

# Poster Presentations Schedule

## POSTER SESSION #1 – January 11th 13:30-14:30

### Research Area Software

Author	Poster Title
Adha Hrusto	Quality monitors for anomaly detection in operations
Idriss Riouak	A Precise Framework for Source-Level Control-Flow Analysis
Ahmad B. Usman	Trust Establishment with Remote Attestation
Javier Ron Arteaga	Enhanced blockchain API using N-version engineering
Deepika Tiwari	Generating Tests from Production Data

### Research Area Autonomous Systems

Author	Poster Title
David Gillsjö	Semantic Room Wireframe Detection from a Single View
Julian M. Salt Ducaju	Robot Cartesian Compliance Variation for Safe Kinesthetic Teaching using Safety Control Barrier Functions
Truls Nyberg	Foresee the Unseen
Vandana Narri	Shared Situational Awareness using V2X communication
Anton Kullberg	Linearization-based learning of state-space models
Gustav Zetterqvist	Seismic Elephant Tracking

Simon Lindståhl	Measurement-based Admission Control in Sliced Networks: A Best Arm Identification Approach
Anja Hellander	Unified Task and Motion Planning
Hedieh Khosravi	mmWave channel characterization for positioning using 5G base station measurement
Adam Miksits	Safe navigation under localization uncertainty using robust control barrier functions
Muhammad Faris	Optimal coordination of vehicles at mixed-traffic intersections
Suleman Khan	Anomalous Behavior Detection in Aircraft based Automatic De- pendent Surveillance–Broadcast (ADS-B) system using Deep Graph Convolution and Generative model (GA-GAN)
Maria Charitidou	Time constrained coordination of multiple platoons using Signal Temporal Logic
Emil Vladu	Robust Control of Large-scale Systems

#### Research Area Artificial Intelligence Math

Author	Poster Title
Fabian Sinzinger	Reinforcement Learning-Based Tractography With $SO(3)$ Equivariant Agents
Fredrik Hellström	Information-Theoretic Generalization Bounds for Neural Networks and Meta Learning
Petter Restadh	Greedy Causal Discovery is Geometric
René Mellema	Normative reasoning for social simulation
Fethi Bencherki	TBD
Erik Jansson	Residual neural networks seen through the lens of shape analysis
Seyedsaeed Razavikia	Blind Asynchronous Over-the-Air Federated Edge Learning
Aryaman Jal	Bisection fans of Wasserstein balls and beyond

Jonas Conneryd	Proof Complexity
Olle Torstensson	Discretizing practical neural networks

Research Area Artificial Intelligence Machine Learning

Author	Poster Title
Ahmad Terra	BEERL: Both Ends Explanations for Reinforcement Learning
Daniel Gedon	No Double Descent in PCA: Training and Pre-Training in High Dimensions
Georg Bökman	Rotation invariant image matching - A deep learning approach called SE2-LoFTR
John Törnblom	Formal Reasoning about Input-Output Relations of Tree Ensembles
Jonathan Styrud	Learning behavior trees for robot automation
Martin Isaksson	Adaptive Expert Models for Federated Learning
Pavlo Melnyk	Spherical Neurons for Geometric Deep Learning
Quantao Yang	MPR-RL: Multi-Prior Regularized Reinforcement Learning for Knowledge Transfer
Rita Laezza	Robotic Manipulation of Deformable Linear Objects
Gizem Caylak	Static Delayed Sampling for Probabilistic Programming Languages
Matthias Mayr	Reinforcement Learning with Skill-Based Robot Systems
Hampus Åström	A Shared Pose Regression Network for Pose Estimation of Objects from RGB Images
Jakob Lindqvist	Training om unnormalised models
Mena Nadum	Real World Evidence on The Reproducibility of Clinical Trial Emulations from RCT-Duplicate Studies

