

TSI Leverages Technology to Launch New Initiative


TriboConnect & Technical Education Webinar Series of TSI gain popularity

TSI has taken a significant step to harness the power of Digital Technology by launching *TriboConnect* Webinar Series and Educational Seminars. After the successful organization of 12th Summer School in Tribology in July 2020 through virtual mode, TSI has started the *TriboConnect* Webinar Series to spread the awareness and knowledge about recent trends in Tribology, covering both academic and industry aspects. TSI Educational Webinars are designed to provide deeper exposure to a given topic. Both the on-line events have received very good response from the Tribology community in India, including many participants from outside India.

Following are the events organized by TSI during July - December 2020:

- TSI TriboConnect Webinar series: August 26th, 2020 05:00 PM India

- (1) Dr SSV Ramakumar, Director R&D, Indian Oil Corporation Ltd, R&D Centre, Faridabad: *"Lubrication imperatives in the mobility sector"*
- (2) Prof Satish V Kailas, Professor, Indian Institute of Science, Bangalore: *"Quest towards understanding lubrication and wear"*.

The poster for the TSI TriboConnect Lecture Series features a green and yellow color scheme. On the left, a large graphic shows two hands shaking, symbolizing collaboration. The text 'TSI TriboConnect LECTURE SERIES' is prominently displayed. Below this, the date and time 'WEDNESDAY, 26TH AUGUST 2020 17:00 INDIA TIME ONWARDS' are listed, along with the TSI logo and the full name 'Tribology Society of India'. On the right, two speakers are featured: Dr. SSV Ramakumar, Director of Indian Oil R&D, with his title 'Lubrication Imperatives in the Mobility Sector', and Prof. Satish V Kailas, from the Indian Institute of Science, Bangalore, with his title 'Quest towards Understanding Lubrication & Wear'. A vertical chain of three squares is on the far right.

TSI TriboConnect LECTURE SERIES

WEDNESDAY, 26TH AUGUST 2020 17:00 INDIA TIME ONWARDS

Dr. SSV Ramakumar
Director Indian Oil R&D
"Lubrication Imperatives in the Mobility Sector"

Prof. Satish V Kailas
Indian Institute of Science, Bangalore
"Quest towards Understanding Lubrication & Wear"

Tribology Society of India
TSI

- TSI TriboConnect Webinar series: October 26th, 2020 04:00 PM India

(1) Prof Nityanand Gosvami, Assistant Professor, Department of Materials Science & Engineering, Indian Institute of Technology, Delhi: *"In situ nanoscale study of tribochemical processes under lubricated contacts"*

(2) Dr J Christopher, Chief General Manager (AD), Indian Oil Corporation Ltd., R&D Centre, Faridabad: *"Surface Techniques for understanding Tribochemistry"*

TSI TRIBOCONNECT
OCTOBER SERIES - will focus on -
TRIBO - CHEMISTRY

DR. J CHRISTOPHER
Chief General Manager,
Analytical Division
IndianOil R&D
Surface Techniques for Understanding TriboChemistry

PROF. N GOSVAMI
Assistant Professor,
Materials Science & Engineering
IIT Delhi
In situ Nanoscale Study of TriboChemical Processes under Lubricated Contacts

MONDAY, 26TH OCT 2020
at
16:30 PM INDIA TIME
- join -
Tribology Society of India
(Affiliated to the International Tribology Council, UK)
TSI

- TSI TriboConnect Webinar series: September 30th, 2020 05:00 PM India

(1) Dr Mayank Tiwari, Indian Institute of Technology, Patna: *"Surface Failure in Gears and Rolling Sliding Components"*

(2) Dr Barun Chakrabarti, General Manager, L&T Hydrocarbon Engineering, Mumbai: *"Monitoring & Diagnostics of Industrial Gears"*

TSI TriboConnect
LECTURE SERIES

Dr. Mayank Tiwari
Associate Professor
Indian Institute of Technology,
Patna
SURFACE FAILURE IN GEARS AND ROLLING SLIDING COMPONENTS

Dr. Barun Chakrabarti
General Manager
L&T Hydrocarbon Engineering,
Mumbai
MONITORING & DIAGNOSTICS OF INDUSTRIAL GEARS

WED, 30TH SEP 2020
17:00 INDIA TIME
Tribology Society of India
(Affiliated to the International Tribology Council, UK)
TSI

- TSI Technical Education Webinar Series: September 25th, 2020 03:00 PM India

Mr Anjeeve George, Eaton Fluid Power Limited: *Tribology in Hydraulic Systems.*

Topics covered:(1) *Basic principles* (2) *Hydraulic components* (3) *Symbols used in Hydraulics* (4) *Basic Hydraulic System* (5) *Lubricants used in Hydraulic systems.*



