

# POSTER PRESENTATION SCHEDULE 2024

## POSTER SESSION #1 – JANUARY 10th 13.40–14.40

**\*Best Poster Award Contestant**

Artificial Intelligence/Machine Learning

ID	AUTHOR	POSTER TITLE
S1A1	Linus Aronsson	Correlation Clustering with Active Learning of Pairwise Similarities
S1A2	Paul Häusner	Neural incomplete factorization: learning preconditioners for the conjugate gradient method
S1A3	Amr Alkhatib	Interpretable Graph Neural Networks for Tabular Data
S1A4	Shih-Min Yang	Is Enhanced Learning Efficiency the Key to Transform Robotic Manipulation Challenges?
S1A5	Anindya Sundar Das	Few-shot Anomaly Detection in Text with Deviation Learning
S1A6	Fabian Sinzinger	Impact of Tractogram Filtering and Graph Creation for StructuralConnectomics in Subjects with Parkinson's Disease
S1A7	Livia Qian	Dialogue representations
S1A8	Axel Berg	Sound Source Localization using a Masked Autoencoder
S1A9	Rasmus Kjær Høier	A Lagrangian Perspective on Dual Propagation
S1A10	Sourasekhar Banerjee	*PerMFL: Personalized Multi-tier Federated Learning

S1A11	Matthias Möller	DeepTreeLog
S1A12	Amir Mehrpanah	Oops! I Fell for an Explanation!
S1A13	Christopher Kolloff	Method for obtaining mechanistic models of kinetic exchange using (Dis-)connected simulations and NMR relaxation dispersion data
S1A14	Erik Karlsson Nordling	A Bayesian Method for Approximating the Transition Function in Partially Observable Continuous State Space MDPs
S1A15	Francisco Miguel Calatrava Nicolás	Sensor-Based Human Activity Recognition
S1A16	Kamran Hosseini	Dcut: Robustness Framework for Deep Neural Networks
S1A17	Sofia Ek	*Externally Valid Policy Evaluation Combining Trial and Observational Data
S1A18	Franco Ruggeri	Explainable multi-agent reinforcement learning
S1A19	Ehsan Doostmohammadi	Instruction Tuning for Non-English Languages And Limitations in Its Evaluation
S1A20	Ciwan Ceylan	Structural Node Embeddings for Graph Alignment
S1A21	Erik Brorsson	Safe and Efficient Collaborative Automation Systems
S1A22	Alexander Dürr	tba
S1A23	Hadi Mousanejad Jeddi	Tensor-Wise Post-Training Quantization for Graph Neural Network Hardware Acceleration
S1A24	Alexander Gower	*Enabling robot scientists in systems biology: hypothesis formation, experimental design and model improvement
S1A25	Karl Bengtsson Bernander	Equivariant Neural Networks for Biomedical Image Analysis
S1A26	Gabriel Baravdish	Sparse adaptive sampling for visual data reconstruction
S1A27	Jennifer Andersson	Bayesian Uncertainty Quantification in High-dimensional Stellar Magnetic Field Models

S1A28	Faseeh Ahmad	Introducing Adaptive Recovery Behaviors in Behavior Trees
S1A29	Dominik Fay	Personalized Privacy Amplification via Importance Sampling
S1A30	Joel Oskarsson	*Graph-based Neural Weather Prediction for Limited Area Modeling
S1A31	Carl Hvarfner	Self-correcting Bayesian Optimization through Bayesian Active Learning
S1A32	Yifan Ding	Neural Image Synthesis with Histogram Priors
S1A33	Josef Bengtson	Adjustable Visual Appearance for Generalizable Novel View Synthesis
S1A34	Daniel Gedon	On Feature Learning of Recursive Feature Machines and Automatic Relevance Determination
S1A35	Amirhossein Ahmadian	Novelty Detection in Pretrained Representation Space with Locally Adapted Likelihood Ratio
S1A36	Simona Gugliermo	*Learning Planning Domains for Intelligent Transport Systems
S1A37	Oscar Stenhammar	Predicting the Quality of Service for Connected Vehicles
S1A38	Shivam Mehta	*Matcha-TTS: A fast TTS architecture with conditional flow matching
S1A39	Lovisa Hagström	The Effect of Scaling, Retrieval Augmentation and Form on the Factual Consistency of Language Models
S1A40	Rishi Hazra	SayCanPay: Heuristic Planning with Large Language Models using Learnable Domain Knowledge
S1A41	Maciej Wozniak	How to deal with robots perception failures?
S1A42	Minh Ha Le	Exploring adversarial aspects of machine learning for preserving privacy and improving robustness
S1A43	Frida Heskebeck	Calibration of BCI's
S1A44	John Törnblom	Formal Reasoning about Input-Output Relations of Tree Ensembles

