

First Announcement

IndiaTrib – 2019

10th International Conference on Industrial Tribology

Organized by

Department of Mechanical Engineering

Indian Institute of Science (IISc), Bangalore

1- 4, December , 2019



भारतीय विज्ञान संस्थान

Theme: Tribology for Society

under the aegis of



Tribology Society of India

(Affiliated to the International Tribology Council, UK)



IndiaTrib – 2019

10th International Conference on Industrial Tribology

Organized by

Department of Mechanical Engineering

(Platinum Jubilee – Established 1945)

Indian Institute of Science (IISc), Bangalore



Statue of Jamsetji Tata

The Indian Institute of Science (IISc)
Bangalore was established in 1909 by a visionary
partnership between the industrialist Jamsetji Nusserwanji Tata,
the Maharaja of Mysore, and the Government of India.



Introduction

Tribology, a multidisciplinary field of science and technology of interacting surfaces in relative motion, has assumed significant importance globally due to its potential to reduce the huge quantum of losses occurring through friction and wear across all the industrial sectors. The name “Tribology”, denoting friction, lubrication and wear related studies, was coined by Late Prof. H. Peter Jost in the year 1966.

Tribology Society of India (TSI) is a premier professional society set up with a vision to spread awareness and practice of Tribology all across India. To fulfill this mission, the Society has been organizing International Conferences on Industrial Tribology biennially in different parts of the country, to enable the practitioners of Tribology to discuss and showcase their work in various aspects of this multidisciplinary area.

The applications of the principles of Tribology are more evident in highly energy intensive industries like steel, cement, power and mining, where even an incremental saving can add a significant amount to the productivity and thereby profitability. Therefore, the theme of the present Conference has been chosen as “Tribology for Society”

About IndiaTrib-2019

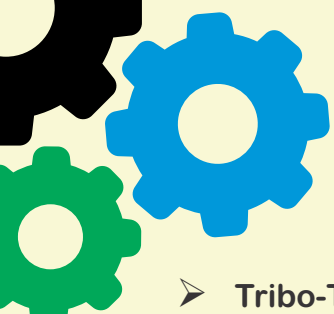
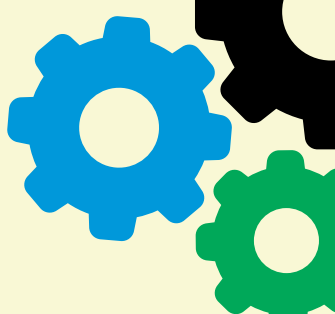
IndiaTrib - 2019 is the upcoming mega event in the series of the International Conferences on Industrial Tribology being organised by Tribology Society of India since the year 1997 when the first International Conference on Industrial Tribology was organised at Kolkata. Since then the story of International conferences has continued and the last in the series was the International Conference on Industrial Tribology 2017, organized again at Kolkata.

IndiaTrib – 2019 is the rechristened 10th International Conference on Industrial Tribology, since 1997, being organised by the Department of Mechanical Engineering of Indian Institute of Science (IISc), during 1-4 December 2019. The Department of Mechanical Engineering founded in 1945 is celebrating its Platinum Jubilee Year.

Scope of IndiaTrib-2019

IndiaTrib - 2019 will highlight various innovations, solutions and emerging technology trends in Tribology for enabling energy and life Improvements resulting in improved productivity and profitability in Industry. This conference, “Tribology for Society”, will have parallel technical sessions covering the following broad areas:

- Bearing & Gear Tribology
- Lubricants & Additives
- Contact Mechanics & Friction
- Wear Mechanisms
- Surface Treatment & Coatings

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- Tribo-Testing
 - Condition Based Maintenance System
 - Tribology in Design & Manufacturing
 - Tribology in Metalworking
 - Bio Tribology
 - Nano Tribology
 - Nuclear Tribology
 - Space Tribology
 - Automotive Tribology
 - Marine Tribology
 - Wind Power Tribology
 - Tribology in Renewable Energy
 - Innovations in Tribology

