

Workshop Programme

First International Roughness Workshop 2026

Establishing a Benchmark for Roughness in Turbulent Flows

26th – 27th of July 2026

Venue: [Kaiserstraße 10, Bldg. 10.91, 1st floor, Room 129, 76131 Karlsruhe, Germany](#)

Sunday, 26th July 2026

12:30 – 13:30	Arrival & Lunch (Workshop Venue)
13:30 – 13:45	Opening & Welcome <i>Introduction & objectives: Can we establish a benchmark for roughness in wall-bounded turbulence? (Bettina Frohnäpfel, Alexander Stroh)</i>
13:45 – 15:45	Introductory Presentations <i>How to evaluate the drag of a rough surface and what would an ideal reference roughness look like? Experiment, Simulation, Modeling</i> <i>Internal flows - simulations: Angela Busse</i> <i>External flows - experiments: Bharath Ganapathisubramani</i> <i>Internal flows - experiments: Bettina Frohnäpfel</i> <i>External flows - simulations: Davide Modesti</i> <i>Prediction/modeling: Pourya Forooghi</i>
15:45 – 16:15	Coffee Break
16:15 – 17:15	Comparison and Uncertainties <i>What are the challenges in comparing results? How to report uncertainties? Intro talk: Nicholas Hutchins and Ricardo García-Mayoral</i>
17:30 – 18:30	Check-in at hotels
19:00 – 22:00	Networking Dinner <i>Location: Vogelbräu, Kapellenstr. 50, Karlsruhe</i>

Monday, 27th July 2026

08:45 – 09:30	Recap of Day 1 - Properties of a Reference Roughness <i>What are key issues from yesterday's presentations/discussion that we should keep in mind?</i> <i>Chair: Alexander Stroh</i>
09:30 – 10:15	Required Metadata <i>Which metadata should be reported with every database?</i> <i>Chair: Davide Gatti</i>
10:15 – 10:45	Coffee Break
10:45 – 11:15	The Next Hot Topic <i>Heat transfer (passive scalar or compressible flow) on rough surfaces. Should a reference roughness for drag also be suited for heat transfer comparison?</i> <i>Intro talk: Daniel Chung and Davide Modesti</i>
11:15 – 12:15	Reference Roughness <i>Which requirements would a reference rough surface have to fulfill? Can we define a benchmark rough surface that different groups can test in numerics and experiments?</i> <i>Chair: Angela Busse</i>
12:15 – 13:00	Wrap-Up and Next Steps <i>Chair: Bettina Frohnäpfel and Bharath Ganapathisubramani</i>
13:00 – 14:30	Farewell Lunch (Workshop Venue)
14:30 – 15:30	ISTM Lab Tour (optional)

List of participants:

- Angela Busse (TU Berlin, Germany)
- Stuart Cameron (University of Aberdeen, UK)
- Alessandro Ceci (Gran Sasso Science Institute, Italy)
- Daniel Chung (University of Melbourne, Australia)
- Pourya Forooghi (Aarhus University, Denmark)
- Bettina Frohnepfel (KIT, Germany)
- Bharath Ganapathisubramani (University of Southampton, UK)
- Ricardo García-Mayoral (University of Cambridge, UK)
- Mariachiara Gallia (TU Braunschweig, Germany)
- Himani Garg (Lund University, Sweden)
- Davide Gatti (KIT, Germany)
- Nicholas Hutchins (University of Melbourne, Australia)
- Jochen Kriegseis (KIT, Germany)
- Yusuke Kuwata (Osaka Metropolitan University, Japan)
- Charles Meneveau (Johns Hopkins University, USA)
- Davide Modesti (Gran Sasso Science Institute, Italy)
- Jason Monty (University of Melbourne, Australia)
- Ramis Örlü (Oslo Metropolitan University, Norway)
- Marco Raiola (Universidad Carlos III de Madrid, Spain)
- Kay Schäfer (Universität Hamburg, Germany)
- Philipp Schlatter (FAU Erlangen-Nuremberg, Germany)
- Alexander Stroh (KIT, Germany)
- Patricia Suja Garrido (KTH Stockholm, Sweden)
- Stephen Terrington (Monash University, Australia)
- Siavash Toosi (FAU Erlangen-Nuremberg, Germany)
- Ralph Volino (United States Naval Academy, USA)
- Dea Daniella Wangsawijaya (University of Southampton, UK)
- Aiko Yakeno (Tohoku University, Japan)

ISTM PostDocs and PhD students:

- Stefano Cipelli
- Simon Dalpke
- Ferdinand Elsner
- Jonathan Neuhauser
- Tomos Rich
- Nicole Sa'adeh
- Carola Schmidt
- Jonathan Schmitt
- Francesco Secchi