S1A45	Leonard Papenmeier	*Boune: Reliable High-Dimensional Bayesian Optimization for Combinatorial and Mixed Spaces
S1A46	Jean-Paul Ivan	Domain Knowledge Priors and Constraints for Continual Gaussian Processes
S1A47	Amanda Olmin	Generalised Active Learning with Annotation Quality Selection
S1A48	Ann-Sophie Hilkert	Hopfield networks for time series forecasting
S1A49	Yaroslava Lochman	Learned Trajectory Embedding for Subspace Clustering
S1A50	Simon Johansson	The Semi-Supervised Data Representation Problem
S1A51	Erik Englesson	Robust Classification via Regression
S1A52	Fereidoon Zangeneh	Robust Relative Camera Pose Estimation
S1A53	Emir Konuk	Feature Augmentations
S1A54	Victor Aregbede	Affordance-based Visual Goal Imagination

## Artificial Intelligence/Math

ID	AUTHOR	POSTER TITLE
S1B1	Jens Agerberg	Topological Data Analysis for Neuroscience
S1B2	Fethi Bencherki	Learning Optimal Dispatching Policies in Queueing Systems
S1B3	Oscar Carlsson	HEAL-SWIN: A vision transformer on the sphere
S1B4	Jonas Conneryd	Graph Colouring Is Hard on Average for Polynomial Calculus
S1B5	Marcus Häggbom	Meta-Learning the Microcanonical Descent
S1B6	Erik Jansson	*Shape analysis on matrix groups with applications in Cryo-EM microscopy
S1B7	Jacob Lindbäck	*Bringing regularized optimal transport to lightspeed: a splitting method adapted for GPUs
S1B8	Vincent Molin	Cooling the Bouncy Particle Sampler for high-dimensional optimization in continuous time
S1B9	Viktor Nilsson	REMED! A neural entropy estimator
S1B10	Andy Oertel	Certified Combinatorial Optimization
S1B11	Felix Rydell	Sampson Approximation in Computer Vision
S1B12	Lena Strobl	Formal Languages Theoretic Expressivity of Transformers
S1B13	Manu Upadhyaya	Automated tight Lyapunov analysis for first-order methods
S2B14	Joannes Vermant	Structural Rigidity and Flexibility Using Graphs of Groups
S2B15	Måns Williamson	Componentwise non-linear clipping algorithms

## Software

ID	AUTHOR	POSTER TITLE
S1C1	Derya Akbaba	Applying Feminism to Visualization Research
S1C2	Ricardo Caldas	Software engineering for resilient robotics
S1C3	Matthias Pall Gissurarson	CSI: Haskell – Fault-Localization in Lazy Languages using Runtime Tracing
S1C4	Adha Hrusto	Autonomous Monitors for Detecting Failures Early in Operations
S1C5	Peng Kuang	Applying Machine Learning to Gaze Data in Software Development
S1C6	Eric Olsson	SandTrap: Securing JavaScript-driven Trigger-Action Platforms
S1C7	Idriss Riouak	Efficient Demand Evaluation of Circular Attributes Using Static Analysis
S1C8	Piero Romare	Privacy Profiles for Enhanced Privacy Permission Management in Trigger-Action Platforms
S1C9	Johannes Wilson	Extending the Authentication Hierarchy with One-Way Agreement

