

# SAEINDIA SAEINDIA STUDENT KNOWLEDGE IMPROVEMENT PROGRAM AUTOMOTIVE TRANSMISSION

# **Two Days Workshop by SAEISS**

# Trainer: Shri. R. Venugopal, DRDO

Date: 16<sup>th</sup> & 17<sup>th</sup> October 2015



#### Venue:

SAEINDIA Southern Section, Guindy, Chennai -600032 Phone: 044-42188651-52 Mobile: +91-9790464679 E-mail Id: <u>skip@saeiss.org</u> Website: www.saeiss.org

#### **Course content**

**Day 1:** Morning: Introduction to Transmissions & Automatic Transmissions. Vehicle performance requirements

Afternoon Configuration of Automatic Transmissions Torque converter, Retarder, Fluid coupling in Automatic Transmission, Torque Converter matching

**Day 2:** Morning: Planetary Gearboxes introduction and design criterion Selection of Gear ratios, their influence on performance. Control, control logics, selection of oil, lubrication.

Afternoon Testing of Automatic Transmissions and integration checks. Applications of Automatic Transmission

#### **Intended Learning Objectives**

Many modern cars, buses, trucks, off highway vehicles, mining equipment, and military vehicles use Automatic Transmissions. The driving comfort and improved life of drive train components by the use of automatic transmissions is attracting the attention of vehicle users as well as vehicle manufacturers. Automatic transmissions offer ample opportunities to practicing engineers in various fields of product development.

All executives irrespective of their involvement in different phases of product development cycle will benefit from this course

#### Benefits of attending this course

The participants will be equipped with necessary knowledge for selection, retro fitment of Automatic transmission in the vehicles. Necessary knowledge on changes in vehicle power train will be presented.

The participants will acquire the knowledge and essential design philosophy, system engineering considerations, planetary gear box configurations and designs apart from torque converter and retarder integration.

# Who should attend?

The students studying in undergraduate course in Automobile, Mechanical, Aeronautical engineering will find that most of the topics in the program cover their syllabus requirements and future developments. This program is designed for any automotive enthusiast.

## **About the Course**

The four resource persons are practicing engineers in design and development of automatic transmissions for various applications. Together they bring in about 90 years of design and development experience.

The course consists of theoretical and practical approach to design, selection, system engineering, testing, vehicle integration and validation of automatic transmissions.

In addition the course deals with performance prediction of vehicle with automatic transmission, selection of sub systems of automatic transmission and the control strategies. Application of automatic transmissions will be discussed for the benefit of the industry.

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

Automotive Engines	16 <sup>TH</sup> 17 <sup>TH</sup> October 2015	
Start: 9:00 A.M to 12.00 Noon & 1.00 P.M to 4.00 P.M (Lunch 12 Noon to 1.00 P.M)		

#### How to enrol

#### Fee Structure (Two days)

Student Member	1500/-	Last date of Registration 13 <sup>th</sup> October 2015
Registration fee for t	wo days	

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

# **Facilities provided during course**

- Networking Tea/Snacks
- Networking Lunch
- Delegate Kits
- Certificate & Course materials

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

Name of the account holder: SAEINDIA Southern Section Student Convention Account No. : 32506106802 (Saving Account) Bank Name : State Bank of India Branch Name : Kottur, Chennai IFSC Code : SBIN0001669

# **Enrollment Procedure**

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

# Speaker: Shri. R. Venugopal, DRDO Fellow

ME in Production Engineering from Anna University, Chennai. He joined CVRDE in 1971 and has been working in various divisions of CVRDE. During his tenure at CVRDE, he was engaged in design and development of transmission systems and engines for various tracked vehicle applications. He also designed and developed hydraulic oil filters for flight control system of LCA Tejas and was awarded "Technology Group Award" for the year 2003. Also as a team member, he was awarded "DRDO Award for Development of Main Battle Tank ARJUN" for the year 2008. And also received 'Scientist of the year Award 2009' from the Honorable Prime Minister of India on 26th May 2010. About 40 years of experience in design, development, testing, field evaluation of automotive systems like Automatic Transmission, Engine, Suspensions etc.

#### **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 organizes 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).

**For more Information** 

Website: www.saeiss.org



Further please contact: S.PANNEERSELVAM SKIP, Executive SAEINDIA Southern Section Mobile No: 9790464679. Mail.id: skip@saeiss.org