Call for Oral and Interactive Session Papers (Oral Short)

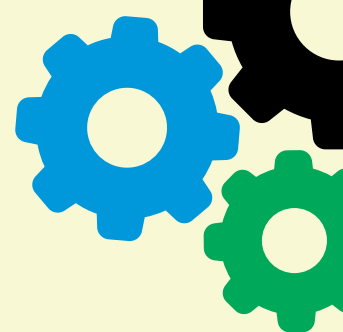
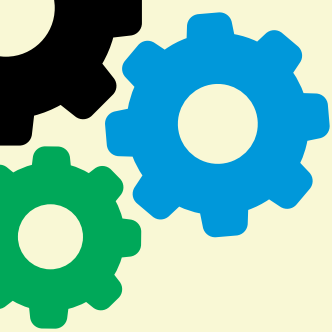
Engineers, scientists, academicians and practitioners in Tribology are invited to present technical papers in line with the theme of the Conference. Prospective contributors are requested to submit abstract of their paper in about 250 words latest by July 15, 2019 for review and selection. Abstracts should be submitted online through the TSI website www.tribologyindia.org

Authors of selected papers are required to submit extended abstract of their papers (up to 4 pages) latest by August 31, 2019. The guidelines for authors and template for the extended abstract and posters will be available for download from the TSI website.

IndiaTrib – 2019 will endeavour to give preference to papers which deal with new advancements, applications and developments in the aforesaid areas. All papers submitted for presentation in the Conference must be original and should not have been presented, published, or under consideration for publication / presentation in identical or substantially similar format. All papers will be subjected to review by a Technical Committee and the decisions will be conveyed to the authors accordingly. Authors of selected papers will be required to execute a Copyright Agreement in favor of TSI.

Important Deadlines for Technical papers

Receipt of abstract	: July 15, 2019
Acceptance of abstract	: within two weeks of submission
Submission of Extended Abstract	: August 31, 2019



Publication of IndiaTrib 2019 papers in Tribology Journals of Repute

All authors who have submitted technical papers for IndiaTrib 2019 may please note that following journals have agreed to publish papers from IndiaTrib 2019

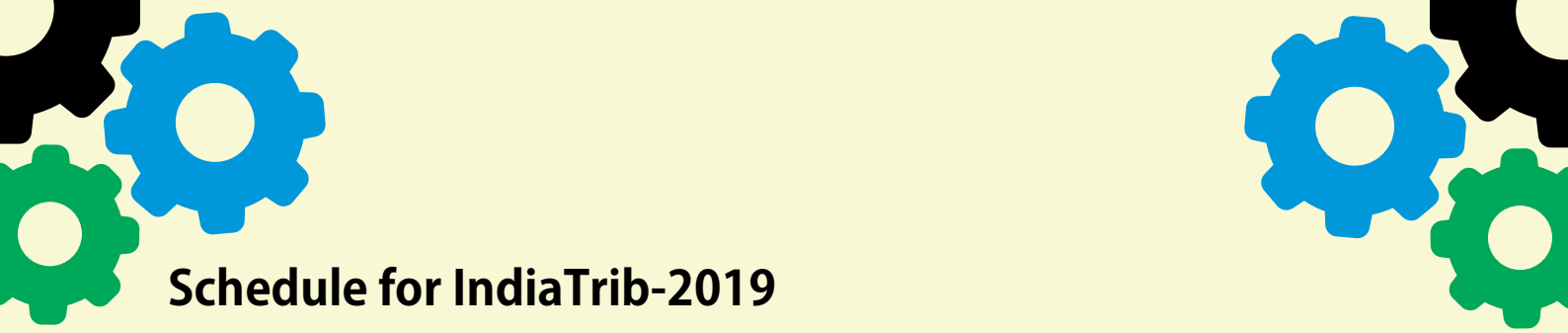
- 1) Wear
- 2) Tribology Online
- 3) Tribology Letters
- 4) Friction
- 5) IMechE – Part J
- 6) IJT of TSI

The papers will have to undergo the regular peer review process for acceptance. Depending on the response, some of the journals have agreed for a special issue. Please do follow the instructions given in the website for each of these journals when preparing the manuscript. The template given in the TSI website for preparing Research Papers will be useful.

