

## About the Course

Tighter emission norms established for vehicles on the Indian roads over the last decade and the next have created a need for more sophisticated engine and after-treatment management systems. It used to be that Indian OEMs were simply users of the EMS (Engine Management Systems) technology that is imported predominantly from the western world. Over the last few years there has been a shift in this trend and many Indian OEMs are now in the process of internalizing the power-train controls technology knowledge so future emission programs can result in the most optimized overall system at the right price/performance point. This course is aimed at professionals in the Diesel power-train industry who are either involved in such development work. It covers the basics of subsystems that make up the engine and after-treatment management platform in a Diesel system and also provides additional information on what will be available in the near future.

## Programme

### Day 1: (Dec 11th 2009)

#### Morning

- ✚ Diesel engine and After-treatment Control – Big Picture
- ✚ Engine torque management and fuel system controls

#### Afternoon

- ✚ EGR control
- ✚ Charging systems control

### Day 2: (Dec 12th 2009)

#### Morning

- ✚ Diesel after-treatment concepts and controls

#### Afternoon

- ✚ On Board Diagnostics – A Primer
- ✚ Future EMS trends

Note: Registration starts at 8.45 AM

## Speaker

### Dr. Anupam Gangopadhyay

Dr. Anupam Gangopadhyay is Head of Controls at Automotive Infotronics Private Limited (A joint venture between Ashok Leyland and Continental) and has more than twelve years of experience in the Diesel Systems area. Prior to taking up this position in India he was in the US where he worked at various divisions of General Motors for ten years and was the global leader for the development of in-house diesel controls functions for GM's internal diesel ECU. He had also spent two years at Southwest Research Institute in San Antonio, Texas in the Automotive division before joining General Motors. Dr. Gangopadhyay has a B. Tech (IIT, Kharagpur), M.S. (University of New Hampshire, US), & PhD (Purdue University, US). Dr. Gangopadhyay has eighteen US and European patents in the field of engine and powertrain control.

### Dr. Uwe Lingener

Dr. Uwe Lingener is project manager at Continental Automotive GmbH in the Powertrain – Engine Systems Division dealing with Diesel Systems and has almost twenty years of experience. He is currently working on a Best Cost Diesel system. He has handled Diesel as well as CNG/LPG systems in the past. Prior to taking up this position he worked at Woodward Governor GmbH, Germany for development, design and testing of electronic and conventional Fuel Injection systems for diesel-engines with 100kW-1000 kW per cylinder. Dr. Lingener has also worked as Scientific assistant for research and education at Otto-von-Guericke-University Magdeburg. Dr. Lingener has a B.E and a Doctor of engineering (Technical University, Magdeburg).

### Mr. S. T. Venkatesan

S.T. Venkatesan is Engineering Head – Engine Systems (Diesel and Gasoline) dealing with system integration, fuel components and electronics at Continental Automotive Systems, Bangalore with twelve years of experience. Prior to taking up this position he worked at Delphi – TVS Diesel Systems as combustion development / application engineering for Common Rail fuel injection systems. Mr. Venkatesan has B.E (Annamalai University) and an M.Tech in Automotive Engine Technology (IIT Madras).

## TOPTECH

on

# Diesel Engine and After-treatment Controls – Today's Technology and Future Trends

Conducted by

**Dr. Anupam Gangopadhyay,**  
**Automotive Infotronics Private Limited**  
**Dr. Uwe Lingener,** Continental  
**Mr. S. T. Venkatesan,** Continental



Organized by :

# SAEINDIA

**TOPTECH**  
On  
**Diesel Engine and After-treatment Controls – Today's Technology and Future Trends**

**11th and 12th December 2009**  
at  
**Chennai**

We confirm the following will attend the above Seminar :

Name	Designation
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**Signature:**

**Name & Designation:**

**Company:**

**Email address:**

Please fax/email/post the registration form duly filled, on or before 7<sup>th</sup> December 2009 to:

**N. Swaminathan**

**Toptech Program Executive**

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[memberservices@saeiss.org](mailto:memberservices@saeiss.org)

**Who should attend?**

The course is intended primarily for mechanical/control systems engineers or other automotive engineers with prior experience with some aspect of engine or after-treatment development in the engine or chassis dynamometer labs. Engineers working in the allied controls departments that have traditionally helped the engine/after-treatment development teams can also benefit from this course.

**Registration fees**

Rs. 12,000 for Non-Members of SAEINDIA  
Rs. 9,000 for Members of SAEINDIA  
Rs. 7,000 for Faculty Members of SAEINDIA  
Rs. 5,000 for Student Members of SAEINDIA

**Mode of payment**

Demand Draft/ Cheque in favor of "**SAEINDIA Mobility Congress 2009**"; payable at Chennai.

[Payment should reach us before the program dates](#)

**Venue**

Anna University  
Guindy,  
Chennai-600 025.

**Applying for membership**

Visit [www.saeindia.org](http://www.saeindia.org)

**Objectives**

To provide good understanding of the fundamentals of Diesel engine/after-treatment subsystems and the related control concepts.

**Benefits of attending the Course**

This course enables the participants (from OEMs and Suppliers) to understand the concepts of today's Diesel engine and after-treatment management systems. A clear understanding of the effectiveness and difficulties of each of these subsystem technologies will help in making the right decisions in one hand as well as prepare them for the development programs that OEMs will be undertaking to reach future emission goals and performance goals.

**Course prerequisites**

Preliminary knowledge about Diesel engine/exhaust after-treatment components, regulated emission regimes, basic ideas of electronic controls will help digest the material easily.