

# TRIBOLOGY-A KEY ENABLER FOR INDUSTRIAL GROWTH



th  
International  
Conference  
on Industrial  
Tribology

Vedic Village Spa Resort, Rajarhat, Kolkata  
December 6-9, 2017



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



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[www.tribologyindia.org](http://www.tribologyindia.org)

## Introduction

Tribology, the multidisciplinary 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 March 1966. The 50<sup>th</sup> Anniversary of Tribology was celebrated recently in March 2016 at the Institution of Mechanical Engineers, London, UK followed by a reception at the Buckingham Palace hosted by HRH the Duke of Edinburgh. India was represented in this program by Tribology Society of India (TSI).

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 organising International Conferences on Industrial Tribology (ICIT) 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 **9<sup>th</sup> International Conference on Industrial Tribology (ICIT-2017)** is being organized by Balmer Lawrie & Co Ltd, under the aegis of TSI. The event will be held during 6 – 9 December, 2017 in Kolkata, India.

The applications of the principles of Tribology can be realized in energy intensive industries. The benefits are more evident in highly energy intensive ones, like industries sector (steel, mining, cement, power etc.), where even incremental savings in energy consumption can add a significant amount to the profitability. Besides, the improvement in the life of components through better materials or design / operational / maintenance improvements can yield a lot of benefits. Therefore, the Theme of the present Conference has been chosen as "Tribology – A Key Enabler for Industrial Growth". The theme is more relevant since Kolkata is situated in eastern part of India where there is a concentration of many heavy industries having high energy intensity. Researchers and practitioners are also encouraged to submit papers related to the theme of the conference.





## Scope of International Conference on Industrial Tribology 2017

ICIT-2017 will highlight various innovations, solutions and emerging technology trends in Tribology for enabling energy and life improvements in Industry. The Theme Session will focus on **"Tribology – A Key Enabler for Industrial Growth"**. To enrich the content of this Conference, parallel technical sessions have also been planned covering following broad areas:

