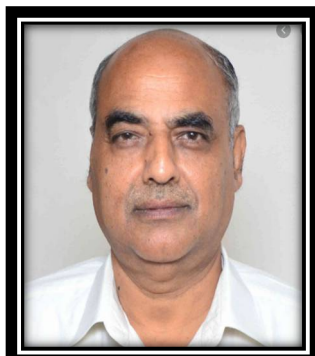
Dr Sumit Sharma
Department of Mechanical Engineering
Ph: 8146871758
Email: sharmas@nitj.ac.in

Dr Nitin Sharma
Department of Mechanical Engineering
Ph: 9418573982
Email: sharman@nitj.ac.in

DISTINGUISHED SPEAKERS



Prof. Rakesh Sehgal
Director, NIT Srinagar



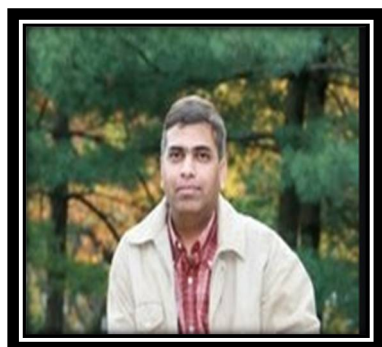
Prof. S C Sharma
IIT Roorkee



Prof. S P Singh
IIT Delhi



Prof. Inderdeep Singh
IIT Roorkee



Dr Navin Kumar
IIT Ropar



Dr Rajesh Sharma
NIT Hamirpur



Dr Amar Patnaik
MNIT Jaipur



Dr Pramod Kumar
NIT Jalandhar



Dr D K Shukla
NIT Jalandhar



Dr Raman Bedi
NIT Jalandhar