



### Registration Fees for Participants

- Industry Delegates 10,000 INR
- Indian Academic Delegates 5,000 INR
- Indian Research Scholars 3,000 INR
- Accompanying Person Indian Delegates 4,000 INR
- Foreign Academic Delegates 200 USD
- Foreign Research Scholars 100 USD
- Accompanying Person Foreign Delegates 150 USD

### Registration Details

Account name: TEQIP III  
 Account No.: 0391040100011025  
 IFSC: JAKA0RECSGR  
 Bank Name: J&K Bank  
 Branch: REC, Hazratbal

### Important Dates:

Last date for registration: 10<sup>th</sup> June 2019  
 Selection-list intimation: 14<sup>th</sup> June 2019  
 Duration of Symposium: 17<sup>th</sup> -21<sup>st</sup> June 2019

For further details and application form visit:

<http://new.nitsri.ac.in/Department/DisplayDeptPage.aspx?page=maikk>

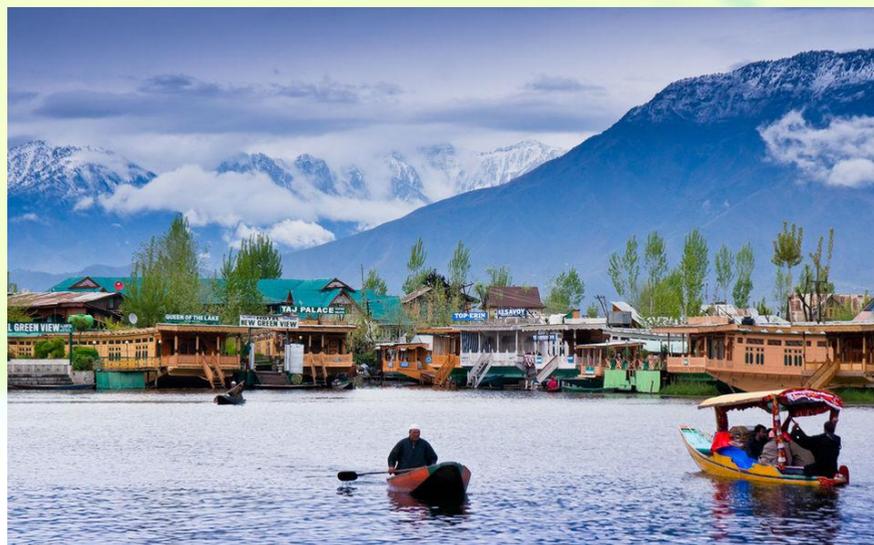
### Selection Criteria:

Selection will be done based on first-cum-first-serve basis and the confirmed candidates will be notified immediately. The maximum number of participants will be 50 (fifty).

### How to Reach NIT Srinagar, India:

National Institute of Technology Srinagar is well connected by road, rail and air. It is located on the western bank of the world heritage site, Dal Lake near the Hazratbal Shrine in the north eastern region of the Srinagar city. The institute is located 23 km from the Srinagar International Airport and 13 km from Srinagar railway station.

Kashmir, also known as Paradise on Earth, is a world famous tourist destination. The capital city, Srinagar, is well known for many tourist spots, including the famed Mughal Gardens. Health resorts like Gulmarg, Pahalgam and Sonamarg are easily accessible from the institution. Summer season is an ideal time to visit the region.



## 2<sup>nd</sup> International Symposium on “TRIBOLOGY FOR SUSTAINABILITY”

**Date: 17<sup>th</sup>-21<sup>st</sup> June 2019**

**Venue: National Institute of Technology Srinagar  
J&K, India-190006**

### Patron

**Prof. Rakesh Sehgal,  
Director**

National Institute of Technology Srinagar, India

### Symposium Chair

**Prof. M. F. Wani**

National Institute of Technology Srinagar, India

### Symposium Co-Chair

**Prof. Mohamed Kharrat**

National Engineering School of Sfax, Tunisia

*Sponsored by*

**Rtec Instruments, USA  
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### Contact

**The Symposium Chair**

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Tribology laboratory, NIT Srinagar, India, in collaboration with National Engineering School of Sfax, Tunisia is organizing a five day international symposium, “**Tribology for Sustainability**”. The initiative is aimed at bringing together the researchers, scientists, technocrats and practising engineers to discuss and address the issues related to sustainable development of mechanical systems and its future need for the benefit of humanity. The first successful edition was held in Hammamet, Tunisia (2018).