TSI TECHNICAL EDUCATION

WEBINAR SERIES

- Speaker -
Mr. Anjeeve George
Eaton Fluid Power Limited, Pune

TRIBOLOGY IN HYDRAULIC SYSTEMS

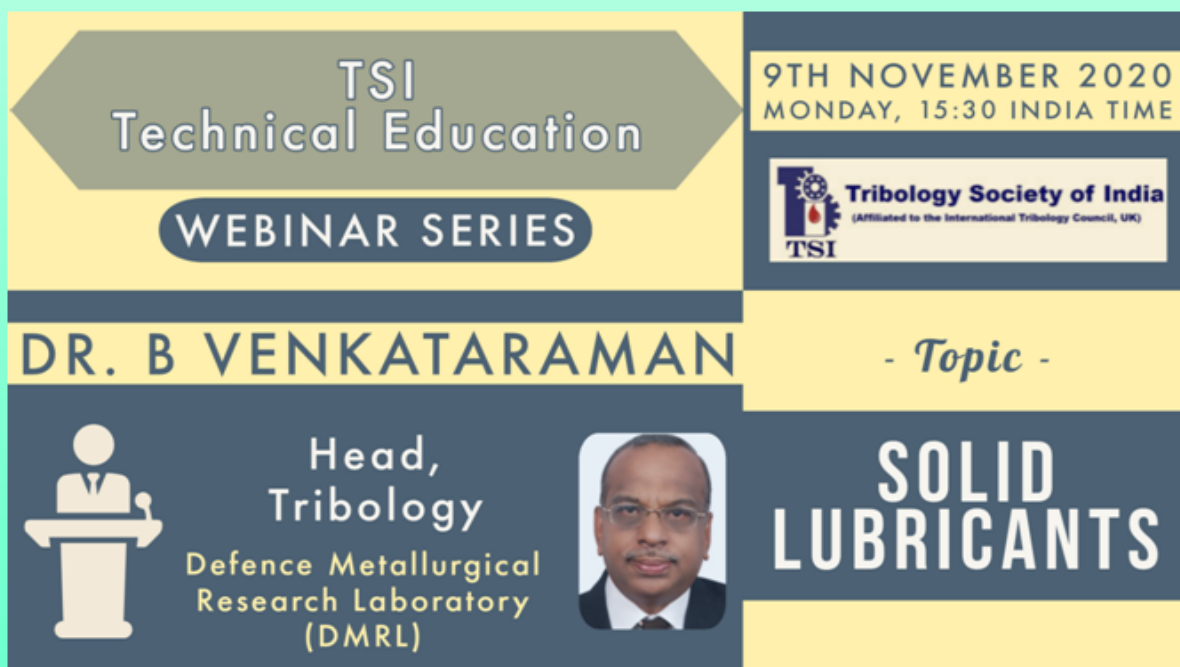
FRIDAY, 25TH SEP 2020
10:30 AM INDIA TIME

Tribology Society of India
(Affiliated to the International Tribology Council, UK)

- TSI Technical Education Webinar Series: November 9th, 2020 03:00 PM India

Dr B Venkataraman, Head - Tribology, Defence Materials Research Laboratory, Hyderabad:

(1) *Solid Lubricants - Materials* (2) *Solid Lubricants - Application and Testing*



TSI Technical Education

WEBINAR SERIES

DR. B VENKATARAMAN

Head,
Tribology
Defence Metallurgical
Research Laboratory
(DMRL)

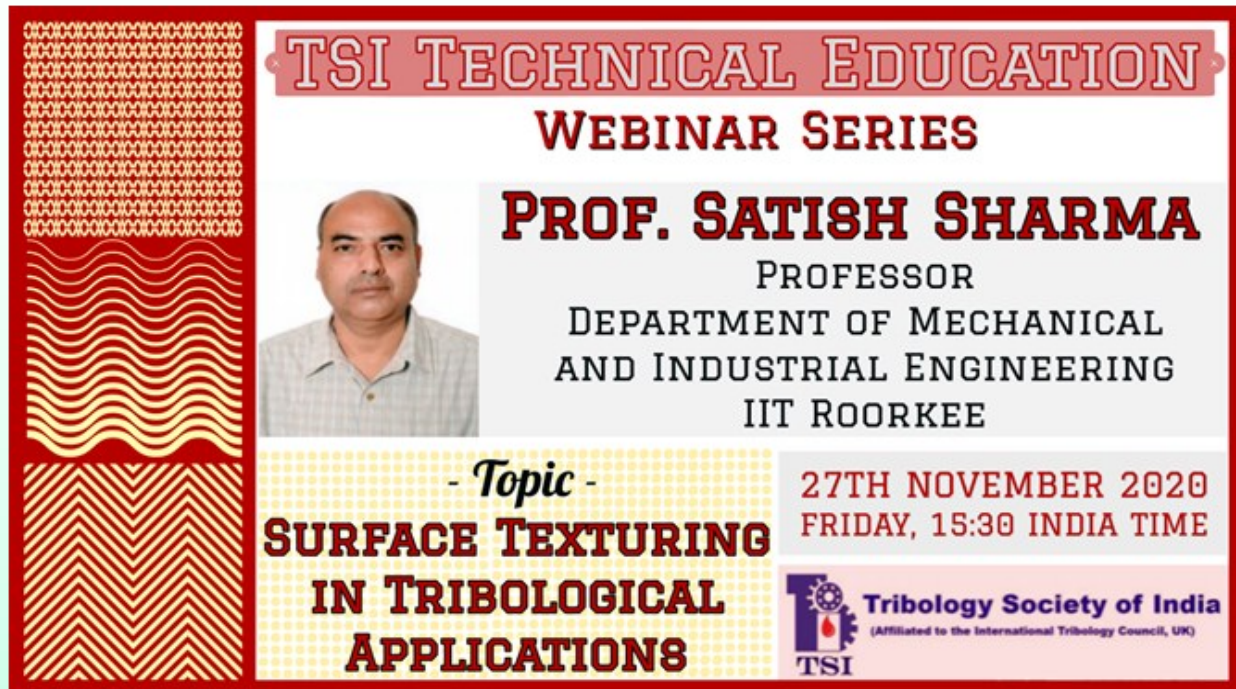
9TH NOVEMBER 2020
MONDAY, 15:30 INDIA TIME

Tribology Society of India
(Affiliated to the International Tribology Council, UK)

- Topic -
SOLID LUBRICANTS

- TSI Technical Education Webinar Series: November 27th, 2020 03:00 PM India

Prof. Satish Sharma, Department of Mechanical and Industrial Engineering, IIT Roorkee: *Surface Texturing in Tribological Applications*



