



SAEINDIA Southern Section Toptech Program

Automatic Transmissions

21st & 22nd August 2015 at Radha Regent Chennai

Time: 9.00 A.M to 5.00 P.M

Radha Regent Chennai, 171 Jawaharlal Nehru Salai,
Arumbakkam, Chennai – 600 106

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.

Who should attend?

Engineers, executives, Managers, R&D professionals, faculty, students with affinity to Automotive Engineering and interested in any field of product development like design, marketing, testing, manufacturing, CAD, Engineering Analysis

Benefits of attending the 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.

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

Course prerequisites

All practicing Engineers/Executives/Managers/ R&D Professionals, faculty, with or without experience, interested in any field of product development are eligible to attend this course.

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

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.

Shri. M. Khader Basha, Scientist 'G'

He is working in the capacity of Additional Director and heading transmission division. He is M Tech in Mechanical Engineering from IIT Madras, Chennai. He has joined DRDO in 1987 and working in CVRDE for the past 26 years. He had contributed in the design and development of high power output diesel engines and its sub systems. His specific contributions are in the field of development of diesel fuel injection system for 1500 hp air cooled engine and 1000 hp uprated engine. He had developed introduction of electronics in the conventional fuel injection system (like EDU) specifically for Armoured Fighting Vehicle. He was involved in the engine assembly, testing and endurance testing of 1000 hp engine.

Mrs. V. Uma

B.E (Mechanical) from Govt. College of Engineering, Tirunelveli, M.Tech from IIT Madras. 13 years of experience in Automatic Transmission Development

Mr. M. RAMESH KUMAR, Scientist 'E'

- BE (Mechanical) from University of Madras-2000
- ME (Engineering Design) from Bharathiyar University - 2003
- Work Experience:
- 2 years of experience as a Senior Research Fellow in Engine division of CVRDE
 - Crank train design and Finite Element analysis of piston, Crank shaft, connecting rod for 1500hp Engine design.
- 9 years of experience as a Scientist in Transmission division of CVRDE
 - Design of Planetary gear train and driveline for 1500hp Automatic transmission.
 - Design and development of High Contact ratio (HCR) gear for AMAGB for TEJAS and Tracked vehicle application.
 - Developed unique APDL code in ANSYS for design and contact analysis of HCR gear pair
 - Design and development of wheel, brake and steering system pertaining to Landing gear design for RUSTOM-II UAV.

Domain Expertise

All the resource persons are Senior Scientists in CVRDE, DRDO, Min of Defence with experience in design, development, testing, vehicle integration of Automatic Transmissions and their subsystems in the power range of 150 hp to 1500 hp. They had interaction with various foreign consultants and Automatic Transmission Manufacturers.

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 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 programme 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.

About Toptech Program

Theory Content

- Explaining the basic concepts
- Relating to physical products / parameters
- Limited Mathematics
 - Support with tables and graphs as applicable
- Graphic representations
- Reference to more reading material

Application Content

- Published case examples and Case examples from the institute and Industry presentations

Tools Content

- Tools that are helpful for application of concepts
 - Equipment, &Hardware& Software
- Explanation and Demonstration
- Presentation& Hand-holding by Tool vendor

Benefit of the Participant

Benefit of the Participant	Non-Member	Member	Faculty Advisor
	₹ 13,000	₹ 10,000	₹ 4,000
Free Membership with Magazine	Yes	No	No
Discount for next program	Yes	No	No
Course materials with Softcopy	Yes	Yes	Yes
Networking Lunch with Tea & Snacks	Yes	Yes	Yes
Delegate Kits (File, Notepad, Pen)	Yes	Yes	Yes
Certificate	Yes	Yes	Yes
T-Shirt	Yes	Yes	No

Please Note: Including Tax

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

Name of the account holder	SAEINDIA Southern Section Toptech
Bank Account Number	32506111653
Bank Name & Branch	State Bank of India, Kottur, Chennai
MICR Number of the Bank	600002023
IFSC Code of the Bank	SBIN0001669
PAN No.	AABAS2734H

Please send the completed registration form along with cheque / demand draft drawn in favour of **“SAEINDIA Southern Section Toptech”** payable at Chennai