## Autonomous Systems

ID	AUTHOR	POSTER TITLE
S1D1	Martin Andersson	Uplink Symbol Detection in Dynamic TDD MIMO Systems with AP-AP Interference
S1D2	Ahmad Terra	Can Explanation Improve AL Model?
S1D3	Erik Börve	Interaction-Aware Trajectory Planning by Approximate Distributed MPC
S1D4	David Dörner	Distributed Control of Underwater Robots
S1D5	Cihan Eryonucu	Security and Privacy for Mobile Crowdsensing Systems
S1D6	Razan Ghzouli	Leveraging Behavior Trees for Reusability and Understandability
S1D7	Marko Guberina	Hand-arm coordination control for robot interaction tasks
S1D8	Jonas Hansson	Transient Analysis and Control for Scalable Network Systems
S1D9	Georg Hess	Neural Rendering for Autonomous Driving
S1D10	Zheng Jia	A Study of Task-Space Path-Velocity Control for Torque-Limited Redundant Manipulators under Uncertainties
S1D11	Suleman Khan	An Explainable Deep-Learning Framework for Anomaly Detection in ADS-B
S1D12	Elias Krantz	Distributed Control of Autonomous Space Vehicles
S1D13	Dzenan Lapandic	Coordination and Control of Unmanned Aerial and Surface Vehicles
S1D14	Adam Lilja	Neural Splines for Online Mapping

S1D15	William Ljungbergh	End-to-end autonomous driving
S1D16	Lubos Marcinek	Conversational speech synthesis for collaborative robots
S1D17	Matthias Mayr	Learning with Skill-Based Robot Systems
S1D18	Vandana Narri	Shared Situational Awareness with V2X Communication and Set-membership Estimation
S1D19	Truls Nyberg	Foresee the Unseen: Highway-Driving with Safe Velocity Bounds on Occluded Traffic
S1D20	David Ohlin	Optimal Control of Positive Networks
S1D21	Javad Parsa	Coherence-Based Input Design for Nonlinear Systems
S1D22	Farhan Rasheed	A Topology-based Approach For Scalar Field Comparison
S1D23	Qunying Song	*Critical Scenarios Identification for Testing of Autonomous Driving Systems
S1D24	Gustav Vallinder	Control-Oriented Modelling of the Tractor-Trailer System
S1D25	Emil Vladu	Robust Control of Large-scale Systems
S1D26	Birgitta Wingqvist	Exploring Autonomous USVs - Planning and Maneuvring
S1D27	Gustav Zetterqvist	Seismic Elephant Tracking
S1D28	Yufei Zhu	Why use maps of dynamics for long-term human motion prediction?



## POSTER SESSION #2 – JANUARY 10th 15.25–16.25

### \*Best Poster Award Contestant

#### Artificial Intelligence/Machine Learning

ID	AUTHOR	POSTER TITLE
S2A1	Signe Sidwall Thygesen	Exploring Transition Ensembles using Hierarchical Clustering and Visual Representations
S2A2	Matthias Wagner	Navigating the Upcoming EU AI Act
S2A3	Tiago Almeida	*Learning motion patterns from heterogeneous agents
S2A4	Yushan Zhang	GMSF: Global Matching Scene Flow
S2A5	Marco Iannotta	Interpretable, Modular and Adaptive Behavior Trees for Robot Manipulation
S2A6	Hampus Åström	Exploring with Goals: Autonomous deliberate exploration strategies using goal conditioned reinforcement learning
S2A7	Pavlo Melnyk	Spherical Neurons for Geometric Deep Learning
S2A8	Alan Lahoud	Uncertainty to Data-driven Optimization Problems
S2A9	Ermanno Bartoli	Streaming Network for Continual Learning of Object Relocations under Household Context Drifts
S2A10	Daniel Brunnsåker	*Interpretable metabolic profile predictions through a mixed multiomics integration strategy
S2A11	Leo Dahl	Data-driven exploration of the inflammatory proteome associated with SARS-CoV-2 infection and/or vaccination from home-sampled blood spots
S2A12	Sofia Andersson	Probabilistic design of two-state protein sequences