Jingru Fu	Synthesis of pediatric brain tumor images with mass effect
Olivier Moliner	Bootstrapped Representation Learning for Skeleton-Based Action Recognition
Xixi Liu	GEN: Pushing the Limits of Softmax-Based Out-of-Distribution Detection
Ahmad Saeed Khan	Confounding error-based general weighting scheme for covariates balancing
Ahmet Ercan Tekden	Grasp Transfer based on Self-Aligning Implicit Representations of Local Surfaces
Emir Konuk	Relationships between network architecture and complexity
Johan Edstedt	DKM: Dense Kernelized Feature Matching for Geometry Estimation
Jennifer Andersson	Probabilistic Stellar Magnetic Field Reconstruction
Filip Kronström	Graph based knowledge representations for automated scientific discovery
Nancy Xu	Keypoint matching with graph neural networks
Dominik Fay	Federated Learning for Smart Radiotherapy Systems
Daniel Brunnsåker	Metabolic profile predictions using efficient and interpretable data descriptors generated with relational learning
Paul Höft	Generalization Prediction of LP-based Heuristics
Rasmus Kjær Høier	Accelerated Contrastive Hebbian Learning
Erik Wallin	Improving Open-Set Semi-Supervised Learning with Self Supervision
Arman Rahbar	Towards better representation learning in the absence of sufficient supervision
Emilio Jorge	Minimax-Bayes Reinforcement Learning
Shivam Mehta	Probabilistic and robust speech synthesis
Oscar Carlsson	Equivariant neural networks

## POSTER SESSION #2 – January 11th 15:30-16:30

### Research Area Software

Author	Poster Title
David Hasselquist	Fingerprinting Attacks and Encrypted Traffic Analysis
Khashayar Etemadi	Augmenting Diffis with Runtime Information
Andy Oertel	Certifying Combinatorial Solving Using Pseudo-Boolean Reasoning
Anton Risberg Alaküla	Property Probes
Matthias Pall Gissurarson	CSI: Haskell - Fault-Localization in Lazy Languages using Runtime Tracing

### Research Area Autonomous Systems

Author	Poster Title
Xiao Chen	Heterogenous traffic intersection coordination based on distributed model predictive control with invariant safety guarantee
Aleksandra Obeso Duque	To be defined
Joakim Brorsson	De-Trusting Third Parties
Kristin Nielsen	Localization for Autonomy in Underground Mines
Alexander Nilsson	Decryption Failure Attacks on Post Quantum Cryptography
Muhammad Rusyadi Ramli	Collaborative-engineering to realize trustworthy cyber-physical systems: A socio-technical perspective
Daniel Marta	Modeling Human-Feedback for Perceived Safety in Deep RL
Birgitta Wingqvist	Exploring autonomous USVs – Planning and Manoeuvring
Javad Parsa	Application-Oriented Input Design With Low Coherence Constraint

Cihan Eryonucu	Sybil-Based Attacks on Google Maps or How to Forge the Image of City Life
Javad Forough	Anomaly Detection and Countermeasures for Edge Clouds
Bernhard Wullt	Neural motion planning in dynamic environments
Piyumal Ranawaka	Compiler Assisted Reuse Aware On-Chip Memory Management for Edge DNN Accelerators
Farhan Rasheed	A Topology-based Approaches For Scalar Field Comparison

#### Research Area Artificial Intelligence Math

Author	Poster Title
Selma Tabakovic	Decision support for diagnosis of infectious diseases
Karl Bengtsson Bernander	Rotation-Equivariant Semantic Instance Segmentation on Biomedical Images
Robert Bereza-Jarocinski	Stochastic Approximation Methods for Identification of Non-linear Differential-Algebraic Equations Affected by Process Disturbances
Shamisa Shoja	Exac Complexity Certification of Branch-and-bound Methods for Mixed-integer Linear Programming
Jonatan Vallin	Geometry and Evolution in Deep Neural Networks
Måns Williamson	SRKCD: a stabilized Runge-Kutta method for stochastic optimization
Firooz Shahriari-mehr	Machine learning over networks: from an optimization point of view
Jacob Lindbäck	Douglas-Rachford splitting for Fast and Accurate Optimal Transport - Theory and Applications
Maarten Jensen	Context in Software Systems