**TSI TECHNICAL EDUCATION
WEBINAR SERIES**

PROF. SATISH SHARMA
PROFESSOR
DEPARTMENT OF MECHANICAL
AND INDUSTRIAL ENGINEERING
IIT ROORKEE

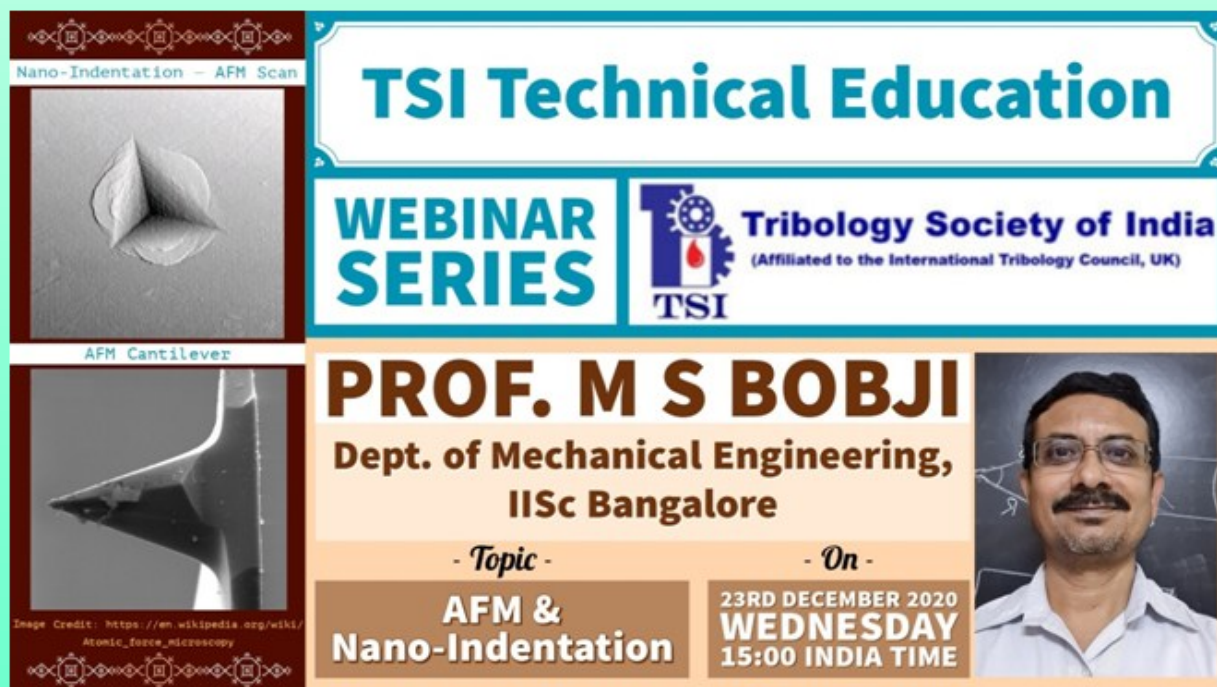
- Topic -
**SURFACE TEXTURING
IN TRIBOLOGICAL
APPLICATIONS**

**27TH NOVEMBER 2020
FRIDAY, 15:30 INDIA TIME**

Tribology Society of India
(Affiliated to the International Tribology Council, UK)
TSI

- TSI Technical Education Webinar Series: December 23rd, 2020 03:00 PM India

Prof. M S Bobji, Department of Mechanical Engineering, Indian Institute of Science, Bangalore: *AFM and Nano-Indentation*



**TSI Technical Education
WEBINAR SERIES**

Tribology Society of India
(Affiliated to the International Tribology Council, UK)
TSI

PROF. M S BOBJI
Dept. of Mechanical Engineering,
IISc Bangalore

- Topic -
**AFM &
Nano-Indentation**

- On -
**23RD DECEMBER 2020
WEDNESDAY
15:00 INDIA TIME**

Nano-Indentation - AFM Scan

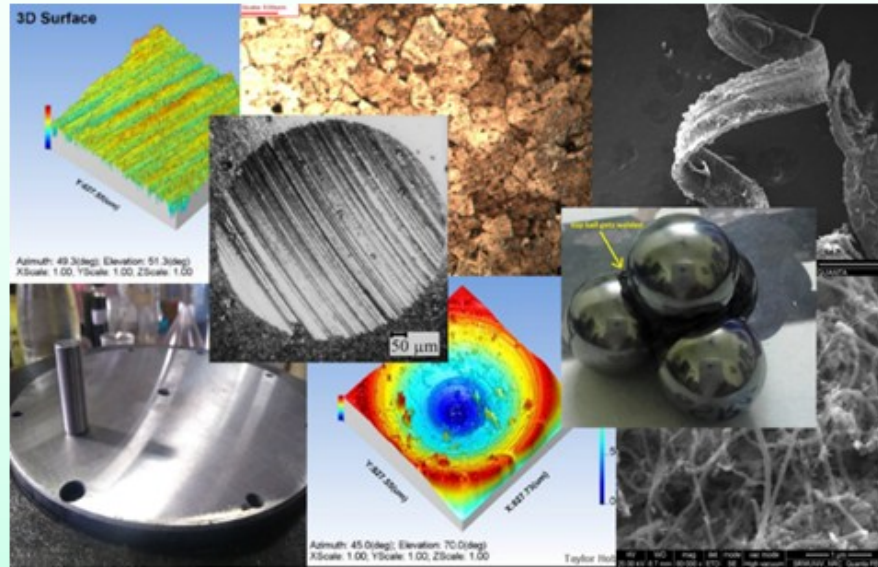
AFM Cantilever

Image Credit: https://en.wikipedia.org/wiki/Atomic_force_microscopy

TRIBOINDIA 2020: 10 - 12 December, 2020

Organized by: Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu 603203

Under the Aegis of Tribology Society of India



TRIBOINDIA 2020, the fifth in the series of National Tribology Conference (NTC), was organized by the Department of Mechanical Engineering, SRM Institute of Science and Technology (SRMIST), Kattankulathur Campus, Tamil Nadu under the aegis of Tribology Society of India.