Tribology is the subject of friction, wear and lubrication of mechanical systems and has played a pivotal role in the improved design of components and the mitigation of adverse contact conditions, resulting in more environment-friendly products. The specific field of sustainable or environment-friendly tribology emphasizes the aspects of interacting surfaces in relative motion, which are of importance for energy or environmental sustainability or which have impact upon today’s environment. This includes tribological technology that mimics living nature (biomimetic surfaces) and the control of friction and wear, which is of importance for energy conservation and conversion. In addition to this, the environmental aspects of lubrication and surface-modification techniques and tribological aspects of green applications, such as wind-power turbines, tidal turbines or solar panels, form essential part of sustainable tribology. It is clear that a number of tribological problems could be put under the umbrella of sustainable tribology and are of mutual benefit to one another.

Tribological development in terms of advanced materials, coatings, nano-coatings, solid lubricants, nano-lubricants, bio-tribology and sustainable design has tremendous potential to enhance the sustainability of mechanical systems. The participants of the symposium will discuss the research experience in the field of coating tribology, nano tribology, bio-tribology and lubricant tribology, and also how the study helps in the design and development of mechanical systems for better sustainable development in future. In addition to this, practical sessions will be held which will provide hands-on experience to the participants on the latest equipment in the field of tribology, nano-tribology and material characterization.

Topics and trends will be introduced through keynote sessions, short-term scientific presentations and experiments.

- Nano-Indentation
- Nano-Tribology
- High Temperature Tribology
- Solid Lubrication
- Composite Development & Characterization
- Ceramics Tribology
- Tribology at Molecular Level
- Tribology in Aqueous Environments
- Nano-Lubrication
- Tribological Testing & Characterization



## Speakers

<b>Zulfiqar A. Khan</b>	Professor	Bournemouth University, UK
<b>Mohammad Asaduzzaman</b>	Professor	Dhaka University of Engineering Technology, Bangladesh
<b>Mohamed Kharrat</b>	Professor	National Engineering School of Sfax, Tunisia
<b>Maher Dammak</b>	Professor	National Engineering School of Sfax, Tunisia
<b>Satish Vasu Kailas</b>	Professor	Indian Institute of Science, Bengaluru, India
<b>Sunil Mohan</b>	Professor	Indian Institute of Technology(BHU) - IIT (BHU)
<b>Rakesh Sehgal</b>	Director	National Institute of Technology Srinagar, India
<b>M.F. Wani</b>	Professor	National Institute of Technology Srinagar, India
<b>Asif Syed</b>	R&D Director	Bruker Nano Surfaces Division
<b>Pratyank Rastogi</b>	Service Engineer	Bruker Nano Surfaces Division
<b>Mohit Sharma</b>	Scientist II	Institute of Materials Research & Engineering, Singapore

## Advisory Committee

<b>Pradeep Rohatgi, USA</b>	<b>Maher Dammak, Tunisia</b>	<b>Vinod Kumar, India</b>
<b>Donald Huisingh, USA</b>	<b>Satish Vasu Kailas, India</b>	<b>R.K. Awasthi, India</b>
<b>Zulfiqar A. Khan, UK</b>	<b>Sunil Mohan, India</b>	<b>Rakesh Sehgal, India</b>
<b>Carsten Gachot, Germany</b>	<b>Surjit Angra, India</b>	<b>M.F. Wani, India</b>
<b>Nuria Espallargus, Norway</b>	<b>Vinod Mittal, India</b>	<b>G.A. Harmain, India</b>
<b>Rizalman Mamat, Malaysia</b>	<b>R.K. Pandey, India</b>	<b>Babar Ahmad, India</b>
<b>Mohd Fadzli Bin Abdollah, Malaysia</b>	<b>Ankush Anand, India</b>	
<b>Mohamed Kharrat, Tunisia</b>	<b>Rajesh Sharma, India</b>	

## Coordinators

<b>Prof. M. F. Wani</b> National Institute of Technology Srinagar, India	<b>Dr. Sheikh Shahid Saleem</b> National Institute of Technology Srinagar, India
<b>Dr. Mukund Dutt Sharma</b> National Institute of Technology Srinagar, India	<b>Dr. Abhijit Dey</b> National Institute of Technology Srinagar, India