Special Issues will be worked out with the Journals if enough numbers of papers get accepted in these journals.

Organising Secretary of IndiaTrib 2019 , Prof Satish Vasu Kailas, will be coordinating with these journal for the needful.





Schedule for IndiaTrib-2019

Education Courses

Following two educational courses have been planned as Pre-Conference Events, to be held on 1st December 2019 at the Venue of the Conference:

- 1) Basics of Tribology, and
- 2) Analytical Techniques and Condition Monitoring in Tribology

Details of these courses will be announced at a later date.

Technical Exhibition

With a view to highlight the advancements made in the area of Tribology, it is planned to organize a Technical Exhibition along with the Conference. Lubricant & Additive Suppliers, Equipment Manufacturers, Tribology Specialists, Service Providers, Technical Book Publishers and related agencies are invited to participate in the Technical Exhibition to highlight their products and services. Exhibition space of about 3.0 m x 2.5 m will be provided to each Exhibitor. A fee of Rs 75,000/- (US \$ 1500) plus GST as applicable (Currently @ 18 %) will be charged for each exhibition stall, which will be provided with adequate furnishing and basic illumination facilities. Each Exhibitor will be entitled to send two complimentary delegates to attend the Conference.

Business Meet

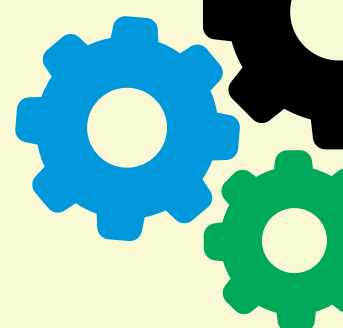
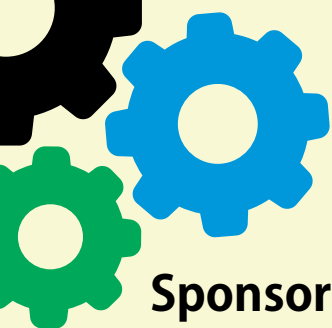
Manufacturers/ suppliers of equipment, lubricants, additives and service providers related to Tribology are invited to the Conference to project their products, services and innovations through multimedia presentation in the special sessions called Business Meet. A fee of Rs 50,000/- (US \$ 1000) plus GST as applicable will be charged for each presentation of 30 minutes duration. One complimentary delegate from each of the participating organizations will be allowed to attend the Conference.

TSI Awards

The best technical papers and exhibition stall will be selected by an Award Committee and will be awarded in the Concluding Session of the Conference. The awards will be given in the following categories:

- Best Oral Paper (Basic Research)
- Best Oral Paper (Industrial Application)
- Best Interactive Paper (Basic Research)
- Best Interactive Paper (Industrial Application)
- Best Exhibition Stall

Each award will carry a cash prize and a certificate of commendation.



Sponsorship and Advertisements

Souvenir, containing Conference details and informative articles, will be released during the Conference and will be provided to each registered delegate. Advertisements for the Souvenir can be booked at the following rates*:

Inside (Front/ Back) : Rs 50,000/- (US \$ 800)

Color Full Page : Rs 20,000/- (US \$ 350)

Black & White Full Page : Rs 15,000/- (US \$ 300)

*Plus GST as applicable (currently 18%)

The advertisement material is to be provided in a high-resolution, print-ready soft copy.

Conference Sponsorship

The Conferences organised by TSI in the past have always received significant support from various industries. These include practically every industry sector like Oil & Gas, Steel, Mining, Chemicals, Power, Engineering and Allied Industries, both from India and abroad. The sponsors get wide publicity and networking opportunities as part of the Conference.

