

Schedule Model Order Reduction Summer School

24 – 28 September 2018

Hamburg

Bundesstr. 55 (Geomatikum), room 740

	Monday 24	Tuesday 25	Wednesday 26	Thursday 27	Friday 28
09:00 – 09:30	Welcome	Maday	--	Stykel Passivity-perserving model reduction for magneto-quasistatic problems	--
09:30 – 10:00	Rozza An introduction to reduced basis methods for parametrized PDEs		Balabanov Dictionary-based reduced basis method via random sketching		Ali Reduced basis methods – application to variational discretization of elliptic control problems
10:00 – 10:30	Rozza State of the art and perspectives in reduced order methods for computational fluid dynamics		Buchfink Symplectic model order reduction		
10:30 – 11:00		Coffee break (Museum downstairs)	Coffee break (Museum downstairs)	Coffee break (Museum downstairs)	Coffee break (Museum downstairs)
11:00 – 11:30	Coffee break (Museum downstairs)	Herberg Introduction to optimal control	Tokoutsu Certified reduced basis method for nonaffine parametrized optimal control problems	Lochner RB Lagrange-systems and optimal control of electromagnetic heating	Hoppe Low-rank tensor techniques for PDE-constrained optimization
11:30 – 12:00	Gräßle Introduction to POD	Banholzer Multiobjective optimal control using reduced-order modeling	Vaidya Fast estimation of blood vessel cooling effects in hepatic radio-frequency ablation using the reduced basis method	Demo Shape optimization in viscous flow by free-form deformation, dynamic mode decomposition and proper orthogonal decomposition with interpolation	Gräßle POD model order reduction with space-adapted snapshots for incompressible flows
12:00 – 12:30	Gosea Model reduction of semi-discretized fluid flow problems from data	Mechelli A comparison of POD-based augmented Lagrangian method and primal-dual active set strategy for state constraint problems	Nellesen A certified reduced basis method for parametrized 3D-VAR data assimilation	Bertram, A. Data-driven variable-fidelity surrogate modeling for high-dimensional outputs	Closing
12:30 – 14:00	Lunch (Mensa Geomatikum)	Lunch (Mensa Geomatikum)	Lunch (Mensa Geomatikum)	Lunch (Mensa Geomatikum)	Lunch (Mensa Geomatikum)
14:00 – 14:30	Bansal Model Order Reduction for convection dominated problems	Shuva RB-LQR control for softtissue	Network activity	Dorschky Introduction to balanced truncation	

14:30 – 15:00	Brunken Model reduction for (kinetic) transport equations	Degen Using the reduced basis method for a geophysical inversion problem	Network activity	Bertram, C. An ODE framework for approximating the Gramian
15:00 – 15:30	Kweyu Fast solution of the Poisson-Boltzmann equation by the reduced basis method and range-separated canonical / tucker tensor format	Coffee break (Museum downstairs)		Coffee break (Museum downstairs)
15:30 – 16:00	Coffee break (Museum downstairs)	Scientific Skills		Software Session
16:00 – 16:30	Posterblitz Froidevaux Band structure computations for photonic crystals Hossain Model Reduction for Descriptor Systems Karachalios The Loewner framework between compression, iteration and optimal selection Palii An efficient discretization schemes for radiative transfer equation based on higher order flux splittings Gräßle Combining POD-MOR with adaptivity	Hinze Do's and Dont's in scientific publications Behrens Presentation skills		Demo Lochner
16:30 – 17:00	Postersession +			
17:00 – 17:30	Snacks + Come together (Museum downstairs)			
17:30 – 19:00				
19: 00 -		Dinner at Taverna Romana (Schulterblatt 53)		Dinner at Fischerhaus (St. Pauli Fischmarkt 14)