

**Session Program**

**Aug 12 - 16, 2024**

**IFIP TC7 System Modeling and Optimization**  
**MS 01: Optimal Control and Machine Learning**

Von-Melle-Park 8  
Von-Melle-Park 8, 20146 Hamburg, Germany

# Mon, August 12

2:00 PM

## MS 01: Optimal Control and Machine Learning: MS 01-1

Session | Location: Von-Melle-Park 8, Seminarraum 205

14:00 - 14:30

### Data-driven predictive control with stability guarantees

**Speaker**

Manuel Schaller

14:30 - 15:00

### A relaxation-based probabilistic approach for PDE-constrained optimization under uncertainty with pointwise state constraints

**Speaker**

Mathias Staudigl

15:00 - 15:30

### A Greedy Algorithm for Efficient Learning of Control Systems

**Speaker**

Simon Buchwald

3:30 PM

4:00 PM

## MS 01: Optimal Control and Machine Learning: MS 01-2

Session | Location: Von-Melle-Park 8, Seminarraum 205

16:00 - 16:30

### On the convergence of feedback laws generated via machine learning methods

**Speaker**

Donato Vásquez Varas

16:30 - 17:00

### Adaptive Step Sizes for Preconditioned Stochastic Gradient Descent

**Speaker**

Frederik Köhne

5:00 PM

## Tue, August 13

9:00 AM

### MS 01: Optimal Control and Machine Learning: MS 01-3

Session | Location: Von-Melle-Park 8, Seminarraum 205

09:00 - 09:30

#### Approximating optimal value functions with neural networks under a decaying sensitivity assumption

**Speaker**

Mario Sperl

09:30 - 10:00

#### A Recursive Multilevel Algorithm for Deep Learning

**Speaker**

Isabel Jacob

10:00 - 10:30

#### Dissipativity Properties in Neural Network Training

**Speaker**

Jens Püttschneider

10:30 AM

11:00 AM

### MS 01: Optimal Control and Machine Learning: MS 01-4

Session | Location: Von-Melle-Park 8, Seminarraum 205

11:00 - 11:30

#### On the continuity of the value function in reinforcement learning and optimal control

**Speaker**

Hans Harder

11:30 - 12:00

#### Physics-informed neural networks for non-smooth PDE-constrained optimization problems

**Speaker**

Yongcun Song

12:00 PM