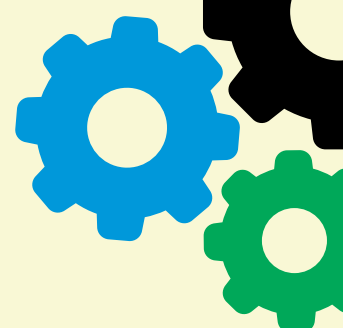
Reputed Companies, Organisations and Trade Associations are invited to join this International Event as Sponsors of the Conference. The details regarding various categories of sponsorship are given below.

Sponsorship	Indian (Rs in Lakhs)	Overseas (US \$)	Free Delegates	Free Colour (Full Page) Advt. in Souvenir	Publicity
Platinum	7.5	12000	6	Yes	Display of Company Logo
Diamond	5.0	10000	5	Yes	Display of Company Logo
Gold	3.0	7000	3	Yes	Display of Company Logo
Silver	2.0	5000	2		Display of Company Logo

Conference Registration Fee

The following Conference Registration Fees are payable by different categories of Delegates:





Category of Delegate	TSI Member*	Non Member*
Industry & Industrial R&D	Rs. 15000/-	Rs. 18000/-
Academia (Faculty)	Rs. 7000/-	Rs. 8500/-
Academia (Student)**	Rs. 4000/-	Rs. 5000/-
Overseas Delegate	US \$ 300	US \$ 350/-

*** Plus GST as applicable (currently 18%)**

Spouse registration at Rs 5000 for Indian delegates and USD \$ 100 for International delegates (No kit included).

****All categories of Delegates will be entitled to a discount of 10% on the listed fees for early registration with payment prior to September 30, 2019.**

The registration fee for the Conference will cover participation in Technical Sessions and Cultural Event; Conference Proceedings in soft form; Printed Materials; Conference Kit; Three Lunches /Banquet Dinner and Tea/ Coffee at the Conference venue during the conference program.

Education Course Fees

The following fees are payable for participation in the Pre-Conference Education Courses:

Students : Rs. 2000/- + GST as applicable (Current rate @18%)
Others : Rs. 4000/- + GST as applicable (Current rate @18%)

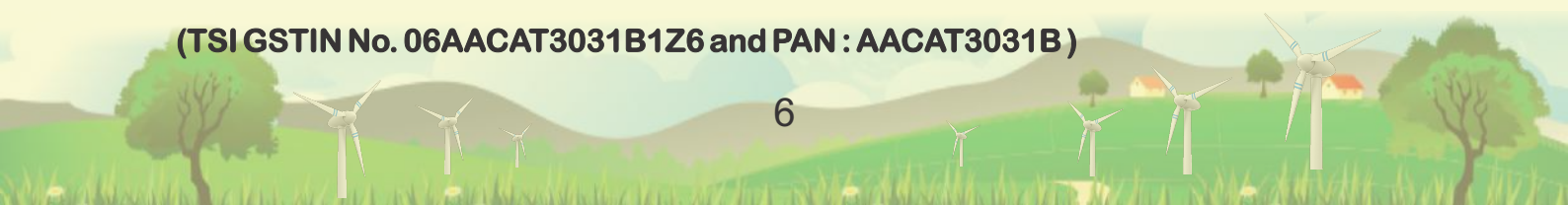
Delegates participating in both Education Course and the Conference will be entitled to a 10% discount on the total fees payable as per above rates.

