

Complimentary 1 year SAEINDIA membership for non-member participants

Special discount on Group Booking (minimum 5 attendees for same session 10% Discount)

# **TOPTECH Automotive Acoustics**

# **Two Days Workshops by SAEISS**

Trainer: Dr. M. Subramanian м.е., Ph.D Professor at PSG College of Technology, Coimbatore

# Date: 1<sup>st</sup> & 2<sup>nd</sup> August 2014



#### Venue:

SAEINDIA Southern Section Block-1, Modules 29 & 30, SIDCO Electronic Complex Thiru-Vi-Ka Industrial Estate, Guindy, Chennai-600032 Phone: 044-42188651-52 Mobile: +91-90430 01718 E-mail Id: toptech@saeiss.org Website: www.saeiss.org

# **Course Content**

#### Day 1

Session 1:

- Introduction and importance
- Basics of Acoustics
- Glossary
- Automotive noise sources
- Interior and exterior noise targets

#### Session 2:

- Measurement and behaviour of sound
- Sound level and intensity meters
- Octave scales and decibel arithmetic
- Near field, far field and free field measurement

#### Session 3:

- Air intake and exhaust system noise
- Intake noise control –case study
- Snorkel and resonators

#### Day2

Session 4:

- Exhaust noise control
- Tyre noise control
- Interior noise assessment and control

#### Session 5:

- Transmission loss calculations
- Bonnet hood liner transmission loss estimations and design
- In-cabin noise estimation and minimization

#### Session 6:

- Automotive material for noise reduction
- Acoustic textiles and absorptive materials
- Firewall design for noise control

# **About the Course**

Automotive Acoustics and noise control is a very significant field of automotive research. Similar to exhaust emission norms noise pollution norms are also enforced strictly in abroad. Hence it becomes mandatory to design the vehicle noise pollution compliant. Unfortunately in India only few institutions teach and research in this area which is grossly insufficient in catering the need for talented NVH engineers. This course is aimed at bridging this gap. Fundamentals of sound, measurement and noise control technologies will be discussed.

#### **Benefits of attending the Course**

- > To learn the fundamentals of sound, measurements and characterization.
- To learn noise reduction strategies
- To learn design for noise control
- > To learn noise control techniques through simple case studies.
- To learn design of automotive panels for noise control

### **Learning Objective**

- Domain knowledge on automotive noise control
- To understand fundamentals of engineering acoustics
- Vehicle and component design for noise control

#### **Course prerequisites**

Participants should have an undergraduate/ postgraduate degree in engineering or equivalent experience/ knowledge.

#### Who should attend?

This course is designed to assist individuals in various industries including automotive, aerospace engineering. Engineering graduates are invited to enrich their knowledge in this emerging technology. Practicing engineers in various automotive industries can attend. Company executives, engineering managers and engineers will find the course relevant and informative.

#### **Course Date & Time**

**Automotive Acoustics** 

1<sup>st</sup> & 2<sup>nd</sup> August 2014

#### Start: 9:00 am to 5:00 pm

## Facilities provided during course

- Networking Tea/Snacks
- Networking Lunch
- Delegate Kits

# How to enroll Fee Structure (Two days)

Non-Member	INR 13000/-	Last date of Registration 30 <sup>th</sup> July 2014
Member	INR 10000/-	
Faculty Advisor	INR 4000/-	
Registration fee for two	o days	

- Admissions would be on first come first serve basis and will be strictly through enrolment Procedure
- Limited seats per batch
- Special discount to Teaching Faculty advisor
- Special discount on group booking (minimum 5 attendees for same session- 10% Discount)

Pay course fee through DD/Cheque or Transfer to our account

Name of the account holder: SAEINDIA Southern Section Toptech Account No. : 32506111653 Bank Name : State Bank of India Branch Name : Kottur, Chennai IFSC Code : SBIN0001669

#### **Enrollment Procedure**

- Send us following details to toptech@saeiss.org for registration
- Registration form enclosed or Click Here

#### **Course Instructor:**

#### Dr. M.Subramanian M.E., Ph.D

Dr. M.Subramanian is an automobile engineer having a rich blend of experience in both automotive industries and academics. He obtained UG and PG degrees in automobile engineering in 1988 and 1991 respectively. He got Ph.D from IIT-M in the area of composite materials in the year 1997. Then he was working for M/s Mahindra and Mahindra Ltd., Nasik as R&D Asst. Manager for the period of two years. Also has worked as a consultant at M/s Satyam Computer Services Ltd., Bangalore for the period of five and half years. He has also worked as Head of the department of Automobile engineering, Dr. Mahalingam College of engineering and Technology, Pollachi. Currently he is working as Professor in the department of automobile engineering , PSG College of Technology, Coimbatore. He has published many international journal papers. He has got a patent for the development of novel sound absorbing glass wool batt for automotive applications in the year 2001.

# **About SAEINDIA Southern Section**

SAEINDIA Southern Section is a premier society that serves the cause of mobility engineering. It is a unique society that includes professional engineers who serve different OEMS and Suppliers, academia as well as budding engineers (students) who aspire to be part of the professionally attractive field of mobility engineers. We believe that Mobility Engineering is a knowledge rich field and that learning and sharing can be fun and rewarding. To this end, SAEISS organises several events throughout the year, runs programmes that enrich and engage and conducts lectures and symposia. It is a part of SAEINDIA.

SAEINDIA is a Premier Professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self-propelled vehicles and systems that move in land, sea, air and space. It is an affiliate society of SAE International which is head quartered in USA and has a glorious record of over 100 years of service to the mobility community. SAEINDIA works closely with other fraternal societies such as Society of Indian Automobile Manufacturers (SIAM), Automotive Component Manufacturers of India (ACMA) and American Society of Engineers of Indian Origin (ASEI) for spreading knowledge and relevant information to a wider cross section of the Indian community. It is also a member of International Federation of Automotive Engineering Societies (FISITA)

#### **Up-Coming Toptech**

- 1. Air Brake System design for medium and heavy commercial vehicles August 2014
- 2. Hydraulic Brake System design for light commercial vehicles August 2014
- 3. Surface Engineering August 2014





https://www.facebook.com/saeiss

http://www.linkedin.com/profile/view?id=323101820&trk=nav\_responsive\_tab\_profile\_pic



Further pls contact:

S. Ilangovan, TopTech Executive

**SAEINDIA Southern Section** 

Mobile No: 9043001718