S2A13	Johan Edstedt	3D from Few Images
S2A14	Sofiane Ennadir	A Simple and Yet Fairly Effective Defense for Graph Neural Networks
S2A15	Mohamadreza Faridghasemnia	Robot Learning of Language Grounding in Multiple Contexts Through Dialog
S2A16	Sana Al-azzawi	NLP in education
S2A17	Jingru Fu	*Individualized Brain MRI Synthesis from a Single Scan: Applications to Aging and Alzheimer's Disease
S2A18	Dennis Malmgren	Learning to plan safely
S2A19	Arthur Nijdam	privacy-preserving machine learning
S2A20	Niklas Gunnarsson	Diffusion-based 3D motion estimation from sparse 2D views
S2A21	Alkis Sygkounas	Human in the loop learning in autonomous driving
S2A22	Olivier Moliner	Geometry-Biased Transformer for Robust Multi-View 3D Human Pose Reconstruction
S2A23	Ahmet Ercan Tekden	Data-Efficient Representation Learning for Grasping and Manipulation
S2A24	Eduardo Gutierrez Maestro	*Stress Lingers: Recognizing the Impact of Task Order on Design of Stress and Emotion Detection Systems
S2A25	Johan Grönqvist	Verification of Low-Dimensional Neural Network Control
S2A26	Marcel Büsching	FlowIBR: Leveraging Pre-Training for Efficient Neural Image-Based Rendering of Dynamic Scenes
S2A27	Samuel Blad	Increasing Critic Robustness with Degenerate Distribution Mixtures in Discrete Action Reinforcement Learning
S2A28	Martin Isaksson	mmWave Beam Selection in Analog Beamforming Using Personalized Federated Learning
S2A29	Filip Kronström	Knowledge graph embeddings for scientific discovery

S2A30	Ioannis Athanasiadis	Introspective Prior Learning: A Prior Learning Odyssey
S2A31	Daniel Marta	MOSAIC: Multi-objective optimization from zero-shot language reasoning in preference-based reinforcement learning
S2A32	Dominik Drexler	Learning Sketches for Decomposing Planning Problems into Subproblems of Bounded Width
S2A33	Olle Hansson	Deep Quantization of GNNs with Run-time Hardware-Aware Training
S2A34	Charles Meyers	Safety-Critical Computer Vision
S2A35	Asma Raeisi	Object Insertion with Computer Graphics and Generative Models
S2A36	Stefan Stojanovic	Spectral Entry-wise Matrix Estimation for Low-Rank Reinforcement Learning
S2A37	Jingyu Guo	Deep Learning with Vision Transformers
S2A39	Adam Orucu	Neural Architecture Search in 6G
S2A40	Ahmad Saeed Khan	Confounding error-based general weighting scheme for covariates balancing
S2A41	Gizem Caylak	Statically Delayed Sampling
S2A42	Nithesh Chandher Karthikeyan	Diffusion Models for Dataset Generation
S2A43	Finn Rietz	Guaranteed constraint-satisfaction in model-free reinforcement learning? Possible, through invertible action projections!
S2A44	Markus Fritzsche	Can Vanilla Transformers Emulate GNNs?
S2A45	Magnus Tarle	*Reinforcement Learning for Electrical Power System Control
S2A46	Georg Bökman	Group equivariance emerging from training of neural networks
S2A47	Anton Matsson	Interpretable Policy Learning

S2A48	Martin Funkquist	Acting on Language Instructions
S2A49	Jonathan Styrod	Planning and learning up to 46 times faster than SOTA RL
S2A50	Qi Shao	HMComp: Extending High-Bandwidth Memory Capacity using Compression
S2A51	Cuong Le	HMDCap Human Motion and Dynamics Capture
S2A52	Chi Zhang	*Cross or Wait? Predicting Pedestrian Interaction Outcomes at Unsignalized Crossings
S2A53	Fabian Schmidt	ALEC2: Adaptive Level of Effective and Continuous Care for Common Mental Health Disorders

## Artificial Intelligence/Math

ID	AUTHOR	POSTER TITLE
S2B1	Aban Ansari-Önnestam	Finite termination of BFGS for quadratic problems
S2B2	Kasper Bågmark	*An energy-based deep splitting method for the nonlinear filtering problem
S2B3	Amandine Caut	Emergence of personality from sentences in TV shows
S2B4	Amaury Gouverneur	*Thompson Sampling Regret Bounds for Contextual Bandits
S2B5	Aryaman Jal	Polyhedral geometry of bisectors and bisection fans
S2B6	Olle Kjellqvist	Minimax Dual Control with Finite-Dimensional Information State
S2B7	Hoomaan Maskan	*A Variational Perspective on High-Resolution ODEs
S2B8	Max Nilsson	The Symmetry Coefficient of Legendre Functions
S2B9	Oskar Nordenfors	Optimization of Equivariant Neural Networks
S2B10	George Osipov	Parameterized Complexity of MinCSPs
S2B11	Mika Skjelnes	Cost Partitioning For Multiple Sequence Alignment
S2B12	Selma Tabakovic	Sepsis Treatment via Personalized Reinforcement Learning: A Multi-Head Dueling DQN Approach
S2B13	Olle Torstensson	Dynamically weighted tree transducers
S2B14	Björn Wehlin	Computational Framework for Piecewise Invariants
S2B15	Emma Andersdotter Svensson	Equivariant Nerural Differential Equations