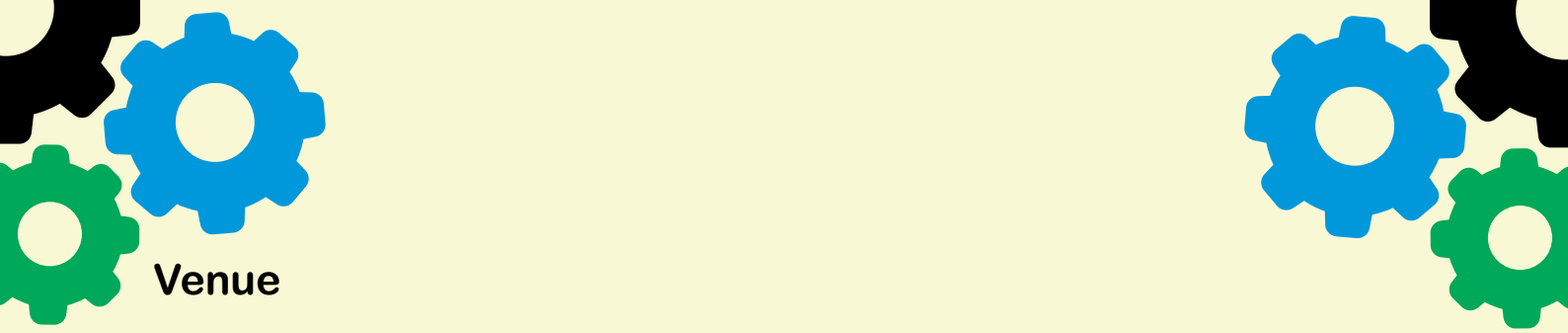
Payment Details

All payments related to Delegate Registration Fees, Sponsorship, Advertisements, Technical Exhibition, Business Meet, Education Course Fee etc., are to be made through crossed demand draft / cheque payable at par, drawn in favor of "Tribology Society of India" payable at IOC Complex, Faridabad. Money can also be transferred directly to the Conference Account as given below (please send proof of transfer of money):

A/c Name : Tribology Society of India
A/c No. : 31710524711
IFSC / NEFT Code : SBIN0010449
Swift Code : SBININBB381
MICR No. : 110002466
Bank & Branch : State Bank of India, IOC Complex Branch, Sector 13, Faridabad - 121 007, INDIA

(TSI GSTIN No. 06AACAT3031B1Z6 and PAN : AACAT3031B)





Venue

National Science Seminar Complex, IISc Bangalore

<http://www.csic.iisc.ernet.in/nssc.htm>

Cultural Program

A cultural event showcasing the rich artistic traditions of India will be organized during the Conference. More details will be shared in due course.

About Bengaluru

India's 'Silicon Valley' Bengaluru (also called Bangalore) is the capital of India's southern state of Karnataka. The center of India's high-tech industry, the city is also known for its parks and nightlife. Former royal residences include 19th century Bangalore Palace, modeled after England's Windsor Castle, and Tipu Sultan's Summer Palace, an 18th-century teak structure. Bangalore is the fifth-largest urban agglomeration in India by population (12.7 million, 2017).

Nearby places of tourist interest are Mysore (3.5 Hours from Bangalore), Ooty Hill Station (6 hours from Bangalore) and Hyderabad (7.5 hours from Bangalore) , besides a number of places of tourist interest locally.

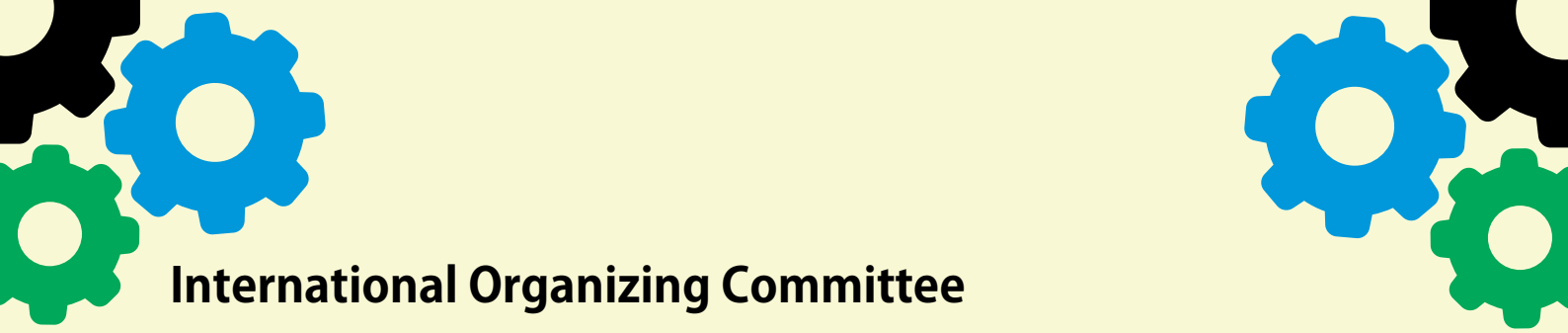
About Indian Institute of Science, Bangalore

