

Interface evolution in multi-scale solidification problems: Observations and modeling approaches

Dr. Shyamprasad Karagadde, IIT Bombay

Dr. Shyamprasad Karagadde obtained his Masters (Computational Science) and PhD (Mechanical Engineering) from IISc. He worked as a post-doc researcher at the University of Manchester, before joining the Dept of Mechanical Engg. at IITB in 2015. His research interests are in the field of computational modeling and real-time observations of materials processes.



July 30, 2021, 9:30 am , Microsoft Teams

Electromagnetic Crimping to produce Tube-to-tube Joint

Dr. Arup Kumar Nandy, IIT Guwahati

Dr. Arup Nandy joined IIT Guwahati in July, 2017. He obtained his PhD from Mechanical Engineering department, IISc Bangalore in 2016. His research interest is FEM formulation in different multiphysics domains like acoustics, structures, electromagnetics. His research group is involved in developing some mixed formulations in Isogeometric analysis. The group is studying effectiveness of edge elements in Finite element analysis of electromagnetic wave propagation. The group is also doing research in the domain of Electromagnetic Forming and Crimping. He has taught courses like Advanced Solid mechanics, Continuum mechanics, Finite element method in IIT Guwahati.



July 30, 2021, 2:00 pm, Microsoft Teams

Disentangling the Entangled Polymers

Dr. Manjesh Kumar Singh, IIT Kanpur

Dr. Singh is currently working as an Assistant Professor at the Department of Mechanical Engineering, IIT Kanpur where he joined in September 2019. He has an interdisciplinary background with education in Mechanical and Materials Engineering and research experience in both computer simulations and experiments. The principal areas of his research are tribology and rheology—mostly with polymers. Before joining IIT Kanpur, Dr. Singh worked as a postdoctoral researcher in Polymer Theory group at the Max Planck Institute for Polymer Research Mainz. He has done PhD in polymer tribology from the Department of Materials, ETH Zurich, Switzerland. He finished his Master of Engineering (ME) degree from the Materials Engineering Department of Indian Institute of Science, Bangalore. He studied for a Bachelor of Engineering (BE) at Mechanical Engineering Department of Indian Institute of Engineering, Science and Technology, Shibpur (formerly BE College or BESU Shibpur), West Bengal, India.



July 31, 2021, 9:30 am, Microsoft Teams

Breakup of tear-films: role of mucins polymers

Dr. Harish N Dixit, IIT Hyderabad

Harish has a BTech in Mechanical Engineering from Osmania University in 2003, an M.S. by Research in Mechanical Engineering from IIT Madras in 2005, and a Ph.D. from the Engineering Mechanics Unit, JNCASR in 2010. During his Ph.D., he explored the role of density stratification in large-scale vortices. He spent three years as a postdoctoral fellow at the University of British Columbia before returning to India in 2013 to join the Department of Mechanical Aerospace Engineering at IIT Hyderabad. He currently serves there as an Associate Professor and an adjunct faculty associated with the Polymers and Biosystems Engineering program.



July 31, 2021, 2:00 pm, Microsoft Teams