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Prof. Harish Hirani, Sr Vice President, TSI

Mr. Ajay Harinarain, Vice President, TSI

Mr. Rajendra Mahapatra, Secretary, TSI

Dr. Tarunendr Singh, Joint Secretary, TSI

Mr. Anjeeve George, Joint Secretary, TSI

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Mr. Rajendra Mahapatra (GM, Indian Oil)

Phone No. 0129-2294322

Email id: mahapatrar@indianoil.in

Registration Form for Industry participants

Five-Days Training Program on

17th Summer School in Tribology

Designation			

Organization......

Address for Correspondence

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Mob.	No	 	
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Email ID.....

Registration Fees: INR (Rs):

Transaction Particulars:

UTR No/Ref.:....

Date:

Place:

Signature of Sponsoring Authority:

(Mr./Ms./Dr...)

OR

Registration Form Link for Industry participants: https://www.tribologyindia.org/pdf/regn-form-forindustry-participants-17thSST_BC.docx

www.tribologyindia.org



17th Summer School in Tribology 9th to 13th June 2025

Organized by:



DEPARTMENT OF METALLURGICAL & MATERIALS

ENGINEERING (MME)

VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY (VNIT), NAGPUR-440010
MAHARASHTRA STATE, BHARAT

Under the aegis of:



TRIBOLOGY SOCIETY OF INDIA

Supported by:



Science and Engineering Research Board
(a statutory body of the Department of
Science & Technology, Government of India)

The likely Speakers for Technical Sessions are listed below: ☐ Prof. A. P. Harsha, IIT BHU, Varanasi ☐ Mr. Ajay Kumar Harinarain, Indian Oil Corporation (R&D), Faridabad ☐ Dr. Anand Prabhakaran, TATA Steel, Jamshedpur ☐ Mr. Anieeve George, Danfoss Technologies Pvt. Ltd.. Pune ☐ Prof. B. V. Manoi Kumar, IIT Roorkee. Uttarakhand ☐ Dr. B. Venkataraman, Amrita Vishwa Vidvapeetham, Ettimadai, Coimbatore ☐ Dr. Barun Chakrabarti, Bonitas Consulting Services. Mumbai ☐ Dr. G. D. Thakre, CSIR-IIP, Dehradun ☐ Prof. Geetha Manivasagam, VIT- Vellore ☐ Dr. Gopakumar Parameswaran, 3M India Ltd. Bengaluru ☐ Mr. Hari Dudhankar, Schaeffler India Ltd., Pune ☐ Prof. Harpreet Singh, IIT Ropar, Punjab ☐ Mr. K. Venkatesh, Hindalco Industries, Mumbai ☐ Mr. Kamal Mukheriee, Former GM, South **Eastern Coalfields Limited, Bilaspur** ☐ Dr. Kartik Pondicherry, Anton-Paar, Austria ☐ Dr. Kavita Rai, Indian Oil Corporation (R&D), Faridabad ☐ Prof. Krishnan Balasubramanian, HT Madras, Chennai ☐ Prof. M S Bobji, IISc Bangalore, Bengaluru ☐ Prof. Mayank Tiwari, IIT Patna ☐ Prof. Mohammad Faroog Wani, NIT Srinagar, Jammu & Kashmir ☐ Dr. N K Pokhriyal, Indian Oil Corporation (R&D). Faridabad ☐ Dr. Nityanand Gosvami, HT Delhi, New Delhi ☐ Mr. P. Pathak, RDCIS Steel Authority of India Ltd. Ranchi ☐ Dr. P. Ramkumar, IIT Madras, Chennai ☐ Dr. S. Juttu. The Automotive Research Association of India (ARAI), Pune ☐ Prof. Satish C Sharma, Indian Institute of Technology, Roorkee (Retd.) ☐ Prof. Satish V. Kailas, Indian Institute of Science, **Bangalore** ☐ Dr. T. Singh, Formerly of Bharat Petroleum Corporation Ltd (R&D), Mumbai

About The Program

The Department of Metallurgical & Materials Engineering, VNIT, under the aegis of the Tribology Society of India, is organizing the "17th TSI Summer School in Tribology" (SST) during 9th - 13th June, 2025 (Monday-Friday) to reinforce the need for continued education in Tribology - an interdisciplinary science and technology of friction, wear and lubrication. Some of the programs of the TSI Summer School in Tribology (SST) have been financially supported by SERB, (a statutory body of the Department of Science & Technology) Govt. of India and various industries.

Like earlier programs, 17th TSI SST is intended to provide a platform for interaction between reputed tribologists of the country and the participants, comprising senior teaching professionals and practicing engineers/professionals from Indian industry. The curriculum has a balanced combination of theoretical and applied aspects of Tribology and includes a session on assessment of learning (based on multiple choice questions) on the last day. To enable the participants to carry forward their learning beyond the program, participants will be encouraged to take up projects in their place of work/study, focusing on the application of the leanings in some aspect of their own areas of work/research.

The program intends to provide opportunities to participants for interacting with leading researchers, industry experts and OEMs of Tribo Equipment through practical demo sessions and conducted visits to laboratory/testing facilities.

Who should attend?

- Faculty in Mechanical Engineering teaching Tribology or machine design and research scholars pursuing PhD in Tribology (limited to maximum 10 research scholars).
- Practising Engineers/Managers from Industry working in Plant Design, Operation & Maintenance, Technical Services, Marketing personnel of Lubricants/additives companies, Industrial R&D from sectors like Automotive, Railroad, Oil & Gas, Steel, Power, Cement, Engineering and Heavy Machinery etc.