Indian Institute of Science (IISc) is a public institute for research and higher education in science, engineering, design, and management. It is located in Bangalore, India, was established in 1909 with active support from Jamsetji Tata and H.H. Sir Krishnaraja Wodeyar IV, the Maharaja of Mysore. It is also locally known as the "Tata Institute". It was granted the Deemed University status in 1958.

Mechanical Engineering activities at the Indian Institute of Science commenced prior to the Independence, in 1945, with the establishment of the Department of Internal Combustion Engineering. The Mechanical Engineering section of Power Engineering Department followed suit in 1951, and later became a full-fledged Department. The Department of Internal Combustion Engineering merged with the Department of Mechanical Engineering in 1970. The classrooms, laboratories and offices of the department are located at the South-East end of the Campus in three buildings — the Power Engineering Building, the "TPS" Building and the New Mechanical Engineering Building.

Accommodation

In addition to limited accommodation at Institute Guest Houses, there are a number of budget and higher class hotels near the Institute campus. The details of these hotels etc will be provided in subsequent announcements (however, google can be of help)

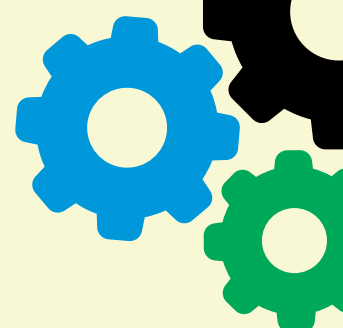


International Organizing Committee

- Ali Erdemir, Argonne National Laboratory, USA
- Ciulli Enrico, University of Pisa, Italy
- Fuadi Zahrul, Syiah Kuala University, Indonesia
- Horng Jeng-Haur, National Formosa University Taiwan
- Juliette Cayer-Barrioz, Ms, École Centrale de Lyon France
- Kalin Mitjan, University of Ljubljana, Europe
- Kailas Satish V., Organizing Secy. IndiaTrib - 2019
- Khatri O P, IIP Dehradun India
- Khonsari Michael, Louisiana State University, USA
- Liang Hong Ms, Texas A&M University USA
- Luo Jianbin, Tsinghua University, China
- Mazuyer Denis, École Centrale de Lyon France
- Nelias Daniel, INSA Lyon, Europe France
- Ramakumar SSV, Indian Oil R&D Centre, President TSI, Faridabad
- Roy Manish, DRML-DRDO Hyderabad India
- Robbins Mark, Johns Hopkins University USA
- SawaeYoshonori, Kyushu University, Fukuoka Japan
- Sinha K Sujeet, IIT Delhi India
- Spencer Nicholas, ETH Zürich UK
- Sugimura Joichi, Kyushu University Japan
- Syed Asif, Bruker Nano Surfaces, USA
- Umehara Noritsugu, Nagoya University, Japan

