



Machine Learning in Science

5th Annual Conference 2023

VENUE – Freistil (Wöhrdstraße 25, 72072 Tübingen)

Poster Session

TUESDAY, 11 July 2023 (2:00 - 4:00 pm)

	Individual Cluster Projects	
1.	Francesco Carnazza ¹ , Federico Carollo ¹ , Sabine Andergassen ¹ , Miriam Klopotek ² , Georg Martius ³ , Igor Lesanowsky ¹ <small>1 University of Tübingen, 2 University of Stuttgart, 3 MPI-IS Tübingen</small>	Machine Learning Stochastic Dynamics of order Parameters
2.	Jonas Ditz , Bernhard Reuter, Nico Pfeifer	Convolutional Kernel Networks for Interpretable End-to-End Learning on (Multi-)Omics Data
3.	Jonathan Fuhr , Dominik Papies, Philipp Berens	Double machine learning meets panel data - promises, pitfalls and pending problems
4.	Moritz Haas [*] , David Holzmüller [*] , Ulrike von Luxburg, Ingo Steinwart	Mind the spikes: Benign overfitting of kernels and neural networks in fixed dimension
5.	Maria Heitmeier , Yu-Ying Chuang, Seth D. Axen and R. Harald Baayen	How to put frequency into a computational model of word comprehension (fast)
6.	Caroline Jachmann , Wolfgang Fuhl, Gizem Alsahan, Mathias Witte Paz, Kay Nieselt, Tjeerd Dijkstra	Metallica (Nothing else metals) - Using large language models to predict metal binding sites in proteins
7.	Kyra Liana Kadhim , Thomas Euler, Philipp Berens	A spatiotemporal model of neural activity in the outer plexiform layer of the mouse retina

8.	Matthias Karlbauer , Dale Durran, Nathaniel Cresswell-Clay, Thorsten Kurth, Mauro Bisson, Martin Butz	Advancing Deep Learning Weather Prediction on the HEALPix Mesh
9.	Rosanna Krebs , Manfred Claassen	Learning conditional mechanistic models of immune cell dynamics using trajectory inference
10.	Kerstin Rau , Thomas Gläßle, Katharina Eggensperger, Frank Schneider, Philipp Hennig, Thomas Scholten	How can we quantify, explain, and apply the uncertainty of complex soil maps predicted with neural networks?
11.	Alessandro Simon , Martin Oettel, Georg Martius	An ML-based density functional for orientational correlations in inhomogeneous systems of patchy particles
12.	Hassan Shahmohammadi, Zohreh Gaderi , Adhiraj Ghosh, Harald Baayen, Hendrik Lensch	ViPE: Visualize Pretty-much Everything
13.	Jacqueline Wistuba-Hamprecht , Rolf Fendel, Jonas Ditz, Samuel Wörz, Benjamin Mordmüller, Nico Pfeifer	Predicting Malaria Vaccine Efficacy Based on Anti-Plasmodial Antibody Profiles in European and African study populations
AIMS Fellows		
14.	Albert Agisha Nt. , Moritz Haas, Bedartha Goswami and Ulrike Von Luxburg	Quantifying Variance in Networks from Spatio-Temporal Data
15.	Amel Abdelraheem , Stefano Woerner, Christian F. Baumgartner	Contrastive meta learning for medical image analysis
16.	Ifeoma Veronica Nwabufo , Jan Niklas Böhm, Dmitry Kobak, Philipp Berens	Unsupervised Visualization of Medical Images using t-SimCNE
Research Groups		
17.	Katharina Eggensperger	Exploring AutoML for Science
18.	Wolfgang Fuhl , Anne Herrmann-Werner, Kay Nieselt	The Tiny Eye Movement Transformer
19.	Nafiseh Kakhani , Moein Rangzan, Thomas Scholten	A Spatio-temporal Deep Learning Framework for Digital Soil Mapping

20.	Ndiye Michael Kebonye , Ruhollah Taghiyadeh-Mehrjardi, Kingsley John, Prince Chapman Agyeman, Nafiseh Kakhani, Zibanani Seletlo, Lesego Motlhetlhi, Boineelo Moyo, Thomas Scholten	Integrating ML and Multivariate Statistics to Uncover Pedodiversity-Elevational Patterns Across Multiple Spatial Scales
21.	Josua Stadelmaier , Gisela Gabernet, Markus Kowarik, Sven Nahnsen	Predicting B-Cell Receptors in the Cerebrospinal Fluid of Multiple Sclerosis Patients
22.	Polina Tsvilodub* , Fausto Carcassi*, Michael Franke (*joint first-authorship)	Explanatory models with Scaffolded LLMs
23.	Çağatay Yıldız , Sebastian Dziadzio, Beyza Ermis, Matthias Bethge	Lifelong machine learning