## Research Area Artificial Intelligence Machine Learning

Author	Poster Title
Faseeh Ahmad	Task variation via Gaussian Process
Lidia Kidane	When and How to Retrain Machine Learning-based Cloud Management Systems
Karl Bäckström	Elasticity, Adaptiveness, and Synchronization in Concurrent Stochastic Gradient Descent
Niklas Åkerblom	Online Learning for Energy Efficient Navigation in Stochastic Transport Networks
Jean-Paul Ivan	Domain Knowledge Priors and Constraints for Continual Gaussian Processes
Samuel Blad	Empirical analysis of the convergence of Double DQN in relation to reward sparsity
Newton Mwai	Fast Treatment Personalization with Latent Bandits in Fixed-Confidence Pure Exploration
Dominik Drexler	Expressing, Exploiting and Learning the Subgoal Structure of Classical Planning Domains
Carl Hvarfner	Joint Entropy Search for Maximally-Informed Bayesian Optimization
Fereidoon Zangeneh	A Probabilistic Framework for Visual Localization in Ambiguous Scenes
Leonard Bruns	Towards Real-World Editable 3D Maps Using Deep Learning
Yaroslava Lochman	GEN: Pushing the Limits of Softmax-Based Out-of-Distribution Detection
Simon J	Decision making for combinatorial design of chemical libraries
Emanuel Sanchez Aimar	Balanced Product of Calibrated Experts for Long-Tailed Recognition
Livia Qian	Representing visually grounded dialogues
Tobias Norlund	Retrieval-enhanced Natural Language Generation
Hampus Gummesson Svensson	Sequential Decision-Making in Drug Discovery
Hariprasath Govindarajan	A probabilistic interpretation of self-supervised learning

Shuangshuang Chen	On Learning Probabilistic Inference Models
Mohamadreza FaridGhasemnia	Robot learning of language grounding in multiple contexts
Charles Meyers	Safety Critical Computer Vision
Johan Källström	Utility-Based Reinforcement Learning in Support of Simulation-Based Training
Amanda Olmin	Training of unnormalised models
Rajmund Nagy	Listen, denoise, action! Audio-driven motion synthesis with diffusion models
Magnus Tarle	Learning to Support the Electrical Power System
Guangyi Zhang	Regularized impurity reduction: Accurate decision trees with complexity guarantees
Tianyi Zhou	Minimizing Polarization and Disagreement
Ehsan Doostmohammadi	On Retrieval-Augmented Language Models
Lena Stempfle	Sharing Pattern Submodels for Prediction with Missing Values
Finn Rietz	Towards Task-Prioritized Policy Composition
Sofia Ek	Offline policy evaluation with out-of-sample guarantees
Gabriel Baravdish	Efficient sampling of sparse data for image reconstruction
Yushan Zhang	Flow-guided Semi-supervised Video Object Segmentation



## POSTER SESSION #3 – January 12th 10:00-11:15

### Research Area Software

Author	Poster Title
Noric Couderc	I used machine learning to make Java programs faster, it didn't really work
Ricardo Caldas	Software Resilience for Robotics
Harald Ng	AI-driven State Machine Replication in the Cloud
César Soto Valero	Automatic Software Debloating
Deepika Tiwari	Generating Tests from Production Data

### Research Area Autonomous Systems

Author	Poster Title
Pontus Andersson	Computing, Visualizing, and Communicating Errors in Rendered Images and Videos
Pedro Roque	Coordination of Multi-Agent Systems
Jonas Hansson	Scalability of Large-Scale Network Control
Ali Nouri	Assuring Safety for Rapid and Continuous Deployment for autonomous driving
Marco Spanghero	GNSS attack and countermeasures - time based methods
Qunying Song	Critical scenario identification for testing of autonomous driving systems
Matteo Iovino	Behavior Trees for High-Level Control in Robotics
Max Nyberg Carlsson	Robust Control over the Cloud
Razan Ghzouli	Towards model-driven robotic systems