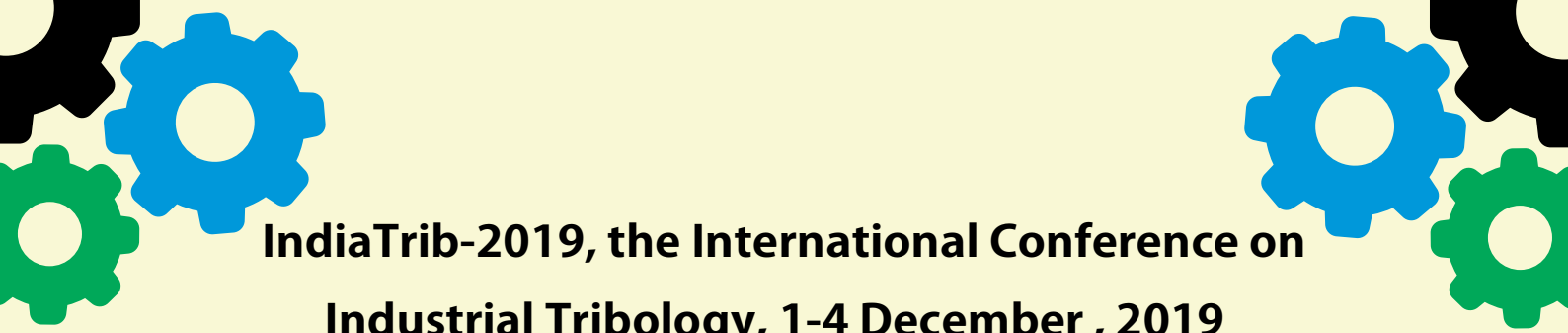
National Organizing Committee

- | | |
|---------------------|--|
| • Bajpai Vishal | : Hindustan Petroleum Corp. Limited, Mumbai |
| • Basu Bikramjit | : IISc Bangalore |
| • Banerjee Kushal | : HPCL, Mumbai |
| • Bhatnagar Pankaj | : Indian Oil, R&D Centre, Faridabad |
| • Bijwe J, Ms. | : ITMMEC, IIT Delhi |
| • Bobji M S | : IISc Bangalore |
| • Chakrabarti Barun | : L&T Hydrocarbon Engineering Mumbai |
| • Dube N. M. | : Ducom Instruments, Bangalore |
| • Durugkar S R | : L&T Hydrocarbon Engineering Mumbai |
| • Ganguli Debashis | : BPCL, Mumbai |
| • Ganpathi Ayappa | : IISc Bangalore |
| • Harinarain Ajay K | : Indian Oil, R&D Centre, Faridabad |
| • Harsha A P | : IIT BHU Varanasi |
| • Jayaram Vikram | : IISc Bangalore |
| • Kailas Satish V | : IISc, Bangalore Organizing Secy. IndiaTrib– 2019 |
| • Kumar M Mahendra | : Ultra Tech Cement |
| • Kumar Rajendra | : NIT Calicut |
| • Mahapatra R | : Indian Oil, R&D Centre, Faridabad |
| • Mehta A K | : ED TSI Faridabad |
| • Mukherjee Kamal | : Coal India Limited (Ex. GM), Chhattisgarh |
| • Pathak P | : RDCIS Ranchi |
| • Phalle V M | : VJTI Mumbai |
| • Prabhakaran Anand | : Tata Steel Jamshedpur India |
| • Ramakumar SSV | : Indian Oil R&D Centre, President TSI, Faridabad |
| • Ramesh C S | : Presidency University, Bangalore |
| • Rashingkar Sudhir | : RCG Instruments (India) Pvt. Ltd., Pune |



- Saxena Deepak : Indian Oil, R&D Centre, Faridabad
- Selvam D Sothi : Balmer Lawrie & Co. Kolkata
- Sharma Satish C : IIT Roorkee Uttarakhand
- Singh T : BPCL Mumbai
- Sinha Sujeet : IIT Delhi
- Sriganesh G : HPCL R&D, Mumbai
- Tiwari Mayank : IIT Patna
- Turaga Ram : IISc Bangalore





IndiaTrib-2019, the International Conference on Industrial Tribology, 1-4 December , 2019

Registration Form

(Please use separate form for each delegate. Copy of this form may be used)

Name.....