DELEGATE REGISTRATION FORM

Name _____

Designation _____

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Address _____

E-Mail ID _____

Telephone _____

Mobile _____

T-Shirt Size L XL XXL

Signature

Dr. S. Senthilkumar /Toptech Program Champion

To Contact

Mr. S. ILANGO VAN

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

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- EON Free Zone, Cluster C, Wing 1
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- h2e Power Systems Pvt. Ltd
- Hyundai Motor India Engineering
- Indian Army
- Indian Oil Corporation Limited,
- IP Rings Ltd
- John Deere India Pvt Ltd
- Kendrion (Pune) Private Limited
- LGB-Corporate
- LMS -A Siemens Business
- Mahindra & Mahindra Ltd
- Mahindra & Mahindra Ltd. (Truck & Bus Division).
- Mahindra Reva Electric Vehicles Pvt. Ltd
- Maruti Suzuki India Ltd
- Meritor HVS (India) Limited
- Moog India Technology Center Pvt. Ltd,
- NIT, Jaipur
- Pricol Limited
- Rane Brake Lining Limited
- Rane TRW Steering Systems
- Renault Nissan
- Robert Bosch Engineering and Business Solutions Limited
- Roots Industry India Ltd
- Satyam-Venture engineering services Pvt Ltd, Hyderabad
- Shivas Auto Components Private Limited
- Simpson & co Ltd
- SKF Technologies (India) Pvt. Ltd
- Sona Koyo Steering Systems Ltd
- Sri & Sri Consultants, Chennai
- SubrosLimiited
- TAFE
- Tata Motors Ltd, Pune
- TATA TECHNOLOGIES LTD
- Technology Information Forecasting & Assessment Council (TIFAC), New Delhi
- The Automotive Research Association of India
- Turbo Energy Limited
- TVS Motor Company Ltd
- TVU Rheihland India Pvt Ltd
- Valeo India Private Limited
- VANAZ ENGINEERS LTD
- VE Commercial Vehicles Ltd
- Walchand Institute of Technology, Solapur
- Wheels India Ltd, Chennai

Top Academics Supporting

- Agni College of Technology, Chennai
- Amaljyothi College of Engineering, Kottayam
- Amrita School of Engineering - Coimbatore, Coimbatore
- Aurora's Engineering College - Bhongir, Nalgonda
- Aurora's Scientific and Technological & Research Academy, Hyderabad
- Birla Institute of Technology & Science, Hyderabad
- BSA Crescent Engineering College, Chennai
- C. Abdul Hakeem College of Engg & Technology, Vellore
- ChaitanyaBharathi Institute of Technology, Hyderabad
- ChristuJyoti Institute of Technology & Science, Jangaon
- CMR College of Engineering and Technology, Hyderabad
- College of Engineering -Trivandrum, Thiruvananthapuram
- Dhanalakshmi Srinivasan Engineering College, Perambalur
- Faculty of Science & Tech., IFHE University, Hyderabad
- GokarajuRangaraju Institute of Engineering & Technology, Hyderabad
- Hindustan University, Chennai
- Hindusthan College of Engg. & Technology, Coimbatore
- Jeppiaar Institute of Technology, Sriperumbudur
- JNTUH College of Engineering, Hyderabad
- Karunya University, Coimbatore
- KLN College of Engineering, Madurai
- KPR Institute of Engineering & Technology, Coimbatore
- Kumaraguru College Of Technology, Coimbatore
- Madras Institute of Technology, Chennai
- Malabar College Of Engineering And Technology, Thrissur
- Mar Ephraem College of Engineering and Technology, Marthandam,
- Meenakshi Sundarrajan Engineering College, Chennai
- Methodist College of Engg. & Technology, Hyderabad
- MLR Institute of Technology , Hyderabad
- Mookambigai College of Engineering, Pudukkottai
- MVSR Engineering College , Hyderabad
- National Institute Of Technology, calicut
- PadmasriDr.B.V. Raju Inst. Of Technology, Narsapur , Medak (Dist)
- Panimalar Engineering College, Chennai
- Panimalar Inst. Of Technology, Chennai
- Rajalakshmi Engineering College, Chennai
- Rajiv Gandhi College of Engineering, Sriperumbudur
- Ramco Institute of Technology, Rajapalayam
- RMK Engineering College, Tiruvallur
- RVS Educational Trust's Group of Institutions, Dindigul
- Saingits College of Engineering, Kottayam
- Sastra University, Thanjavur
- Sathyabama University, Chennai
- Saveetha Engineering College, Chennai
- SBM College of Engineering and Technology, Dindigul
- Sengunthar Engineering College, Erode
- SreeVidyanikethan Engineering Collleg , Tirupati
- Sri Eshwar College of Engineering, Coimbatore
- Sri Krishna College of Engineering & Technology, Chennai
- Sri Shakthi Institute of Engineering & Technology, Coimbatore
- Sri Venkateswara College of Engineering, Sriperumbudur
- Sri Vishnu Engineering College for Women, Bhimavaram
- SRM University, Chennai
- St. Martins Engineering College, Secunderabad
- St. Peters Engineering College, Hyderabad
- Tamilnadu College of Engineering, Coimbatore
- Turbomachinery Institute of Technology & Sciences, Hyderabad
- Vardhaman College of Engineering , Hyderabad
- Vasavi College of Engineering, Hyderabad
- Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai
- Vel Tech University, Chennai
- Velammal Institute of Technology, Chennai
- Vellore Institute of Technology , Chennai
- Vellore Institute of Technology, Vellore
- Veltech High Tech Dr. RangarajanDrSakunthala Engineering College , Chennai
- VimalJyothi Engineering College, Kannur