

Schematic program

	Monday 9/7	Tuesday 9/8	Wednesday 9/9	Thursday 9/10
09:00–09:30		Invited Lecture	Invited Lecture	Invited Lecture
09:30–10:00		Prof. P. Benner	Prof. O. Mula	Prof. K. Smetana
10:00–10:30		(MPI Magdeburg)	(Dauphine U)	(U Twente)
10:30–11:00		Bonizzoni (U Wien)	Silva (TU/e)	Schleuss (U Münster)
11:00–11:30		Cohen (Technion)	Nellesen (RWTH)	Nichols (ANU)
11:30–12:00		Jamil (RWTH)	Grosjean (Sorbonne)	Chellappa (MPI M.)
12:00–12:30		Lunch break		
12:30–13:00				
13:00–13:30				
13:30–14:00	Opening			
14:00–14:30	Invited Lecture	Industrial Talk	Invited Lecture	Invited Lecture
14:30–15:00	Prof. G. Rozza	J. Ballani (Akselos)	Prof. G. Haller	Prof. C.
15:00–15:30	(SISSA)	Strazzullo (SISSA)	(ETHZ)	Pagliantini
15:30–16:00		Sampedro L. (DTU)		(TU/e)
16:00–16:30	Nguyen (WIAS)	Poster session	Pichi (SISSA)	Moser (TUM)
16:30–17:00	Dou (DTU)		Kandinskii (KU L.)	Vidlickova (EPFL)
17:00–17:30	Pun (TAMU)		Khodabakhshi (UT)	Sehic (Lund U)

Detailed program

Monday, September 7

13:30–14:00: Opening

14:00–15:45: **Prof. G. Rozza (SISSA)**, “Model reduction for high-Reynolds number CFD”

16:00–16:25: H. Nguyen (WIAS Berlin), “A shape optimization problem for stationary Navier-Stokes flows in three-dimensional tubes”

16:30–16:55: S. Dou (TU Denmark), “Applications of non-intrusive model order reduction approaches in long wind turbine blades with large-deflection effects”

17:00–17:25: S. M. Pun (Texas A&M), “Computational methods and model reduction using constraint energy minimizing generalized multiscale finite element methods”

Tuesday, September 8

09:00–10:45: **Prof. P. Benner (MPI - Magdeburg)**, “System-theoretic methods for linear and nonlinear MOR”

11:00–11:25: F. Bonizzoni (University of Vienna), “Rational-based MOR for parametric Helmholtz problems”

11:30–11:55: I. Cohen (Technion), “Fluid dynamics meets image processing through non-linear-mode decomposition”

12:00–12:25: H. Jamil (RWTH Aachen), “Model Order Reduction for an Induction Hardening Process”

14:00–14:45: **Industrial talk: J. Ballani (Akselos)**, “Digital Twins of Large Infrastructure”

15:00–15:25: M. Strazzullo (SISSA), “Advances in Reduced Order Methods for Optimal Flow Control Problems”

15:30–15:55: H. Sampedro Llopis (TU Denmark), “Reduced basis modelling for real-time wave-

based virtual acoustics simulations”

16:00–17:30: **Poster session**

Wednesday, September 9

09:00–10:45: **Prof. O. Mula (Université Paris-Dauphine), “Reduced Modeling for Inverse Problems”**

11:00–11:25: F. A. B. Silva (TU Eindhoven), “Data Assimilation for Imperfect Models”

11:30–11:55: N. Nellesen (RWTH Aachen), “Model Order Reduction for parameterized Data Assimilation and its Experimental Design”

12:00–12:25: E. Grosjean (Sorbonne University), “Non Intrusive Reduced basis methods (NIRB) ”

14:00–15:45: **Prof. G. Haller (ETH Zurich), “Exact nonlinear model-reduction onto spectral submanifolds”**

16:00–16:25: F. Pichi (SISSA), “Reduced order models for parametric bifurcation problems in nonlinear PDEs”

16:30–16:55: R. Kandinskii (KU Leuven), “Geometry-parameterized reduced order modelling for permeability computations”

17:00–17:25: P. Khodabakshi (UT Austin), “Data-driven reduced order model for solidification processes in additive manufacturing”

Thursday, September 10

09:00–10:45: **Prof. K. Smetana (University of Twente), “Randomized algorithms in MOR”**

11:00–11:25: J. Schleuss (University of Münster), “Optimal local approximation spaces for parabolic problems”

11:30–11:55: J. Nichols (Australian National University), “Nonlinear reduced modelling and model selection for state estimation of parametric PDEs”

12:00–12:25: S. Chellappa (MPI - Magdeburg), “A Training Set Sampling Strategy for the Reduced Basis Method”

14:00–15:45: **Prof. C. Pagliantini (TU Eindhoven), “Structure-preserving model order reduction of Hamiltonian systems: linear and nonlinear reduced basis methods”**

16:00–16:25: T. Moser (TU Munich), “A Riemannian Framework for \mathcal{H}_2 -Optimal Model Reduction of Port-Hamiltonian Systems”

16:30–16:55: E. Vidlickova (EPF Lausanne), “Time discretization and stability properties for dynamical low rank approximation of random parabolic equations”

17:00–17:25: K. Sehic (Lund University), “Low-dimensional offshore wave input for extreme event quantification”

Poster contributions

- E. Abi Raad (RWTH Aachen): “Supervised classification of ultrasonic metal welds”
- M. Alireza Mirhoseini (University of Notre Dame): “Discontinuity-aligned approximation of hyperbolic problems”
- M. Bannenberg (Uni Wuppertal): “Reduced Order Multirate for Coupled Differential Algebraic Systems”
- N. Discacciati (EPF Lausanne): “Modeling synchronisation in globally coupled oscillatory systems using model order reduction”
- M. H. Khalid (University of Twente): “Symplectic model order reduction for the seismic wave equation”
- S. McQuarrie (ICES, UT Austin): “Data-driven reduced-order models via regularized operator inference for a single-injector combustion process”
- S. Neeckx (KU Leuven): “Model order reduction in service of thermo-elastic coupled gear pairs”
- F. Pind (TU Denmark): “Real-time virtual acoustics using physics-informed data-driven techniques”
- D. Pradovera (EPF Lausanne): “Non-intrusive greedy MOR for frequency-domain problems”