Designation.....

Organisation.....

Postal Mailing Address.....

Contact: Landline..... Mobile.....

Email.....

Category (Please tick mark) : Author ☐ Delegate ☐

Exhibitor ☐ Spouse ☐ Business meet ☐

Fee* of Rs.....US\$..... is

paid by Cash/Draft/Cheque/Bank Transfer No..... .Dated

:..... on Bank.....

(* all fee payments should also include the applicable GST (currently 18%)

(Draft/ Cheque should be in favour of “Tribology Society of India”, payable at IOC Complex, Faridabad . Bank transfers (ECS) can be made to the following account) :

A/c Name : Tribology Society of India
A/c No. : 31710524711
IFSC / NEFT Code : SBI N 0010449
Swift Code : SBI NIN BB381
MICR No. : 110002466

Bank &Branch : State Bank of India, IOC Complex Branch,
Sector 13, Faridabad – 121007, INDIA

(TSI GSTIN No.: 06AACAT3031B1Z6 and PAN No.: AACAT3031B)

N.B.: Please register before 30th September 2019, and avail of 10% discount on registration fees.

Interested persons can also register themselves online through TSI website
www.tribologyindia.org.



Invited Speakers for IndiaTrib - 2019

We have a galaxy of tribology experts who have confirmed their participation as Plenary and Keynote Speakers. These Include (in alphabetical order):



Ciulli Enrico
University of Pisa
Italy



**Fuadi Zahrul
Syiah**
Kuala University
Indonesia



Horng Jeng Haur
National Formosa University
Taiwan



Juliette Cayer-Barrioz
École Centrale de Lyon
France



Khatri O. P.
IIP Dehradun
India



Khonsari Michael
Louisiana State University
USA



Liang Hong
Texas A&M University
USA



Luo Jianbin
Tsinghua University
China



Mazuyer Denis
École Centrale de Lyon France



Nelias Daniel
INSA Lyon
France



Robbins Mark
Johns Hopkins University
USA



Roy Manish
DMRL -DRDO
Hyderabad





Sawae Yoshonori
Kyushu University
Japan



Sinha K. Sujeet
IIT Delhi
India



Spencer Nicholas
ETH Zürich
Switzerland



Sugimura Joichi
Kyushu University
Japan



Syed Asif
Bruker Nano Surfaces
USA



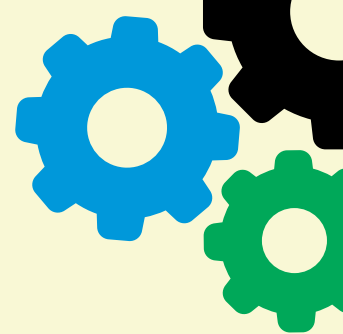
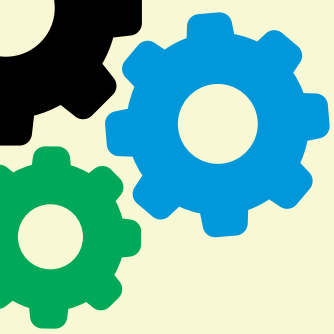
Umehara Noritsugu
Nagoya University
Japan

Mailing Address :

Satish Vasu Kailas, Ph.D.
Organising Secretary
Professor & Vice President, Tribology
Society of India,
Surface Interaction and Manufacturing
Laboratory
Department of Mechanical Engineering
Indian Institute of Science
Bangalore 560 012, INDIA

Ajay Kumar Harinarain
Secretary,
Tribology Society of India
C/o Indian Oil R&D Centre,
Sector-13, Faridabad-121 007,
Haryana, India

@ email @
indiatrib19.conf@iisc.ac.in / indiatrib19@tribologyindia.org



Indian Institute of Science Bangalore

www.tribologyindia.org

