

IUTAM Symposium: Instabilities and Transitions in Interface and Field-driven flow



**Department of Chemical Engineering
Indian Institute of Technology Roorkee, India
December 7 - 11, 2026**

Aim & Scope of the Symposium

Flow transitions and instabilities in interfacial and field-driven flows arise in broad spectrum of natural and engineered systems, e.g., industrial applications like coating flows, film reactors to microfluidic applications to space-enabling technologies to geophysical flows and physiological flows like pulmonary flow and corneal drainage. These exhibit rich dynamics involving formation of complex spatio-temporal wave patterns. While instabilities may hinder conventional processes, they also enable controlled pattern formation across micro- to macro-scales, with emerging applications in additive manufacturing and soft materials. Understanding these phenomena requires integrated experimental, theoretical, and computational efforts, spanning stability analysis, reduced-order modelling, direct numerical simulations, and molecular-level approaches. The symposium aims to bring together researchers across the globe to discuss the up-to-date progress made in modelling and experiments of these instabilities for utilizing them in design of new materials and processes. Topics of interest include (but not limited to): micro and macro-scale instabilities; field-mediated control; film flows and wave dynamics; fluid-structure interactions; nonlinear dynamics; reduced-order modelling; and molecular-scale modelling of interfaces. The symposium consists of invited oral talks and poster sessions.

Important Dates

• Call for Abstract	Mar 1, - Jun 15, 2026
• Notification of acceptance	Jul 31, 2026
• Early Bird Registration	Aug 1 - Sep 14, 2026
• Regular Registration	Sep 15 - Oct 31, 2026
• On-spot Registration	Dec 7 - 11, 2026

Scientific Committee

- **Prof. Alexander Oron**, Technion - Israel Institute of Technology, Israel
- **Prof. Amy Shen**, Okinawa Institute of Science & Technology, Japan
- **Prof. Gaurav Sharma**, Indian Institute of Technology Roorkee, India (Organizer)
- **Prof. Ivan Christov**, Purdue University, USA
- **Prof. Jacques Magnaudet**, University of Toulouse, France (IUTAM Representative)
- **Prof. Omar K Matar**, Imperial College London, UK
- **Prof. Ranga Narayanan**, University of Florida, USA
- **Prof. Rochish Thaokar**, Indian Institute of Technology Bombay, India
- **Prof. Sakir Amiroudiine**, University of Bordeaux, France
- **Prof. Satish Kumar**, University of Minnesota, USA

Organizing Committee

- **Prof. Dipin S Pillai**, Indian Institute of Technology Kanpur, India
- **Prof. Gaurav Sharma**, Indian Institute of Technology Roorkee, India
- **Prof. Premananda Bera**, Indian Institute of Technology Roorkee, India
- **Prof. Ram P Bharti**, Indian Institute of Technology Roorkee, India
- **Prof. Ratul Dasgupta**, Indian Institute of Technology Bombay, India
- **Prof. V Shankar**, Indian Institute of Technology Kanpur, India



Registration Fee

(inclusive of 6 days accommodation & meals)

• Early Bird non-student	INR 35000 / USD 400
• Early Bird student	INR 15000 / USD 175
• Regular non-student	INR 38000 / USD 430
• Regular student	INR 18000 / USD 200
• Late Registration non-student	INR 45000 / USD 500
• Late Registration student	INR 22000 / USD 250