Topics to be covered

Basics of Tribology: Basics of Friction, Wear and Lubrication; Wear of Materials and Wear Modeling; Wear Mechanisms and Mitigation of Wear by Tribology based Designs.

Lubrication: Fluid Film Lubrication & Hydrodynamic Bearings; Lubricants-different types and their production; Chemistry of Lubricants and Additives; Automotive Tribology and Grease Rheology.

Tribology of Machine Components: Rolling Element Bearings; Gears; Failure Analysis / fault Diagnosis of Tribo Components.

Applied Tribology: Tribo-testing of Material & Lubricants; Analytical Techniques for Tribology and Surface Characterization; Condition Monitoring through Oil Analysis.

Special Topics in Tribology: Nano-mechanics/properties of materials at small scales; Bio Tribology; Application of NDT in Tribology; Tribology of Manufacturing Operations; Corrosion.

Case studies by industry experts will be presented during the program. We also propose to include guest lectures from eminent tribologists from industry and academia.

For participants from Academia:

No delegate fee for the program is required to be paid by the Academia Participants. Lodging and boarding will be provided free of cost. Selected participants will also be reimbursed to and fro travel cost, limited to II AC railway fare.

Faculty members teaching tribology or machine design and Research Scholars pursuing Ph.D. in Tribology may apply on line through the link given below by 4th May 2025 https://www.tribologyindia.org/online-application-form-for-academia.html

- (A) The selected candidates will be informed by 10th May, 2025. All Academia participants selected will be required to take TSI membership.
- (B) Bonafide certificate from Head of Institution / Department is required for the selected Academia candidates.
- (C) In addition, the selected participants from academia will also be required to submit a Cheque of Rs 5000/- as an interest-free deposit, which will be refunded back to the participant during the program. In case of non-participation without a prior notice of notice of 15 days before the start of the program, this amount will be encashed by TSI to cover the administrative expenses incurred.

(D) Academia candidates who have <u>already attended</u> any earlier SST need not apply.

Academia participants, who are desirous of participation in 17th SST, but currently not members of TSI, can apply online for TSI membership at the link below:

For TSI membership/registration click the link given below

http://www.tribologyindia.org/become a member.htm

For participants from Industry:

Residential Category: A course fee of Rs. 45000/inclusive of GST and accommodation on twin-sharing basis for 6 days at VNIT - Nagpur will be payable by Industry participants choosing to stay in campus during the program. The course fee will cover the TSI program fee, course material plus food for five days during the program. There are limited numbers of seat available for Industry participants and the registration will be done on first-come-first-served basis.

Non-Residential Category: For Industry participants without availing campus accommodation, the course fee will be Rs. 35000/- inclusive of GST (currently @18%). The course fee will cover the TSI program fee, course material plus food for five days at VNIT – Nagpur during the program.

Participants can obtain proper invoices for all payments made for fees and services, if required by them.

Payment of Registration Fees

(Industry Participants)

The registration fee can be paid through only online transfer (NEFT), as per the following details:

Account Name	M/s Director VNIT, Nagpur
Account Number	3124101006214
Bank	Canara Bank
Branch	VNIT Campus, Abhyankar
	Nagar, Nagpur
IFSC Code	CNRB0003124
MICR CODE	440015013

About Tribology Society of India:

Tribology Society of India (TSI) was set up as a professional, nonprofit body bringing together academicians, industry experts as well as research organizations as its members, to promote the knowledge and practice of Tribology. It was set up in its present form in June 1989, with its headquarters at Bharat Heavy Electricals Limited, Corporate R&D at Hyderabad. Subsequently the headquarters were shifted to its current location at IndianOil R&D Centre, Faridabad. TSI is affiliated to the International Tribology Council, UK which has many other National Tribology Societies as members across the world.

TSI organizes the Summer School in Tribology to provide a platform to academicians, practicing engineers and R&D professionals for sharing their knowledge and experiences in this field. It enables Tribology faculty and research scholars to expand the Tribology curriculum at their organizations. TSI is engaged in a variety of initiatives such as IndiaTrib series of conferences and TSI Webinars to promote Tribology in India.

The Society has Members from Oil & Gas, Power, Steel, Cement, R&Ds and academia from all over the country.

For more information, please visit the TSI website: www.tribologyindia.org

About the Institute:

Visvesvaraya National Institute of Technology, Nagpur is one of the thirty-one National Institutes of Technology in the country. The Govt. of India conferred on the Institute, the Deemed to be University status under University Grants Commission Act, 1956 (Section 3 of 1956) with effect from 26th June 2002. Subsequently, the Central Govt. by an Act of Parliament (National Institutes of Technology Act, 2007 (29 of 2007)) declared VNIT Nagpur as an

Institute of National Importance along with all other NITs. The Act was brought into force on 15th August 2007. Earlier, the Institute was known as Visvesvaraya Regional College of Engineering (VRCE). It was established in the year 1960 under the scheme sponsored by Govt. of India and Govt. of Maharashtra. The college was started in June 1960 by amalgamating the State Govt. Engineering College functioning in Nagpur since July 1956. In the meeting held in October 1962, the Governing Board of the College resolved to name it after the eminent engineer, planner, and statesman of the country, Sir M. Visvesvaraya.

Venue:



Multiactivity Centre,

Visvesvaraya National Institute of Technology, South Ambajhari Road,

Nagpur – 440010. Maharashtra State, Bharat



