

One-Day Course on “Railway Dynamics”

October 16, 2022 (Sunday): 09:30 to 17:00

Venue: Department of Mechanical Engineering, Indian Institute of Technology Delhi (IIT Delhi), New Delhi – 110016, India

Pre-Conference Course during IMSD-ACMD Organized by IIT Delhi (<http://imsdacmd2020.iitd.ac.in>) during October 16-20, 2022

Introduction:

Railway Dynamics deals with the mathematical modelling and simulation of a railway vehicle. It has been an active field of research and its importance has been increasing due to the demand for safer and faster means of transportation, for both passengers and freight. With the introduction of high-speed trains in India, the topic is very relevant for Indian researchers working in railway industries.

Learning Outcomes:

- **For Students/Researchers:** Enable to understand the basics of railway dynamics which can make them suitable in railway industries.
- **For Faculty:** Enable to discover the state-of-the art in railway dynamics and identify the active research topics.
- **For Industry Delegates:** Enable to understand the underlying mathematical models and interpret the results from simulation software to improve designs.

Resource Person/Speaker:

Prof. Jorge A.C. Ambrósio, having received his Ph.D. degree from the University of Arizona in 1991, is currently Full Professor and Head of the Structural and Computational Mechanics at Instituto Superior Técnico, University of Lisbon, Portugal. He coordinates several domestic and international projects in railway dynamics, biomechanics and passive safety. Currently, he is the Editor-in-Chief of Multibody System Dynamics (Journal by Springer). He has been actively participating in IMSD and ACMD conferences, and hosted IMSD 2018 at Lisbon, Portugal. Prof. Ambrósio is also the President of the IMSD International Steering Committee (2018-2022).

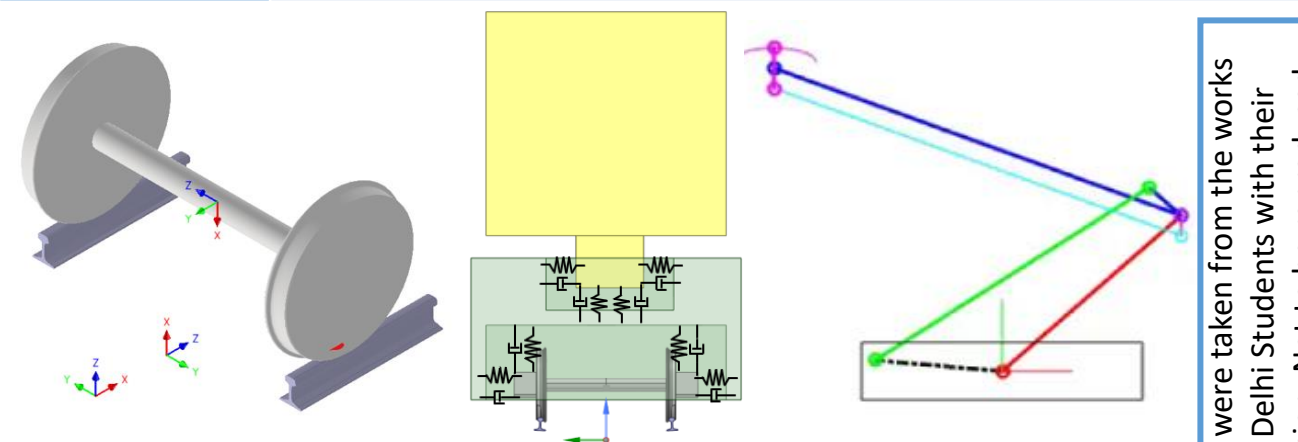


About IMSD-ACMD:

The 6th Joint International Conference on Multibody System Dynamics (IMSD) and the 10th Asian Conference on Multibody Dynamics (ACMD) are organized by IIT Delhi, New Delhi (India) and are going to be held during October 16-20, 2022, at Eros Hotel, New Delhi. These are biennial conferences that serve as a meeting point for the international multibody community and as an opportunity to exchange high-level, current information on the theory and applications of multibody systems.

Tentative Schedule

| Time | Event/Topic |
|----------------|--|
| 09:30 to 09:45 | Registration |
| 09:45 to 10:00 | Inauguration and Introduction to Prof. Jorge A.C. Ambrósio |
| 10:00 to 11:15 | Wheel-Rail Interaction |
| 11:15 to 11:30 | Coffee/Tea Break |
| 11:30 to 13:15 | Mathematical Modelling of Bogie and Carbody |
| 13:15 to 14:00 | Lunch Break |
| 14:00 to 15:30 | Pantograph and Catenary Modelling |
| 15:30 to 16:00 | Overview of Analysis Software for Railway Simulation |
| 16:00 | Closing Ceremony followed by Tea/Coffee |



Registration Fee (Offline and Online Participations):

Students: Rs. 5,000 / 75 USD; **Faculty:** Rs. 10,000 / 150 USD;

Delegates from Industry/Research Organizations: Rs. 15,000 / 225 USD

Account Details:

Account Name: IMSD-ACMD 2020
Account No: 50200046895623
Bank Name: HDFC Bank
Branch: SDA Market, New Delhi
IFSC: HDFC0000032
Swift code: HDFCINBB

Coordinators:

• Prof. Ashish K. Darpe, Prof. Subir. K. Saha and Prof. Rama Krishna K. (IIT Delhi, New Delhi)
• Mr. Rajeevlochana G. Chittawadigi (Amrita Vishwa Vidyapeetham, Bengaluru)
Contact: imsdacmd2020@iitd.ac.in
Registration: <http://imsdacmd2020.iitd.ac.in>

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