TRIBOINDIA 2020 is a benchmark for many such activities, as it was organized in fully virtual mode, seamlessly over three days during December 10 - 12, 2020. The inaugural session was presided over by Pro Vice Chancellor (E & T), SRMIST, Prof. C. Muthamizhchelvan and Dr. Barun Chakrabarti, Vice President - TSI. The Head of Mechanical Engineering Department, SRMIST, Prof. M. Cheralathan delivered the welcome address. Dr. Shubrajit Bhaumik, SRMIST and Joint Organizing Secretary -TRIBOINDIA 2020, introduced the conference to all participants. Prof. T.V. Gopal, Dean - College of Engineering, SRMIST delivered the felicitation address.

The inaugural lecture was delivered by Prof. Ali Erdemir, Texas A & M University, USA who is also the current President of International Tribology Council (ITC). In his excellent lecture he showed the menace of friction in daily life and the ways of reducing energy consumption by lowering friction. He beautifully described the quest of mankind to reduce friction, starting from the era of Egyptian civilization to the modern days of super lubricity.

During TRIBOINDIA 2020, participants also had the privilege of listening to seven highly qualified plenary speakers, distributed over all three days. Prof. Satish V Kailash of IISc Bengaluru explained how the wear in Tribo system was influenced by several factors. A lecture by Prof. R Gnanamoorthy, IIT Madras was on bearing design methodology and bearing materials. Prof. Andreas Almqvist, Luleå University of Technology, Sweden also discussed on design of bearings. Prof. Zulfiqar A Khan, Bournemouth University, United Kingdom talked about different nano-composite coatings and their effect on reducing friction and wear. The combined effect of fretting wear and corrosion was discussed by Prof. T. Liskiewicz, Manchester Metropolitan University, UK. Prof. Hong Liang, Texas A&M University, USA in her plenary talk described her research on several nano additives and how they form the Tribo films on surfaces. The final plenary talk was delivered by Prof. Viorel Paleu of Gheorghe Asachi Technical University, Romania on kinematics of cardan joints and rolling bearing life.

In addition to the plenary lectures, TRIBOINDIA 2020 also showcased thirteen keynote lectures delivered by eminent scientists and practising engineers from India and abroad: Prof. Dr. Kanao Fukuda, Malaysia -Japan International Institute of Technology, Malaysia; Prof. Dr. Md. Fadzli Bin Abdollah, Universiti Teknikal Malaysia; Dr. T.C.S.M Gupta, Apar Industries Limited India; Dr. Naresh Chandra Murmu, Senior Principal Scientist CSIR-CMERI India; Dr. Chiradeep Ghosh, Tata Steel Limited India; Prof. Dr. A. Elaya Perumal, Anna University India; Dr. Md. Khalid, Sunway University Malaysia; Prof. Satish C Sharma, IIT Roorkee India; Dr. Balasubramaniam Vengudusamy, Klueber Lubrication Germany; Dr. Debdulal Das, Indian Institute of Engineering Science and Technology India; Dr. Amar Patnaik, Malaviya National Institute of Technology India; Dr. P. Ramkumar, IIT Madras, India and Dr. G. Rajaram, Thejo Engineering Limited India. Presentations from more than one hundred contributory speakers also made TRIBOINDIA 2020 a grand success.

TRIBOINDIA 2020 was sponsored by SRM Institute of Science and Technology, Optimol Instruments - Germany and Indian Oil Corporation Limited, as Diamond Sponsors. The Platinum Sponsors included RTEC Instruments, DUCOM Instruments, Magnum Engineers, ACE Instruments and Indian Additives.

The valedictory function was attended by Prof. Nilesh Vasa - IIT Madras, Mr. Uttam Kr. Roy - President, Maihar Integrated Cement Unit, MP Birla Group, Mr. Walter Wagner - Managing Director, Wagner High Performance Lubricants, Germany and other delegates of the conference. In the special addresses, Mr. Roy stressed upon the importance of adopting good tribological practices in process industries and Mr. Wagner familiarized the participants about the next generation commercialized nano lubricants. A brief report of the conference was presented by Prof. Shubhabrata Datta, SRMIST, Organizing Secretary - TRIBOINDIA 2020. Prof. Nilesh Vasa delivered the valedictory speech.

Mr. Ajay Harinarain, Secretary - Tribology Society of India, expressed his happiness on the success of TRIBOINDIA 2020 amid pandemic situation and invited all the fellow tribologists to join in the upcoming INDIATRIB 2021. He also thanked all the tribologists who have come forward in this “not- normal” situation and made TRIBOINDIA 2020, the first virtual conference of TSI, a benchmark for the future conferences. The conference ended with high hopes, with the vote of thanks delivered by Dr. Jitendra Katiyar, SRMIST.

For more details of TRIBOINDIA 2020 and screen shots of various sessions, please click at the following link:
<https://drive.google.com/drive/folders/16FqR93XXopBEXSSZepBGxS6JvBVet8S5>



AICTE Sponsored Short Term Training Program (STTP) Series:
RECENT ADVANCES IN TRIBOLOGY AND SURFACE ENGINEERING

***Organized by: Department of Mechanical Engineering,
Saintgits College of Engineering (Autonomous), Kottayam, Kerala***

Saintgits College of Engineering (Autonomous), Pathamuttom, Kottayam, Kerala, took up the initiative of organizing the STTP Series to impart knowledge and awareness about emerging trends in Tribology. This was sponsored by All India Council for Technical Education (AICTE), New Delhi under AQIS scheme on ***Recent Advances in Tribology and Surface Engineering***. The aim of this Workshop was to provide a platform academicians, practicing engineers and R & D professionals for sharing their knowledge and

experiences in this field. Department of Mechanical Engineering organized this STTP via webinar mode, involving four one-week series each on August, September, October and November 2020. The program was intended to provide an international platform for interaction between renowned Tribologists around the globe and the participants comprising teaching professionals, research and PG scholars and practising engineers from industry. This program also attempted to highlight the current areas of research in tribology and their viability for industrial applications.

