

**Hari Shankar Singhania Elastomer & Tyre Research Institute (HASETRI)
presents**

**“Seminar on Vibration and Acoustics Engineering –
Introduction and Industrial applications”**

*In collaboration with SAE India Bengaluru Section and Siemens Industry Software
India*

Date: July 10th, 11th, 12th, 2019

Course Venue: Country Inn & Suites by Carlson, Plot No. 345/A, Hebbal Industrial Area, Near Infosys Campus, Mysuru, Karnataka 570016, (Ph.) 0821 664 2000.

It's a noisy world out there, so much, that noise has become an integral part of our modern lives. With the introduction of newer products that are aimed at making our lives easier, more comfortable and enjoyable, noise levels are set to increase further. As manufacturers of products, we must take interest in the field of vibration and acoustics actively, while also striving to optimize its level more effectively. By doing this, one can successfully comply with local and international standards, understand what prospective customers 'like' and 'dislike' about products, avoid causing hearing damage to end-users, as well as gain a competitive edge over other players, among other advantages.

Join us for the seminar to get an introduction to the fundamentals of acoustics, vibration, and durability phenomena that are important during the development of product. Understanding the basic phenomena is key while designing today's competitive products, especially when dealing with unexpected noise, vibration, or fatigue related issues. Addressing such issues requires an in-depth knowledge of the theory on physical phenomena, as well as an understanding of the source-transfer-receiver approach that extends deep insights into the product, further helping in pointing at the root causes that design right-first-time approach can be successfully adopted.

Who should attend?

1. Stakeholders intending to solve issues related to acoustics (noise) and/or vibration efficiently
2. Stakeholders who are new to the concept of noise and vibration engineering, and would like to understand basic theoretical & practical concepts
3. Engineers working in the simulation & test domains, and would like to understand theoretical concepts
4. Researchers and Academicians who would like to understand the industrial/practical noise & vibration engineering

SEMINAR AGENDA

Day 1, 10th July 2019, Wednesday		
Time	Session topic	Speaker
0930 hrs	Welcome & Introduction to the course	S Kumaraswamy
1000 hrs	Introduction to Vibrations	Frank Demesmaeker
1100 hrs	Coffee/Tea break	
1130 hrs	Vibration Measurements – Sensors & Instrumentation	S Kumaraswamy
1215 hrs	Review of DSP basics	Frank Demesmaeker
1300 hrs	Lunch break	
1400 hrs	Theory: Vibration Signal (Signature Testing) Analysis	S Kumaraswamy
1430 hrs	Demonstrations: Signature Testing & Analysis	Siemens Team
1530 hrs	Coffee/Tea break	
1600 hrs	Theory: Modal Testing and Analysis	Frank Demesmaeker
1700 hrs	Demonstrations: Modal Testing and Analysis	Siemens Team
1800 hrs	Day 1 concludes	
Day 2, 11th July 2019, Thursday		
0930 hrs	Introduction to Acoustics	Frank Demesmaeker
1030 hrs	Acoustic Measurements – Sensors & Instrumentation	S Kumaraswamy
1100 hrs	Coffee/Tea break	
1130 hrs	Role of Elastomeric materials in NVH for both Automotive & non-Automotive industries	Dr. R. Mukhopadhyay
1300 hrs	Lunch break	
1400 hrs	Theory: Sound Pressure, Sound Intensity, and Sound Power	Frank Demesmaeker
1500 hrs	Drive to HASETRI facility	
1530 hrs	Demonstrations: Sound Pressure, Sound Intensity & Sound Power	Siemens Team
1730 hrs	Day 2 concludes	
Day 3, 12th July 2019, Friday		
0930 hrs	Advanced Acoustics – Sound Quality Engineering and Demo	S Kumaraswamy
1015 hrs	Advanced Acoustics – Sound Source Localization and Demo	Frank Demesmaeker
1100 hrs	Coffee/Tea break	
1130 hrs	Advanced Acoustics – Transfer Path Analysis and Demo	Frank Demesmaeker
1200 hrs	Recent trends in Noise & Vibration Simulations	RajendraDongale
1300 hrs	Lunch break	
1500 hrs	Vibration & Acoustics: Applications & Case Studies	S Kumaraswamy Dr.Niraj Kumar Jha
1530 hrs	Closing session –Q&A, Feedback etc.	

SPEAKERS



Dr. R. Mukhopadhyay, Director & Chief Executive, HASETRI, Mysuru



Dr. Niraj Kumar Jha, Sr. Engineer, HASETRI, Mysuru



Frank Demesmaeker, Technical Expert and Business Development Manager, Siemens Industry Software



S Kumaraswamy, Technical Manager – Test and ECS, Siemens Industry Software



Rajendra Dongale, Sr. Application Expert, Siemens Industry Software

About HASETRI

Hari Shankar Singhania Elastomer and Tyre Research Institute (HASETRI) is India's first and foremost independent Research and Testing Center, which fulfils the Nation's need for developing newer and better technologies for Elastomer and Tyres. The primary goal of this institute is to foster development and evolution of new technologies for Rubber and Allied Industries for domestic and international markets as also to develop technical manpower for the industry. This institute was established and Tyre Research Institute is recognised under SIRO (Scientific and Industrial Research Organisation) by the Department of Scientific & Industrial Research (DSIR), Govt. of India. HASETRI is also acknowledged by the Indian Institute of Technology (IITs) and other universities for registration leading to higher studies.