## Software

ID	AUTHOR	POSTER TITLE
S2C1	Anoud Alshnakat	Robust Formal Semantics and Type System for P4
S2C2	Khashayar Etemadi	CigaR: Minimizing LLM Costs for Program Repair
S2C3	Lo Heander	DAPPER - Seamless, Tailored Code Review
S2C4	Ranim Khojah	Do you use ChatGPT to write code? Well, don't.
S2C5	Malsha Mahawatta	Asynchronous In-Range Dynamic and Distributed Network Orchestration Framework
S2C6	Johan Oxenstierna	Order-Picking Optimization
S2C7	Anton Risberg Alaküla	CodeProber: Live Compiler Exploration
S2C8	Konstantinos Sotiropoulos	DPREF: Decoupling using Dead Code Elimination for Prefetching Irregular Memory Accesses
S2C9	Ahmad B. Usman	Remote Attestation with Software Updates in Embedded Systems

## Autonomous Systems

ID	AUTHOR	POSTER TITLE
S2D1	Gabriel Arslan Waltersson	Haptic perception for in-hand object tracking
S2D2	Robert Berezka	Towards Scalable Identification of Non-linear Differential-Algebraic Equations with Process Disturbances
S2D3	Paula Carbó Cubero	Local feature matching for heterogeneous visual SLAM algorithms
S2D4	Pontus Ebelin	Improving Rendered Visual Experiences
S2D5	Muhammad Faris	Optimal CAVs Coordination in Mixed Traffic
S2D6	Lara Laban	Enhanced Path Planning for Autonomous UAV Missions: Integrating RRT* with Non-Linear Model Predictive Control for Obstacle Avoidance
S2D7	Alba Gurpegui	Minimax Linear Optimal Control of Positive Systems
S2D8	Anja Hellander	Optimal Task and Motion Planning for Tractor-Trailer Applications
S2D9	Andreas Jansson	Robust localization of close-range radar reflections
S2D10	Prabhat Jha	Games for efficient supervisor synthesis
S2D11	Hedieh Khosravi	Experimental Analysis of Physical Interacting Objects of a Building at mmWave
S2D12	Anton Kullberg	Adaptive Basis Function Selection for Computationally Efficient Predictions
S2D13	Malte Larsson	Efficient time of arrival self-calibration using source implicitization
S2D14	Kenneth Lau	Reinforcement Learning for Real-time Dose-based Adaptive Radiotherapy

S2D15	Simon Lindståhl	Change Point Detection with Adaptive Measurement Strategies for Network Performance Verification
S2D16	Hannes Marklund	Parameter Identification Using Multiple Shooting in Maximal Coordinates
S2D17	Adam Miksits	Uncertainty-Based Bandwidth Allocation for 5G-Enabled Mobile Robots with Offloaded Localization
S2D18	Frida Norlund	Data-driven modeling for sustainable mining
S2D19	Ali Nouri	Assuring Safety for Rapid and Continuous Deployment for Autonomous Driving
S2D20	Max Nyberg Carlsson	Robust Control over the Cloud
S2D21	Piyumal Ranawaka	Compiler Assisted Reuse Aware Dynamic On-Chip Memory Management for DNN Accelerators
S2D22	Shamisa Shoja	*Complexity Certification of Branch-and-Bound Methods for MILP and MIQP
S2D23	Matti Vahs	Belief Control Barrier Functions for Risk-aware Control
S2D24	Joris Verhagen	Time-Robust Multi-Agent Motion Planning for STL Specifications in Continuous Time
S2D25	Nana Wang	Simultaneous Topology Identification and Control for Complex Networks
S2D26	Bernhard Wullt	A MPC approach to motion planning in dynamic environments
S2D27	Ayesha Jena	Mixed-Initiative Interaction for Collaborative Robots
S2D28	Xiaomeng Zhu	Computer Vision for Manufacturing Quality Inspection with Synthetic Data