The series of the STTP were divided based on the content of the main topic in 4 schedules, as mentioned below:

- **Series 1 of 4 - Introduction to Tribology and Surface Engineering**, 17 - 22 August 2020
(Website: <http://fdp.saintgits.org/tribology/>)
- **Series 2 of 4 - Tribology of Machine Components and Applied Tribology**, 14 - 19 September 2020
(Website: <http://fdp.saintgits.org/appliedtribology/>)
- **Series 3 of 4 - Introduction to special topics like Nanotribology, Biotribology & Space Tribology**, 12 - 17 October, 2020 (Website: <http://fdp.saintgits.org/nanotribology/>)
- **Series 4 of 4 - Surface characterization and treatments in Tribology**, 23 - 28 November 2020
(Website: <http://fdp.saintgits.org/surfaceengineering/>)

The detailed program of these 4 schedules can be viewed at the above-mentioned website links. The Workshop was open to faculty members of AICTE approved Engineering and Polytechnic Colleges, Research Scholars working in various fields of Mechanical Engineering, professionals from Industry, R&D organizations and PG scholars who have a genuine interest in the field of Tribology. No registration fee was charged from the participants and E-certificates along with STTP video and e-proceedings were provided to all participants who completed the online examination on the last day of each series.

The organizing committee of the STTP series included **Prof. (Dr.) Jason Cherian Issac** and **Prof. (Dr.) Chacko Preno Koshy**, **Prof. Philip Jacob Perakathu** and **Prof. Mathew Prins Korah Philip**, along with the guidance and help rendered by the Head of Department, **Prof. (Dr.) Jacob T Varghese** and faculty members of Mechanical Engineering Department.

- ♦ Key highlights of the STTP series are briefly mentioned below:
- All schedules were inaugurated on the first day in the presence of the following eminent educationalist/academicians:
 - > **Shri Thomas T John**, Director, Saintgits Group of Institutions
 - > **Er. Punnoose George**, Executive Chairman, Saintgits Group of Institutions
 - > Guest of Honor, **Col. B Venkat**, Director, Faculty Development Cell, AICTE, New Delhi
 - > **Prof. (Dr.) Josephkunju Paul C**, Principal, Saintgits College of Engineering
 - > **Prof. (Dr.) M D Mathew**, Dean - Research, Saintgits College of Engineering
 - > **Prof. (Dr.) Jacob T Varghese**, Head - Department of Mechanical Engineering
 - > **Prof. (Dr.) Jason Cherian Issac**, Professor, Department of Mechanical Engineering (STTP Coordinator)
 - > **Dr. Chacko Preno Koshy**, Associate Professor, Department of Mechanical Engineering (STTP Coordinator)
- Apart from the above-mentioned, each series was inaugurated by the following distinguished Tribologists:
 - > **Prof. (Dr.) Satish V Kailas**, Professor, Indian Institute of Science, Bangalore - For series 1 of 4
 - > **Prof. (Dr.) T V L N Rao**, Research Associate Professor, Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur, India - For series 2 of 4

>Prof. (Dr.) Anirudhan P, Professor, Department of Mechanical Engineering, Government Engineering College, Calicut, Kerala, India - For series 3 of 4

>Prof. (Dr.) B S Murty, Director, Indian Institute of Technology, Hyderabad, India - For series 4 of 4

- ◆ These eminent scholars delivered the inaugural address followed by the keynote lecture.
- The entire program covered 63 technical lectures by 46 eminent faculty members from reputed academic institutions and industry. The collage of images below depicts the speakers of STTP series.
- 527, 546, 606 and 451 participants from academia and industry around the globe registered for each STTP series, respectively.
- Prof. (Dr.) Nicholas D. Spencer, ETH Zurich, Switzerland and Prof. (Dr.) Suman Chakraborty, IIT Kharagpur delivered invited special lectures during the STTP.

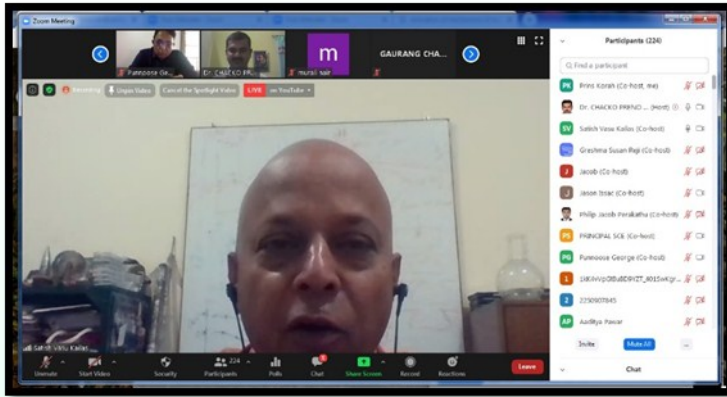
The sessions witnessed live interactions of the participants with the speakers and the coordinators of STTP as well. At the end of each session, feedback was collected from the participants. Most of the participants requested for more such initiatives from the Department of Mechanical Engineering of Saintgits College of Engineering, Kottayam, as this STTP gave insightful knowledge in the field of applied Tribology, which is one of the factors that showcase the success of the program. This also motivates the team to launch future initiatives.

The Organizing Team would like to thank AICTE for sponsoring the STTP on *Recent Advances in Tribology and Surface Engineering*, and also acknowledge the support and timely help from TSI in making such a knowledge sharing platform a grand success.



