

1st Annual Meeting – Agenda

MPI for Dynamics and Self-Organization Göttingen, Am Faßberg 17
Manfred-Eigen-Saal

Day 1 (04.12.17)

- 13:00 – 13:30 **Welcome & Organizational Aspects**
Jörg Schumacher, Technische Universität Ilmenau
- 13:30 – 14:00 **“Roughness in turbulent Taylor-Couette flow”**
Detlef Lohse/Richard Stevens/Pieter Berghout, University of Twente
- 14:00 – 14:30 **“Large-scale contribution to Reynolds shear stress in drag-reduced flows”**
Bettina Frohnappel/Davide Gatti, Karlsruher Institut für Technologie
- 14:30 – 15:00 a) **“Experiments on Very Large Structures in Fully Developed Pipe Flow, Achievements and Ongoing Progress”**
Christoph Egbers/El-Sayed Zanon, Brandenburgische Technische Universität Cottbus
b) **“A Dynamic Mode Decomposition on a moving frame of reference to capture large scale coherent structures”**
Christoph Egbers/Amir Shahripour, Brandenburgische Technische Universität Cottbus
- 15:00 – 15:30 **Coffee break**
- 15:30 – 16:00 **“Towards exact coherent superstructures in turbulent pipe flow”**
Marc Avila/Daniel Feldmann, Universität Bremen
- 16:00 – 16:30 **“Incompressible dissipative particle dynamics using a Lagrange-multiplier based algorithm”**
Nikolaus Adams/Morgane Borreguero, Technische Universität München
- 16:30 – 17:00 **“Exact coherent structures for high Reynolds numbers and boundary layers”**
Bruno Eckhardt/Moritz Linkmann, Philipps-Universität Marburg
- 17:00 – 17:30 **“Symmetry induced stability modes of the asymptotic suction boundary layer”**
Martin Oberlack/Judith Kahle, Technische Universität Darmstadt
- 19:00 **Joint dinner** (at own expense)
[Restaurant Bullerjahn](#), Altes Rathaus Göttingen

Day 2 (05.12.17, MPI Göttingen, Manfred-Eigen-Saal)

- 09:00 – 10:00 **Keynote talk on Dynamical Systems**
Steven L. Brunton, University of Washington
- 10:00 – 10:30 **“Lagrangian coherent structures in stably stratified turbulence”**
Markus Holzner/Marius Neamtu, Eidgenössische Technische Hochschule Zürich
- 10:30 – 11:00 **“Lagrangian coherent structures in stably stratified turbulence”**
George Haller/Stergios Katsanoulis, Eidgenössische Technische Hochschule Zürich
- 11:00 – 11:30 **coffee break**
- 11:30 – 12:00 **“Network theory and coherent structures”**
Kathrin Padberg-Gehle/Christiane Schneide, Leuphana Universität Lüneburg

- 12:00 – 12:30 **“Lagrangian Coherent Structures and almost-invariant sets”**
Oliver Junge/Daniel Karrasch/Nathanael Schilling, Technische Universität München
- 12:30 – 13:00 **“Horizontal velocity fields in large aspect ratio thermal convection”**
Christian Kästner/Jörg Schumacher, Technische Universität Ilmenau
- 13:00 – 14:00 **Lunch**
- 14:00 – 14:30 **“Mach Number effects on turbulent superstructures in wall bounded flows”**
Christian Kähler/Matthew Bross, Universität der Bundeswehr München
- 14:30 – 15:00 **“DNS of spatially evolving turbulent boundary layers with focus on adverse pressure gradients and turbulent inflow boundary condition”**
Ulrich Rist/Matthias Weinschenk, Universität Stuttgart
- 15:00 – 15:30 **“Large scale volumetric flow measurement on a turbulent boundary layer”**
Andreas Schröder/Daniel Schanz, Deutsches Zentrum für Luft- und Raumfahrt Göttingen
- 15:30 – 16:00 **Coffee break**
- 16:00 – 16:30 **“Conditional Analysis Near the Surface of the Atmospheric Boundary Layer”**
Juan Pedro Mellado/Katherine Fodor, MPI für Meteorologie Hamburg
- 16:30 – 17:00 **“Finite-time coherent sets for aperiodic flows”**
Peter Koltai/Martin Plonka, Freie Universität Berlin
- 17:00 – 17:30 **“Set Oriented Numerics and Embeddings”**
Michael Dellnitz/Raphael Gerlach, Universität Paderborn
- 17:30 – 18:30 **Meeting of the Steering Committee**

Day 3 (06.12.17, MPI Göttingen, Manfred-Eigen-Saal)

- 09:00 – 10:00 **Keynote talk on Turbulence**
Eberhard Bodenschatz, MPI für Dynamik und Selbstorganisation Göttingen
- 10:00 – 10:30 **“Effective Description of Superstructures in Turbulent Convection”**
G. Green, D. Vlaykov, M. Wilczek, MPI für Dynamik und Selbstorganisation Göttingen
- 10:30 – 11:00 **“Interactive feature-based visualization of Rayleigh-Bénard convection”**
Rüdiger Westermann/Martin Ender, Technische Universität München
- 11:00 – 11:30 **Coffee break**
- 11:30 – 12:00 **“Inclined Thermal Convection in Slender Containers Filled with Small-Prandtl-Number Fluids”**
Olga Shishkina/Lukas Zwirner, MPI für Dynamik und Selbstorganisation Göttingen
- 12:00 – 12:30 **“Experimental investigation of the heat transport across a sheared thermally unstable boundary layer”**
Stephan Weiss/Gabriele Nunnari, MPI für Dynamik und Selbstorganisation Göttingen
- 12:30 – 13:00 **“Turbulent superstructures in Rayleigh-Bénard convection”**
Jörg Schumacher/Ambrish Pandey, Technische Universität Ilmenau
- 13:00 – 13:15 **Closing remarks**
Jörg Schumacher, Technische Universität Ilmenau

** keynote talk, 45 minutes + 15 minutes discussion*

*** project talk, 25 minutes talk + 5 minutes discussion*

(Whiteboard and beamer available)