Automotive Noise and Vibration Control: Contemporary Engineering Practice and Research Issues

Overview

The course proposes an integrated study of vibration, acoustics, digital signal processing and machinery dynamics based on a case study approach; discussion of engineering practice including design, manufacturing, material, performance, and economic considerations; examination of research issues for world-wide automotive industry.

The major objectives of the course are to:
- Learn analytical, computational and experimental methods for analyzing automotive noise and vibration (NVH) problems
- Examine dynamic and acoustic issues involved in the design of contemporary vehicles
- Apply concepts to real-life vehicle and machinery noise and vibration control problems
- Identify research problems for graduate theses and for R&D organizations

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<th>Dates for the Course</th>
<th>16th May 2016 to 27th May 2016</th>
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<td>Host Institute</td>
<td>IIT Madras</td>
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<td>Number of Credits</td>
<td>2</td>
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<td>Maximum Participants</td>
<td>30</td>
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<td>You Should Attend If</td>
<td>You are an engineer in the automotive sector and are working on noise and vibration issues You are a mechanical engineer who wants to understand the noise and vibration issues related to your product and then develop solutions You are a student or faculty from an academic institution interested in learning how to identify research problems in this area</td>
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| Course Fees          | The registration fees for the course are as follows:  
  **Student Participants**: Rs. 2000  
  **Faculty Participants**: Rs. 5000  
  **Government Research Organization Participants**: Rs. 8000  
  **Industry Participants**: Rs. 15000  
  The above fee is towards participation in the course, the course material, computer use for tutorials and assignments, and laboratory equipment usage charges.  
  **Mode of Payment**: Demand Draft in favour of "Registrar, IIT Madras" payable at Chennai |
| Accommodation        | The participants may be provided with hostel accommodation, depending on availability, on payment basis. Request for hostel accommodation may be submitted through the link: [http://hosteldine.iitm.ac.in/iitmhostel](http://hosteldine.iitm.ac.in/iitmhostel) |
Course Faculty

**Prof. Raj Singh** directs the NSF Smart Vehicle Concepts Center at The Ohio State University (USA). He is globally recognized for his seminal research in automotive NVH and geared system dynamics over 36+ years. Prof. Singh teaches an innovative graduate course sequence in automotive NVH.

**Prof. Chandramouli** is a faculty member in the Department of Mechanical Engineering at IIT Madras. His research interests include noise and vibration, fluid-structure interaction and non-linear dynamics. He is an active consultant to several industries.

Course Coordinator

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