Eminent Speakers of the STTP Series

Some snaps of various sessions are attached herewith:

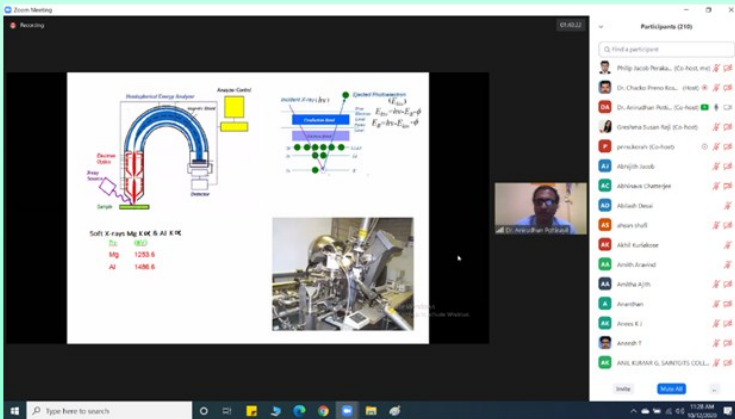


Prof. (Dr.) Satish V Kailas, IISc Bangalore, delivering the inaugural address and keynote lecture during Series 1 of 4 on *Introduction to Tribology and Surface Engineering*

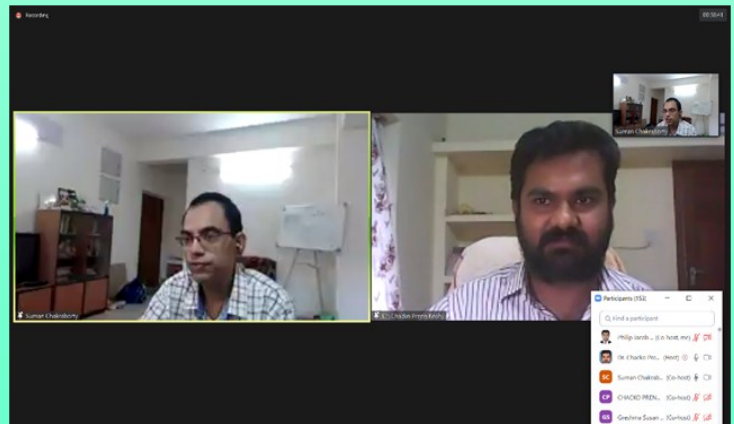
Prof. (Dr.) A P Harsha, IIT (BHU) Varanasi delivering the lecture during Series 2 of 4 on *Tribology of Machine Components and Applied Tribology*

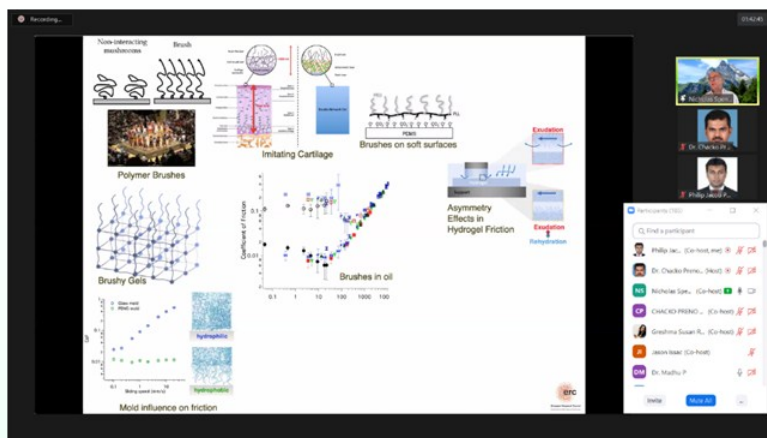


Prof. (Dr.) Anirudhan P, GEC Calicut, delivering the inaugural address and keynote lecture during Series 3 of 4 - *Introduction to special topics like Nanotribology, Biotribology & Space Tribology*



Prof. (Dr.) Suman Chakraborty, IIT Kharagpur delivering the invited lecture during Series 3 of 4 on *Introduction to special topics like Nanotribology, Biotribology & Space Tribology*





Prof. (Dr.) Nicholas D. Spencer, ETH Zurich, delivering the inaugural address and keynote lecture during Series 3 of 4 on *Introduction to special topics like Nanotribology, Biotribology & Space Tribology*

Prof. (Dr.) B S Murty, Director, IIT Hyderabad, delivering the inaugural address and keynote lecture during Series 4 of 4 on *Surface Characterization and Treatments in Tribology*



VIRTUAL INTERNATIONAL TRIBOLOGY RESEARCH SYMPOSIUM (ITRS) 2020: 5th – 7th November 2020



A 3-Day Virtual International Tribology Research Symposium on the Theme “*Impact of Tribology on Society*” was inaugurated jointly by SRM Institute of Science and Technology - Chennai, Sri Mata Vaishno Devi University - Katara, J&K and Centre for Advanced Studies, Dr. APJ Abdul Kalam Technical University - Lucknow during 5th - 7th November 2020, with the theme “*Impact of Tribology on Society*”.

The prominent guests who spoke and were present during the inaugural function included Prof. Manish Gaur, Director CAS-AKTU Lucknow; Mr. Ashok Mehta, Executive Director, Tribology Society of India; Prof. Satish V. Kailas, Vice President, Tribology Society of India and Professor at IISc Bangalore; Prof. Salmiah Kasolang, President, Malaysian Tribology Society and also Rector at Universiti Teknologi Mara. Inaugural Speakers included Prof. Ali Erdemir, Texas A&M, USA and President - International Tribology Council (ITC); Vice Chancellor, AKTU, Prof. Vinay Kumar Pathak; Vice Chancellor, SRMIST, Prof. Sandeep Sancheti; Vice Chancellor, SMVDU, Padma Shri Prof. R. K. Sinha.

In this symposium over 220 abstracts from various countries such as India, USA, Mexico, Japan, UK, Italy, France, Malaysia, Hungary, Indonesia, and Saudi Arabia were received. From India the abstracts were contributed from IISc, IITs, NITs, Government Research Labs, and Private Organizations. . ITRS are publishing 5 Special Issues and 4 Regular issues in reputed SCI/ESCI Journals.

The contributory papers included around 100 from institutes of national importance and government research organization, 45 from abroad and around 80 from private universities and colleges in India.

