

Autonomous Robots and Multirobot Systems (ARMS) 2025

AAMAS 2025 Workshop

Monday, May 19 – Room: LaSalle B, 5th Floor

08:40 **Enhancing Lifelong Multi-Agent Path Finding with Cache Mechanism**

Yimin Tang, Zhenghong Yu, Yi Zheng, T. K. Satish Kumar, Jiaoyang Li, Sven Koenig

09:05 **Multi-Agent Pickup and Delivery with Batteries**

Marcello Bavaro, Francesco Amigoni

09:30 **Rearrangement Optimization for High-Density, Grid-Based Storage Systems**

Tzvika Geft, Kostas Bekris, Jingjin Yu

Coffee break from 10:00 to 10:45

10:45 **Exploiting Aggregate Programming for Task Assignment in a Multi-Robot Library Service Prototype**

Giorgio Audrito, Andrea Basso, Daniele Bortoluzzi, Ferruccio Damiani, Giordano Scarso, Gianluca Torta

11:10 **Safe Monte Carlo planning with velocity obstacles for mobile robots in dynamic environments**

Lorenzo Bonanni, Daniele Meli, Alberto Castellini, Alessandro Farinelli

11:35 **Robust Trajectory Generation and Control for Quadrotor Motion Planning with Field-of-View Control Barrier Certification**

Lishuo Pan, Mattia Catellani, Lorenzo Sabattini, Nora Ayanian

12:00 **Transformer Guided Coevolution: Improved Team Selection in Multiagent Adversarial Team Games**

Pranav Rajbhandari, Prithviraj Dasgupta, Donald Sofge

Lunch break from 12:30 to 14:00

14:00 **Continual Reinforcement Learning via Autoencoder-Driven Task and New Environment Recognition**

Zeki Doruk Erden, Donia Gasmi, Boi Faltings

14:25 **Agential AI for Integrated Continual Learning, Deliberative Behavior, and Comprehensible Models**

Zeki Doruk Erden, Boi Faltings

14:50 **Fast and the Furious: Hot Starts in Pursuit-Evasion Games**

Gabriel Smithline, Scott Nivison

15:15 **Mixed Strategy Constraints in Continuous Games**

Mel Krusniak, Forrest John Laine

Coffee break from 15:45 to 16:30

16:30 **Emergent Swarm Behavior Prediction using 1D-Convolution for Autonomous Closed-Loop Behavior Control**

Varun Raveendra, Connor Mattson, Daniel S. Brown

16:55 **Towards Decentralised Formation of Minimal-Length Networks Using Swarms of Robots**

Genki Miyauchi, Mohamed S. Talamali, Alan G. Millard, Roderich Gross

Discussion and closing remarks