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





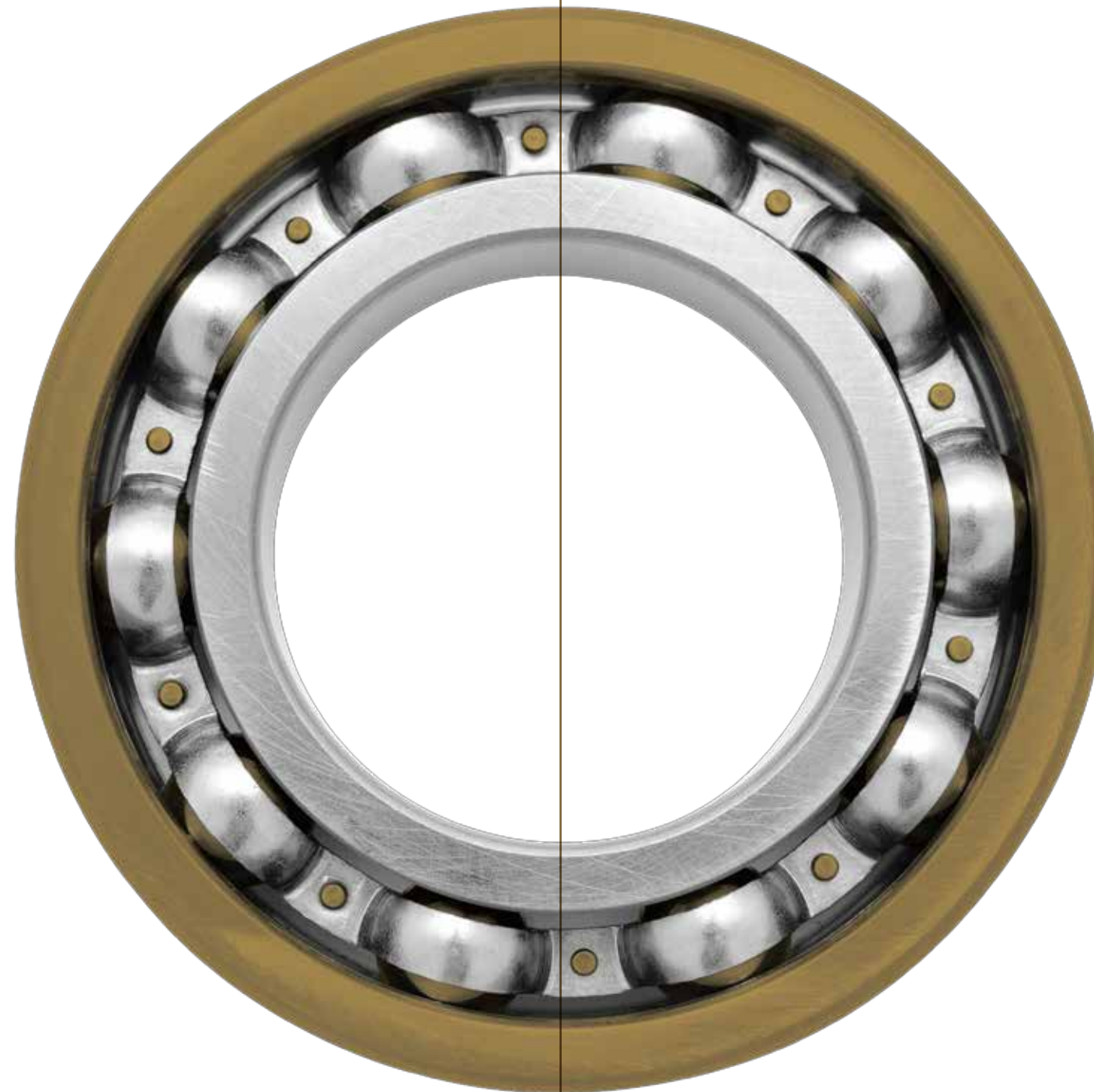
## Call for Papers

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 31<sup>st</sup> May 2017 for review and selection. Abstracts should be submitted online through the TSI website [www.tribologyindia.org](http://www.tribologyindia.org). Contributors of the selected papers would be required to submit manuscript of the extended abstract (up to 4 pages) latest by 31<sup>st</sup> August 2017. The guidelines for authors and template for the extended abstract will be available for download from the TSI website.

ICIT-2017 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 favour of TSI.

Important Deadlines for Technical papers

- Receipt of abstract  
31<sup>st</sup> May, 2017
- Acceptance of abstract  
30<sup>th</sup> June, 2017
- Submission of Extended Abstract  
31<sup>st</sup> August, 2017



## Schedule

### Education Courses

Following two educational courses have been planned as Pre-Conference Event, to be held on 6<sup>th</sup> December 2017 at the Venue of the Conference:

- 1) **Basics of Tribology**
- 2) **Tribology of Heavy Industries**

Details of these courses will be announced at a later date and will be made available on TSI website.

### Technical Exhibition

With a view to highlight the advancements made in the area of Tribology, it is planned to organise 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 nominal fee of Rs 75,000/- (US \$ 1500) plus Service Tax as applicable (Currently @ 15%) 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 nominal fee of Rs 50,000/- (US \$ 1000) plus Service Tax 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 Poster Paper (Basic Research)
- Best Poster Paper (Industrial Application)
- Best Exhibition Stall

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

## Sponsorship and Advertisements

A 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 30,000/- (US \$ 700)  
Cover Page (Colour)
- Colour Full Page : Rs 20,000/- (US \$ 500)
- Black & White Full Page : Rs 15,000/- (US \$ 350)

\* plus Service Tax @15%

The advertisement material is to be provided in a high-resolution, print-ready soft copy by 30<sup>th</sup> September, 2017.