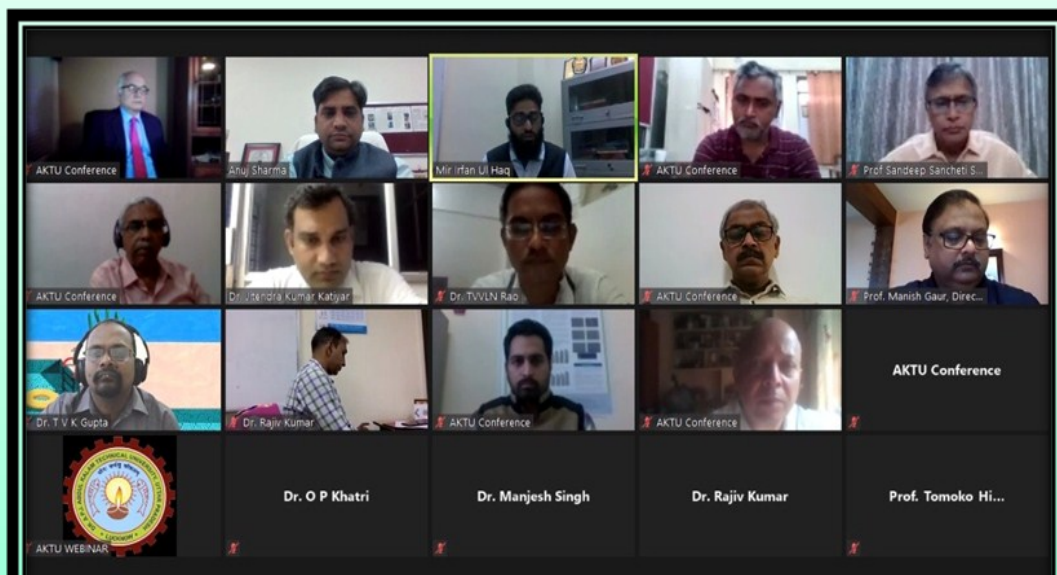
In this symposium, a total of 8 Keynote Lectures were delivered by eminent Tribologists, including Prof. Ali Erdemir, Prof. Daniele Dini, Prof. Yoshinori Sawae, Prof. Satish V Kailas, Prof. Mitjan Kalin, Prof. Tomoko Hirayama, Prof. Sujeet Kumar Sinha and Prof. Roland Larsson.

One industrial meet was also held on 7th November 2020 in which Kistler Instruments Pvt Ltd., Apar Industries - Mumbai, and DUCOM Instruments - Bangalore participated.

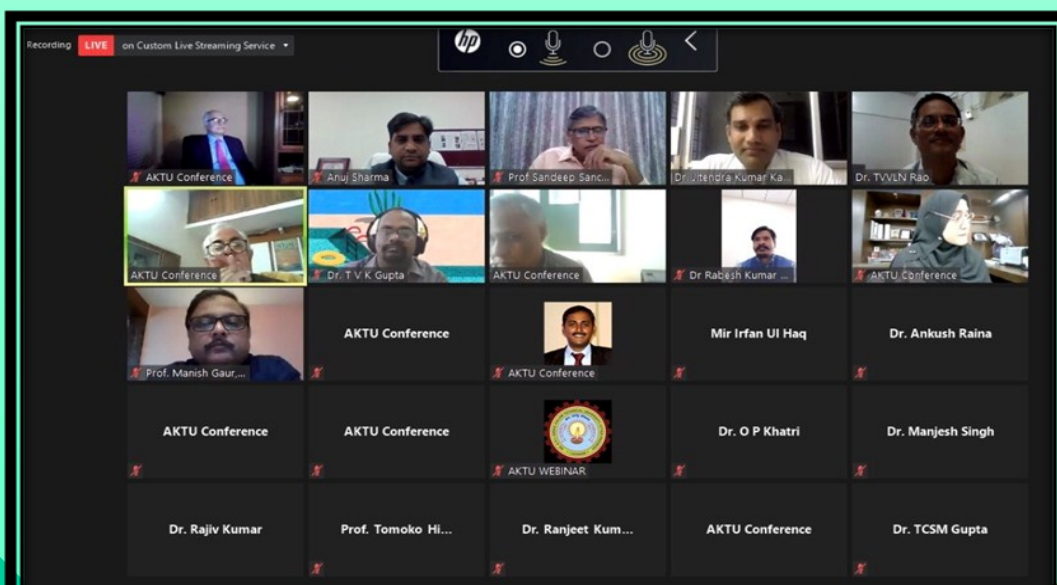
M/s Shreenath Engineers Pvt. Ltd. Nagpur, Kistler Instruments Pvt Ltd., Vandana Enterprises - Pryagraj (UP), CAD Mech Engineers - Pune, Apar Industries - Mumbai, DUCOM Instruments - Bangalore and BHEL - Haridwar supported ITRS 2020 through keynote / invited speakers and providing sponsorship.

The valedictory session of ITRS was addressed by Prof. Manish Gaur, Director CAS-AKTU Lucknow. He appreciated the whole team of ITRS for their good work in organizing ITRS 2020. The team of Conveners included Dr. Jitendra Kumar Katiyar, Dr. Anuj Kumar Sharam and Dr. Mir Irfan Ul Haq, and Co-conveners: Dr. TVVLN Rao, Dr. Ankush Raina and Dr. Rabesh Kumar Singh.

Picture of Inaugural Session



Picture of Valedictory Session



Young Research Scholars in Tribology

In this issue of TSI Newsletter we are presenting ten young researchers, who have completed their PhD program in Tribology during the period from 2016 to the beginning of 2021.



