Agenda – Annual Workshop DeepTurb 2022

Bad Schandau, 25 to 28 April 2022
Hotel Lindenhof, Rudolf-Sendig-Strasse 11, 01814 Bad Schandau

Monday, 25 April 2022

Arrival at Hotel and check-in the late afternoon/evening and free time

Tuesday, 26 April 2022

09:00-09:15 Jörg Schumacher: Welcome

09:15-10:15 Philipp Pfeffer: Quantum Reservoir Computing (45+15)

10:15-10:45 Coffee break

10:45-11:45 Johannes Viehweg: Dimension Reduction and Forecasting Methods for High Dimensional Data (45+15)

12:00-13:30 Lunch (Hotel Lindenhof)

13:30-14:45: Kathy Lüdge: Photonic reservoir computing for time series predictions (60+15)

14:45-15:45: Philipp Schmitz: A data-driven description of dynamic control systems (45+15)

15:45-16:15: Coffee break

16:15-17:15: Mohammad Ghazijahani: ESN for deterministic and statistic prediction of turbulent flows (45+15)

17:15-18:00: Robert Kräuter: Extreme vorticity events in turbulent Rayleigh-B\'enard convection from stereoscopic measurements and reservoir computing (30+10)

18:00 Joint Dinner (Hotel Lindenhof) and free time

Wednesday, 27 Aprill 2022

09:00-10:00 Theo Käufer: Simultaneous 3D velocity and temperature measurements using Shake-the-Box (45+15)

10:00-10:40 Manuel Ratz: DNNs for the determination of position and size classes of APTV measurements (30+10)

10:40-11:10 Coffee break

11:00-11:40 Philipp Teutsch: A Stochastic Approach for Time Dependent Feature Extraction (45+15)

12:00-13:30 Lunch (Hotel Lindenhof)

13:30-14:30 Florian Heyder: Reduced-order modeling of atmospheric boundary layers

14:30-15:30 Jonas Kirchhoff: An introduction to port-Hamiltonian systems

15:30-16:00 Coffee break

16:00-18:00 Discussion time in small groups

18:30 Joint Dinner (Hotel Lindenhof) and free time

Thursday, 28 April 2022

09:00-10:20 Friedrich Philipp: Data-driven surrogate models in the Loewner framework (60+20)

10:20-10:50 Coffee break

10:50-11:30 Christopher Müller: Synthetic turbulent superstructures in convection flows by Wasserstein generative adversarial networks (30+10)

11:30-12:15 Jörg Schumacher: Final discussion and next steps

12:15-13:15 Lunch

13:30 Check out, Departure from Bad Schandau Bhf.