



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

# SAEINDIA SAEINDIA STUDENT KNOWLEDGE IMPROVEMENT PROGRAM

# **Application of Finite Element Analysis** Automotive Parts & System

# **Two Days Workshop by SAEISS**

# Trainer: Dr. V. Ramamurti, FNA, FNAE, FASc, Consultant

Date: 13<sup>th</sup> & 14<sup>th</sup> February 2015

#### Venue:



SSM Institute of Engineering and Technology NH-209, Dindigul-Palani Highway, Sindalagundu Post, Dindigul - 624 002. Tamilnadu, India.

### **Course content**

#### DAY 1

Relevance of Finite element method in Indian Industry, Indian Scenario, Precautions in the use of packages. Choice of common elements and their appropriateness.

#### Day 2

Static, Eigenvalue, Transient and Random vibration Problems with application in Mechanical Engineering, case studies of problems solved for the Indian Industry covering Automobile, Process and Power Sectors.

# **Objectives**

The automotive industry has understood the need for Finite Element Analysis and Finite Element Analyst for some time now. Wide range of software packages are available to carry out FEA with ease. Consequently Finite Element Analysis is being widely used by many industries and especially the usage is unlimited in automotive industries. However, there is considerable lack of understanding of formulating problems for FEA and interpreting the results. This program is designed to bring in better understanding of formulation and interpretation.

## Benefits of attending this course

Since the course is handled by a person who is a reputed teacher with specialisation in finite element method and who has forty years of industrial experience in solving field problems, the lectures will give invaluable information to youngsters who have an urge to take this art as a profession.

- Select preferable modeling approaches
- Analyse errors inherent to FEA results
- Identify FEA advantages and shortcomings
- Avoid mistakes and pitfalls in FEA
- Ensure quality and cost effectiveness of FEA projects

# Who should attend?

The students studying in pre-final year and final year in Mechanical/Automobile/ Aeronautical/allied stream of Mechanical engineering should attend the program. This program is designed for practising Finite Element Analysis in under graduate level. SKIP program is very useful for the students who are having FEA as one of their subject. Same time SKIP is beneficial for Design team members involving in Baja, Supra, FSAE, Go-Kart, Solar Vehicle etc.,

## **About the Course**

This course is about application of FEA to automotive situations. This is not a course on teaching FEA (Mathematical Formulation). Course will be through instruction, case studies.

The participants are encouraged to bring their own problems for discussions.

### **Course Date & Time**

Application of Finite Element Analysis to Automotive Parts & System	13 <sup>th</sup> & 14 <sup>th</sup> February 2015
Start: 9:00 A.M to 12.00 Noon & 1.00 P.M	1 to 4.00 Р.М

(Lunch 12 Noon to 1.00 P.M)

## How to enroll Fee Structure (Two days)

Student Member	1500/-	Last date of Registration 8 <sup>th</sup> February 2015
Registration fee for tw	vo days	· · · · ·

- Admissions would be on first come first serve basis and will be strictly through enrolment Procedure
- 60 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

#### 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 <u>skip@saeiss.org</u> for registration
- Registration form enclosed or Click Here

#### Dr. V. Ramamurti

Prof. Ramamurti got his PhD from IIT, Madras in the year 1970. He worked with IIT Madras between 1966 and 2001. He was a Professor between 1977 and 2001. He was the Head of the Department of Applied Mechanics between 1978 and 1981. He was INSA Senior Scientist at AUFRG CAD/CAM Centre, Anna University between 2005 and 2009.

Prof Ramamurti was with the Institute of Mechanics TU, Hannover, Germany between 1971 and 1973. On sabbatical leave he was a Senior Research Associate of NRC at NASA Lewis Research Centre, Cleveland, USA between 1981 and 1983. He was a visiting Professor of Mechanical Engineering in the US, Canada and Kuwait between 1991 and 1993. He was a Visiting Professor at UT Austin, USA in 1999. He was a Visiting Professor of Mechanical and Production Engineering in NANYANG Technological University, Singapore between 2001 and 2002.

Professor VR's career in Industry started as a Machine Tools Engineer in Heavy Engineering Division, KCP Limited between 1963 and 1966. He has been a retainer Consultant to Power, Process and Heavy Engineering Industries (12 of them) for forty years.

Prof. Ramamurti is involved in design problems of industries like KCP Group - Chennai, TVS Group - Chennai, Nuclear power Corporation - Mumbai, Tata Research and Development Centre - Pune, GE (INDIA) - Bangalore and L&T e Engineering Solutions- Chennai and Bangalore.

Prof VR has guided 25 Ph D's and has over 185 International Journal Publications. He has written 5 books, all of them published in India and abroad. (TATA Mc Graw Hill, India and Mc Graw Hill, USA, NAROSA India and Alpha Sciences International UK) The book of relevance to this short term course "Finite Element Method in Machine Design" was published by Narosa India in 2009 and revised in 2012.

Prof VR has been elected Fellow of Indian National Science Academy, Indian National Academy of Engineering and Indian Academy of Sciences. He has received Import Substitution Award in 1973, Vasvik Award in Mechanical Engineering in 1983, INSA Hussain Zaheer Medal in 1995 and INSA Biren Roy Medal in 2007. He was chosen as a distinguished alumnus of IIT, Karagpur in the year 2012 during its diamond jubilee celebrations.

### **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)

For more Information

Website: <u>www.saeiss.org</u>



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