Name of Research Scholar: M Hanief

Title of Ph.D. Thesis: Running-in Wear Modeling

Name of the Supervisor: Prof. M. F. Wani, NIT Srinagar

Year of Completion: 2016



Name of Research Scholar: Parveen Kumar

Title of Ph.D. Thesis: Tribological Characterization of Hypereutectic Al-25Si Alloy: Influence of Graphene as Solid Lubricant Additive

Name of the Supervisor: Prof. M. F. Wani, NIT Srinagar

Year of Completion: 2018



Name of Research Scholar: Shuhaib Mushtaq

Title of Ph.D. Thesis: Development and Tribological Characterization of Iron-based Self-lubricating Composites for Plan Bearings

Name of the Supervisor: Prof. M.F Wani, (NIT Srinagar)

Year of Completion: 2018



Name of Research Scholar: Mohd. Junaid Mir

Title of Ph.D. Thesis: Feasibility Study of Dry, Wet and MQL Systems for hard turning of AISI D2 Steel using CBN, Carbide and Ceramic Inserts

Name of the Supervisor: Prof. M. F. Wani, (NIT Srinagar)

Year of Completion: 2019



Name of Research Scholar: P S Suvin

Title of Ph.D. Thesis: Synthesis and Testing of Eco-friendly, Non-toxic Cutting Fluid Emulsions

Name of the Supervisor: Prof. Satish Vasu Kailas and Prof. Dibakar Sen

Institute: Indian Institute of Science, Bangalore

Year of Completion: 2019



Name of the Research Scholar: Rahul Kumar

Title of Ph.D. Thesis: Computational analysis of Rayleigh Step Bearing Operating under Elasto-hydrodynamic Lubrication.

Name of the Supervisor: Dr. Subrata Kumar Ghosh, Associate Professor, Department of Mechanical Engineering, IIT(ISM) Dhanbad, Jharkhand, India, Pin: 826004

Co-Supervisor: Dr. Mohammad Sikandar Azam, Assistant Professor, Department of Mechanical Engineering, IIT(ISM) Dhanbad, Jharkhand, India, Pin: 826 004

Year of Completion: 2020



Name of Research Scholar: Ch. Sri Chaitanya

Title of Ph.D. Thesis: Mechanical and Tribological Performance of Ceno-sphere-based Syntactic Foams.

Name of the Supervisor: Dr. R. Narasimha Rao, Professor, National Institute of Technology Warangal, Warangal, Telangana - 506004.

Year of Completion: 2020



Name of Research Scholar: Summera Banday

Title of Ph.D. Thesis: Nanotribological Characterization of Self-Lubricating Metal / MoS₂ Nano-coatings Deposited on Al-Si ALLOY.

Name of the Supervisor: Prof. M.F Wani, NIT Srinagar

Year of Completion: 2020



Name of Research Scholar: Syed Irshad Ahmad Qadri

Title of Ph.D. Thesis: An Experimental Investigation of Nickel-based Super Alloy-718 Machining

Name of the Supervisor: Prof Dr G. A Harmain

Name of Co-Supervisor: Prof M. F. Wani, NIT Srinagar

Year of Completion: 2020



Name of Research Scholar: Syed Danish Fayaz

Title of Ph.D. Thesis: Piston Ring-Cylinder Liner Tribo-Pair Under Starved Lubrication: Some Remedial Measures

Name of the Supervisor: Prof. M.F. Wani, NIT Srinagar

Year of Completion: 2021

New Members of Tribology Society of India (August 2020 - December 2020)

Sl. No.	LM #	Name	Affiliation
1	S-5971	Ms. Yogita Maithani	Indian Institute of Technology Delhi, Delhi
2	S-5972	Mr. Subhrajit Pradhan	National Institute of Technology Rourkela, Odisha
3	S-5973	Mr. Akshay Pathania	Indian Institute of Technology Jammu, Jammu
4	S-5974	Ms. Smita Gupta	Indian Institute of Technology (BHU) Varanasi, UP
5	S-5975	Ms. Rubia	Indian Institute of Technology Kanpur, UP
6	5976	Mr. Shrikanth V	Indian Institute of Technology Dharwad, Karnataka
7	5977	Ms. Puja Prakash More	College of Engineering Pune, Maharashtra
8	S-5978	Ms. Neha Sharma	Advanced Tribology Research Centre, CSIR-IIP, Dehradun, Uttarakhand
9	S-5979	Mr. B. Sudheer Reddy	VIT University, Tamil Nadu
10	S-5980	Mr. Kasimuthumaniyan S.	Indian Institute of Technology Delhi, Delhi
11	5981	Mr. Shubhabrata Datta	SRM Institute of Science and Technology (SRMIST), Kattankulathur, Tamil Nadu
12	S-5982	Ms. Chinmayee Nayak	Indian Institute of Technology Kanpur, UP
13	5983	Mr. Ravikumar Dumpala	Visvesvaraya National Institute of Technology Nagpur, Maharashtra
14	S-5984	Ms. Ashwini K Patil	VIT University, Tamil Nadu
15	5985	Mr. GIRISH H	St Joseph Engineering College Vamanjoor, Karnataka
16	5986	Dr. Binu KG	St Joseph Engineering College Vamanjoor, Karnataka
17	5987	Mr. Hafiz Mayeen	Indian Oil R&D Centre, Faridabad, Haryana
18	5988	Dr. P. Ravi Kumar	CMR College of Engg. And Technology, Hyderabad, Telangana
1	Institutional Member FY 2020-21	Department of Mechanical Engineering, IIT Tirupati, Tirupati, Andhra Pradesh	Represented by Dr. Ajay Kumar, Assistant Professor and Dr. Degala Venkata Kiran, Assistant Professor, IIT Tirupati

We welcome all new TSI Members and look forward to their active participation and contribution in TSI events and initiatives.

- *All Members are invited to send their publication materials, suggestions and feedback to Mr. A. K. Mehta, ED (TSI) at the email ID: office.tsi@tribologyindia.org*
- *Compiled by Mr. A. K. Mehta, ED (TSI) and Edited by Dr. Barun Chakrabarti, Vice President (TSI), on behalf of Tribology Society of India. This publication is for free circulation among TSI Members.*