Gabriel Arslan Waltersson	Perception with tactile sensors
Matti Vahs	An Estimation-aware Safety Filter for Robotic Applications
Mohammad Reza Saleh Sedghpour	Towards Self-Driving Microservices
Dzenan Lapandic	Cooperative Predictive Control for Autonomous Landings
Yiping Xie	3D reconstruction using neural rendering with sidescan sonar

#### Research Area Artificial Intelligence Math

Author	Poster Title
Olof Zetterqvist	Stability and Sensitivity of Boolean Neural Networks
Marcus Häggbom	Nonparametric time series generation using small data
Kasper Bågmark	AN ENERGY-BASED DEEP SPLITTING METHOD FOR THE NONLINEAR FILTERING PROBLEM
Isaac Ren	Stable homological invariants from Wasserstein metrics
Jimmy Aronsson	Lattice Gauge-Equivariant CNNs
Felix Rydell	Aspects of Algebraic Vision
Manu Upadhyaya	Tight Lyapunov function existence analysis for first-order methods
Albin Toft	Scalable Causal Inference in Point Processes
Viktor Nilsson	High-dimensional entropy estimation with applications to deep learning
Francesca Tombari	TBD

## Research Area Artificial Intelligence Machine Learning

Author	Poster Title
Hannes Eriksson	SENTINEL: Taming Uncertainty with Ensemble-based Distributional Reinforcement Learning
Rebecka Winqvist	A Teacher-Student Framework for Online Correctional Learning
Ines Lourenco	Learning from Interactions
Simona Gugliermo	How Industrial Transport Applications can be improved using AI planning
Anton Matsson	Interpretable policy learning
Alexander Gower	A first-order logic framework for autonomous improvement of metabolic network models
Lovisa Hagström	Interpreting and Grounding NLP
Georg Hess	LidarCLIP or: How I Learned to Talk to Point Clouds
Arvi Jonnarth	Learning Image Segmentation without Pixel Annotations
Yi Yang	Deep Learning for Motion Prediction in Autonomous Driving
Xiaomeng Zhu	Computer Vision for Automatic Quality Inspection with Synthetic Data
Joel Oskarsson	Temporal Graph Neural Networks for Irregular Data
Signe Sidwall Thygesen	Exploring Transition Ensembles using Hierarchical Clustering and Visual Representations
Leonard Papenmeier	Increasing the Scope as You Learn: Adaptive Bayesian Optimization in Nested Subspaces
Arvid Norlander	Structure learning with neurosymbolic AI
Eduardo Gutierrez Maestro	Artificial Intelligence for Human Well-Being Understanding
Rishi Hazra	TBD
Julian Alfredo Mendez	A Bridge for the Human-Machine Ethical Gap

Sonia-Florina Horchidan	ORB: The Missing System Architecture for Graph Exploration
Oscar Stenhammar	Wireless Channel Prediction Using Neural Networks
Amirhossein Ahmadian	Addressing Out of Distribution Data in Deep Learning
Sara Karimi	CandyRL: A Hybrid Reinforcement Learning Model for Gameplay
Alexander Karlsson	Radar signal processing using convolutional neural networks
Christopher Kolloff	Bridging Experiments and Simulations via Dynamic Augmented Markov Models
Amr Alkhatib	Self-Explaining Graph Neural Networks for Tabular Data
Adam Dahlgren Lindström	CLEVR-Math: Compositionality in mathematical reasoning with multimodal data
Marco Iannotta	Robot Control with Behavior Trees and a Stack-of-Tasks Approach
Chi Zhang	Predicting Pedestrian Behavior in Urban Traffic Scenarios Using Deep Learning Methods
Yifei Jin	Learning Cellular Coverage from Real Network Configurations using GNNs
Erik Englesson	Robustness to Label Noise in Classification
Dennis Malmgren	Offline Constrained Multiagent Decision Transformer
Teodor Freriksson	Semi-Supervised Learning and Data Labeling