

Agenda for the Annual Meeting 2022 of the SPP 1881

Zinzendorfhaus
Zinzendorfplatz 3, 99192 Neudietendorf
<https://zinzendorfhaus.de>

Monday, 27th of June

- 12:00 Arrival
- 12:15 - 13:00 Lunch at Zinzendorfhaus
- 13:00 - 13:15 Welcome and Introduction
Jörg Schumacher
- 13:15 – 13:45 Evolutionary clustering of Lagrangian trajectories in turbulent convection
Kathrin Padberg-Gehle
- 13:45 – 14:15 Large-scale dynamics determines the predictability of extreme events in two-dimensional turbulence
Marc Avila
- 14:15 – 14:45 Energy transfer between the large-scale coherent structures and the incoherent part of the flow in turbulent pipe flow
Amir Shahirpour
- 14:45 – 15:30 Coffee Break
- 15:30 – 16:00 Energy transfer in constant heat flux-driven Rayleigh-Bénard convection
Philipp Vieweg
- 16:00 – 16:30 Dynamics-based machine learning of reduced-order models for fluid flows
Balint Kaszas
- 16:30 – 16:45 Short Break
- 16:45 – 17:15 Turbulent superstructures in Couette flows and their suppression: analysis of integral power budgets
Andrea Andreoli
- 17:15 – 17:45 Comparison of Lagrangian curvature and torsion statistics in open and wall-bounded turbulent flows / Searching for periodic orbits with symmetry-reduced Dynamic Mode Decomposition
Moritz Linkmann
- 18:15 – 19:15 Dinner at Zinzendorfhaus

Tuesday, 28th of June

07:45 – 09:00 [Breakfast at Zinzendorfhaus](#)

09:00 – 09:30 Investigation of turbulent superstructures in Rayleigh-Bénard convection by Lagrangian particle tracking
Stephan Weiss

09:30 – 10:00 Development of a technique for simultaneous Lagrangian 3D temperature and velocity measurements in Rayleigh-Bénard convection
Theo Käufer

10:00 – 10:30 [Coffee Break](#)

10:30 – 11:00 The search for extreme events in convective turbulence
Valentina Valori

11:00 – 11:30 Experimental investigation of superstructures in turbulent liquid metal convection
Sylvie Su

11:30 – 13:00 [Lunch at Zinzendorfhaus](#)

13:00 – 13:30 Evolution and Features of Dust Devil-Like Vortices in Turbulent Rayleigh-Bénard Convection - An Experimental Study
Christian Kästner (Associated Project)

13:30 – 14:00 Towards an effective description of turbulent superstructures
Fabián Álvarez-Garrido

14:00 – 14:30 The structure of Rayleigh-Taylor turbulence in presence of sub-leading effects
Markus Holzner

14:30 – 15:15 [Coffee Break](#)

15:15 – 15:45 Very-large-scale motions identified by multi-scale POD for highly turbulent flows and adaptive flow map sampling of divergence-free flows with Autonomous Particles
Cheng Chi and Steve Wolligandt

15:45 – 16:15 Results and analysis of 3D Lagrangian Particle Tracking measurements in turbulent boundary layer- and pipe flows
Daniel Schanz

16:15 – 16:30 [Short Break](#)

16:30 – 17:00 Taylor rolls on tour - Viscous time scale dynamics of large-scale structures in wall bounded flows
Daniel Feldmann

17:00 – 17:30 Experiments on Very Large Structures in Fully Developed Pipe Flow: Achievements and on-going Progress
El-Sayed Zanoun

17:30 – 18:00 [Group Photo](#)

18:15 – 19:15 [Dinner at Zinzendorfhaus](#)

Wednesday, 29th of June

07:45 – 09:00 [Breakfast at Zinzendorfhaus](#)

09:00 – 09:30 On a new class of oblique 3D modes for plane shear flows
Martin Oberlack (Associated Project)

09:30 – 10:00 Spatio-Temporal Visual Analysis of Turbulent Superstructures in Unsteady Flow
Behdad Ghaffari

10:00 – 10:30 [Coffee Break](#)

10:30 – 11:00 The effect of spanwise heterogeneous surfaces on mixed convection in turbulent channels
Kay Schäfer

11:00 – 11:30 Coherent Structures from Quasi-Objective Single Trajectory Diagnostics
Alex Encinas-Bartos

11:30 – 12:00 Summary and organisational points for the last months of the SPP
Jörg Schumacher

12:15 – 13:00 [Lunch at Zinzendorfhaus](#)

13:00 [Departure](#)