

ERNSI WORKSHOP 2024

Centro Culturale Don Orione Artigianelli

POSTER SESSIONS – List of Posters

Poster session 1

1. **Subspace tracking for online system identification**.....Andras Sasfi
2. **Weighted Regularized State-Space Neural Networks for Physics-Guided Model Augmentation**.....Yuhan Liu
3. **Learning-based model augmentation of physical models**.....Jan H. Hoekstra
4. **Non-Parametric Identification Beyond the Nyquist Frequency**.....Max van Haren
5. **Guaranteeing stability in transfer function identification through unconstrained parametrizations**.....Johan Kon
6. **Automatic Rank Determination for Bayesian TN Kernel Machines**.....Afra Kilic
7. **Dealing with missing data: A matrix completion-based method for recurrence plots constructed from time series with missing values**.....Martijn Boussé
8. **Using the SVD to compute output difference equation of Polynomial State-Space Models**.....Sarthak De
9. **Memory-dependent abstractions of stochastic dynamical systems**.....Adrien Banse
10. **Extending the ROVA framework to model nonlinear, frequency-translating systems**.....Amedeo Varano
11. **Disturbance Estimation for Identification of Non-linear Differential-Algebraic Equation Models**.....Robert Bereza
12. **Bridging Prediction Error Method and Subspace Identification: A Weighted Null Space Fitting Method**.....Jiabao He
13. **An Inverse Learning Paradigm for Controller Tuning Rules**.....
.....Braghadeesh Lakshminarayanan
14. **Transformer architecture – a dynamical system perspective**.....Krzysztof Zajac
15. **A Lasso-Based Soft Sensing Method for Sensor Selection and Model Sparsity in Complex Systems**.....Le Wang
16. **A study of Regret Minimization for Static Scalar Nonlinear Systems**.....Ying Wang
17. **Adaptive Sampling for Counterfactual Explanations**.....Margarita A Guerrero

18. Data-Driven and Stealthy Deactivation of Safety Filters	Daniel Arnström
19. Structured State-Space Models are deep Wiener models	Fabio Bonassi
20. Machine learning differentiation of Parkinson’s disease and normal pressure hydrocephalus using wearable sensors capturing gait impairments	Stefano Magni
21. A novel recursive total least squares algorithm for online vehicle parameter identification	Hugo Koide
22. Nonlinear data-driven predictive control	Antonio Fazzi
23. Data-Enabled Policy Optimization for Direct Adaptive Learning of the LQR	Feiran Zhao

Poster session 2

1. Measurements and System Identification for the Characterization of Smooth Muscle Cell Dynamics	Dilan Öztürk
2. Competitive/Collaborative Fusion of Dynamics (CoCoADyn)	Aurelio Raffa Ugolini
3. Convergence of energy-based learning in linear resistive networks	Thomas Chaffey
4. Damage detection in nonlinear systems by nonlinearity cancellation via output injection	Neha Aswal
5. Streamlining Evaluation and Comparison on Benchmarks in System Identification Research	Gerben I. Beintema
6. On Space-Filling Input Design for Nonlinear Dynamic Model Learning: A Gaussian Process Approach	Máté Kiss
7. Learning Subsystem Dynamics in Nonlinear Systems via Port-Hamiltonian Neural Networks	S. Moradi
8. Deep-Learning-Based Model Augmentation of Vehicle Dynamics	Bendegúz M. Györök
9. Tensor Network based Feature Learning Model	Albert Saiapin
10. Inference of dynamical physical interactions in complex networks with zero knowledge on network topology	Zuogong Yue
11. The Impact of Nonlinearity Compensation and Noise Reduction Algorithms in Hearing Aids	Johanna Wilroth
12. Exploiting the Macaulay Matrix structure for the globally optimal identification of autonomous systems	Lukas Vanpoucke

13. The Cuckoo Problem: Finding the Globally Optimal Critical Value of a Polynomial Optimization Problem using the Macaulay Matrix.....	Hans van Rooij
14. Error-in-variables in hybrid system identification.....	Wojciech Sopot
15. Modelling Cell Differentiation Trajectories in Single Cell Sequencing Data as an Optimal Transport Problem over Multiple Constrained Marginals.....	Magnus Tronstad
16. A data-driven model-based approach for balancing hydronic heating systems in residential buildings.....	Henrik Håkansson
17. Data-Driven Stability Analysis of Switched Linear Systems Using Adaptive Sampling.....	Alexis Vuille
18. Efficient Evaluation of Target Tracking Using Entropic Optimal Transport.....	Alfred Wärensäter
19. Using statistical linearization in experiment design for identification of robotic manipulators.....	Stefanie Zimmermann
20. A MIMO Volterra Tensor Network with a Bayesian Approach.....	Eva Memmel
21. An asymptotic closed-loop analysis of γ-DDPC with terminal constraints.....	Valentina Breschi
22. An in-context learning framework for control.....	Riccardo Busetto