### 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:

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

## Conference Fees

### Delegate Registration Fees

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. 3000/-	Rs. 4000/-
Overseas Delegate	US \$ 500	US \$ 600

\* plus Service Tax as applicable (currently 15%)

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 30<sup>th</sup> September 2017.**

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 /Dinners 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/- + Service Tax @15%

Others : Rs. 4000/- + Service Tax @15%

**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 favour of "**Tribology Society of India**" payable at New Delhi/Faridabad. Money can also be transferred directly to the Conference Account as given below:

A/c Name : Tribology Society of India  
A/c No. : 31710524711  
IFSC / NEFT Code : SBI N 0010449  
MICR No. : 110002466  
Bank & Branch : State Bank of India, IOC Complex Branch,  
Sector 13, Faridabad – 121007, INDIA



## VENUE

### 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 Kolkata

Kolkata, India is currently the third-most populous city in India after Delhi and Mumbai, situated in the East Indian state of West Bengal. It was known as Calcutta earlier and was the capital of British India during 1700-1912. Kolkata has a wide variety of architecture largely influenced by the conscious intermingling of Neo-Gothic, Baroque, Neo-Classical, Oriental and Islamic schools of design. It is situated by the river Hooghly. It is known for its cultural events, artistic talent and also for heavy industries situated in the region.

The city of Kolkata is well connected with rest of the country and world by road, rail and air transport. International flights connect Kolkata with many European, Asian and American cities. Major airlines fly to Kolkata directly or via other Indian Cities.

### Local Sightseeing

Conference delegates will have the opportunity to enjoy local sightseeing in and around the beautiful city of Kolkata.

More details can be shared with prospective participants on request.

### The Venue of the Conference

Vedic Village Spa Resort  
Shikharpur, Bagu,  
Rajarhat, Kolkata – 700 135;  
West Bengal, India.  
Tel : +91 33 6622 9900  
Website : [www.thevedicvillage.com](http://www.thevedicvillage.com)

Vedic Village Spa Resort is a hidden gem, nestled in the lap of nature just 20 minutes away from the international airport in Kolkata, India. Built horizontally in the authentic architecture of Bengal villages, the world-class luxury resort blends in completely with the uniqueness of the landscape. It combines tremendous natural beauty and outdoor fun with unbeatable indoor luxury. A boutique getaway sprawling over 150 acres of fertile farmland greenery, sparkling lakes, coconut groves and a wealth of flora; it is a haven for migratory birds, butterflies, squirrels and exotic species of plants.

### Accommodation

Accommodation at the Vedic Village Spa resort is available on request. Various categories of rooms on single, double and triple occupancy can be arranged at the special room tariffs. The delegates should indicate their requirements at the time of registration.

Room Rates for Standard Rooms

Single occupancy @ Rs. 4500/- + applicable Taxes on CP ;

Double occupancy @ Rs. 5000/- + applicable Taxes on CP &

Triple occupancy @ Rs. 5500/- + applicable Taxes on CP.

## 9<sup>th</sup> INTERNATIONAL CONFERENCE ON INDUSTRIAL TRIBOLOGY (06-09 DECEMBER, 2017), Kolkata

### Registration Form

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

Name.....

Designation.....

Organisation.....

Mailing address.....

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

Email.....

Category (Please tick mark) Author  Delegate  Business meet

Exhibitor  Spouse

Fee\* of Rs.....US\$.....is  
paid by Cash/Draft/Cheque/Bank Transfer No.....Dated:.....on  
Bank.....

(\* all fee payments should also include 15% service tax )

(Draft/Cheque should be in favour of "Tribology Society of India", payable at Faridabad / New Delhi, or bank transfers can be made to the following account)

A/c Name : Tribology Society of India

A/c No. : 31710524711

IFSC / NEFT Code : SBI N 0010449

MICR No. : 110002466

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

*N.B.: Please register before 30<sup>th</sup> September 2017, and avail of 10% discount on registration fees.*

*Interested persons can also register themselves online through TSI website [www.tribologyindia.org](http://www.tribologyindia.org).*

### Mailing Address:

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Email: [icitconference2017@gmail.com](mailto:icitconference2017@gmail.com) / [info@tribologyindia.org](mailto:info@tribologyindia.org)

### Mr Ajay Kumar Harinarain

Secretary, Tribology Society of India

Indian Oil R&D Centre, Sector-13 Faridabad-121007, Haryana, India

Email: [icitconference2017@gmail.com](mailto:icitconference2017@gmail.com) / [info@tribologyindia.org](mailto:info@tribologyindia.org)