<http://www.hasetri.com/>

About SIEMENS Industry Software

Siemens PLM Software, a business unit of Siemens Digital Factory Division, is a leading global provider of software, systems and services in the areas of managing the product lifecycle (PLM, Product Lifecycle Management) and management of industrial operations (MOM, Manufacturing Operations Management), with over 15 million licenses sold and 140 000 customers worldwide. Headquartered in Plano (Texas), Siemens PLM Software works collaboratively with clients to offer industrial software solutions that help companies worldwide to achieve a sustainable competitive advantage by realizing their important innovations. **LMS Testing Solutions** one of the product line with Siemens PLM gives you access to a complete platform of test-based engineering solutions for rotating machinery, structural dynamics, acoustics, durability and environmental testing, vibration control and data management. Testing departments around the world count on LMS Testing Solutions to increase test efficiency and productivity, maintain the utmost quality and ultimately achieve a higher return on investment from existing testing facilities.

<https://www.plm.automation.siemens.com/global/en/products/simulation-test/testing.html>

About SAEINDIA Bengaluru Section

SAEINDIA Bengaluru Section is one of the four sections of SAEINDIA – which is an affiliate society of SAE International, registered as a not for profit engineering and scientific society dedicated to the professional advancement of the mobility community in India. As an individual member driven society of mobility practitioners, SAEINDIA comprises members, which includes engineers, executives from industry, government officials, academics and students. SAEINDIA Bengaluru Section, which covers the Karnataka region, conducts and supports various professional, academic and collegiate events, catering to the needs of the mobility world, with a special focus on Automotive and Aerospace Industry. The section has been organising various exhibitions, conferences and professional development programs from many years, but in recent past, it has also started incubating various collegiate competitions like REEV (Hybrid Four-Wheeler), EGA (Hybrid Two-Wheeler) and Manovegam (Aero competition).

About Mysore

One of South India's most famous tourist destinations, Mysuru (which recently changed its name from Mysore) is known for its glittering royal heritage and magnificent monuments and buildings. Its World Heritage-listed palace may be what brings most travellers here, but it's also a thriving centre for the production of premium silk, sandalwood and incense. The cultural ambience and achievements of Mysore earned it the sobriquet Cultural capital of Karnataka.

Mysore is well connected by train and buses from Bengaluru and Chennai. Nearest airport is Bengaluru airport and Mysore is 140kms from Bengaluru and take approximately about 3 hours of travel time.





Payment Details:

***Course fee** : Rs. 11,800.00 (Rs. 10,000.00 + Rs. 1,800.00 as 18% GST)
(per participant) USD 236.00 (USD 200.00 + USD 36.00 as 18% GST)
Note : Special Discount of 10% in Course fee for SAE Members
[Membership details (No. and Expiry date) to be provided]

Payment may be deposited in our Bank Account through NEFT / RTGS, with intimation to us with details / Proof by e-mail.

Contact Details:

Hari Shankar Singhania Elastomer & Tyre Research Institute (HASETRI)
Raghupati Singhania Centre of Excellence,
437, Hebbal Industrial Area, Mysore - 570016, Karnataka

Cell : +91-9414786040 / Ph. : 08213078504 ; Email: asifmd@jkmil.com / library@hasetri.com

Bank Details:

Beneficiary Name (**Current Account**): Hari Shankar Singhania Elastomer & Tyre Research Institute (HASETRI)
GSTN:29AAACH8878G1Z1 ; **SAC Code:** 998346
Bank Account No.:6442442284
IFSC Code: IDIB000M048 ; **Bank Name:** Indian Bank
Branch: Mysore (Karnataka)
Bank Address:No. 57/4-9, R.S.Plaza, 1st Floor, Vinoba Road, Gandhi Square, Mysore - 570001, Karnataka, INDIA

Alternately, Crossed Demand Draft / Multicity Cheque may be drawn in favor of: **Hari Shankar Singhania Elastomer & Tyre Research Institute.**

Payment Terms : Full Advance

Logistical Details :

Accommodation (at Course Venue) :

Country Inn & Suites by Carlson

Plot No. 345/A, Hebbal Industrial Area, Near Infosys Campus, Mysuru, Karnataka - 570016 (India)

(Ph.) : 0821 664 2000 ; Duty Manager : 97427 72777

*Negotiated Price (including Complimentary Breakfast) :

Single Occupancy : Rs. 2500 + Tax

Double Occupancy : Rs. 3200 + Tax

*** (Accommodation Charges to be borne by the Guest)**

Country Inn is located at a distance of around 10km from Mysuru railway station & bus station.