GAMM2025

Tuesday 8 April 2025

S20: Dynamics and control: S20.01 - Room 2 (16:30 - 18:30)

   -**Conveners: Jonas Schießl; Lukas Lanza**

time	[id] title	presenter
16:30	[498] Model predictive control for uncertain systems - robust and data-driven designs	KÖHLER, Johannes
17:10	[499] Near-optimal performance of stochastic economic MPC	SCHIESSL, Jonas
17:30	[501] Vertical Vibration Reduction of Maglev Vehicles using Nonlinear Model Predictive Control	HERMLE, Mario
17:50	[502] Model hierarchy for the design of a MPC controller in gas networks	ORTEGÓN-VILLACORTE, Andrés

Wednesday 9 April 2025

S20: Dynamics and control: S20.02 - Room 2 (08:30 - 10:10)

   -Conveners: Josie König; Yevgeniya Filanova

time	[id] title	presenter
08:30	[503] Comparison of a-posteriori error estimators in the context of Parametric Model Order Reduction by Matrix Interpolation	SCHOPPER, Sebastian
08:50	[504] Reduced Order Modeling for Frequency Response Functions of Nonlinear Dynamical Systems: Application to Gear Transmission Systems	MOHAMED, Hady
09:10	[506] Application of operator inference to reduced-order modeling of constrained mechanical systems	FILANOVA, Yevgeniya
09:30	[507] Approximate Balanced Truncation for Linear Structured Systems based on Greedy Numerical Integration	REDDIG, Celine
09:50	[508] System-theoretic model order reduction for data assimilation	KÖNIG, Josie

S20: Dynamics and control: S20.03 - Room 2 (16:30 - 18:30)

   -Conveners: Yevgeniia Yevgenieva; Jan Heiland

time	[id] title	presenter
16:30	[509] Controllability of an orbiting satellite model with electromagnetic-only actuation	YEVGENIEVA, Yevgeniia
16:50	[510] On the existence of periodic solutions to weakly nonlinear distributed parameter control systems	ZUYEV, Alexander
17:10	[511] Approximate Control by Series Expansion with Application to the Ball and Beam System	GERBET, Daniel
17:30	[513] Comparison and analysis of event-triggered state estimation methods for nonlinear systems	JI, Jiaxin
17:50	[514] Flatness-based observer design of Shallow Water Waves in a Tube with Moving Boundary and non-collocated measurement in Material-Fixed Coordinates	WURM, Jens
18:10	[512] Observability Test for Systems with Rational Nonlinearities	RÖBENACK, Klaus

Thursday 10 April 2025

S20: Dynamics and control: S20.04 - Room 2 (08:30 - 10:30)

-Conveners: Oleksii Molodchyk; Sofya Maslovskaya

time	[id] title	presenter
08:30	[515] Improving Policy Iteration: A Koopman-Based Riccati Analogue for Nonlinear Control Systems	HÖVELER, Bernhard
08:50	[516] Exploring the Links between the Fundamental Lemma and Kernel Regression	MOLODCHYK, Oleksii
09:10	[517] Exponential trim turnpike property for optimal control systems with symmetries	WEMBE, Boris
09:50	[519] New Lagrangian framework for optimality conditions in second order optimal control problems	MASLOVSKAYA, Sofya
10:10	[520] New discrete Lagrangian approach for solving mechanical optimal control problems	KONOPIK, Michael

S20: Dynamics and control: S20.05 - Room 2 (14:00 - 16:00)

-Conveners: Victoria Grushkovska; Sofya Maslovskaya

time	[id] title	presenter
14:00	[521] Exponential splittings in the presence of unbounded operators	KROPIELNICKA, Karolina
14:40	[522] Extremum seeking algorithms with time-varying gains	GRUSHKOVSKA, Victoria
15:00	[523] Simultaneous Inversion for Underactuated Mechanical Systems with Servo-Constraints	WANG, Tengman
15:20	[524] An averaging approach for the optimal design of stand-alone mini- grids	KLICHE, Nina
15:40	[525] Rational Approximation of Transfer Functions with Automated Detection of Relative Degrees	HEILAND, Jan

S20: Dynamics and control: S20.06 - Room 2 (16:30 - 18:30)

-Conveners: Simon Gottschalk; Lukas Lanza

time	[id] title	presenter
16:30	[526] Safeguarded Hybrid Reinforcement Learning for Driving on a Racetrack	GOTTSCHALK, Simon
16:50	[527] Reducing Communication in Distributed Predictive Control: A Case Study from Mobile Robotics	EBEL, Henrik
17:10	[500] Using Polar Coordinates for Sub-Riemannian Formation Control of Mobile Robots	ROSENFELDER, Mario
17:30	[789] Reinforcement learning based tuning of servo motor controllers	SIMONELLI, Ruggero
17:50	[518] Optimal control for a class of linear transport dominated systems via the shifted proper orthogonal decomposition	BURELA, Shubhaditya

Friday 11 April 2025

<u>S20: Dynamics and control: S20.07</u> **- Room 2 (08:30 - 10:30)**

 -Conveners: Civan Yavas; Lukas Lanza

time	[id] title	presenter
08:30	[528] Modeling of ambient temperature influence on dynamic characteristics of viscoelastic layered plates	LITEWKA, Przemyslaw
08:50	[529] Application of the Complex Harmonic Balance Method to determine parameters of a nonlinear fractional Zener model	PAWLAK, Zdzislaw
09:10	[531] The use of viscoelastic layers to retrofit the dynamic resistance of reinforced concrete frames	YAVAS, Civan
09:30	[532] Towards Advancing Energy Efficiency in Subway Systems through Port-Hamiltonian Formulation	HINSEN, Dorothea
09:50	[533] Stability of hybrid systems of variable dimension	SCHULTE, Marvin