ICML 2022: Accepted papers from Cyber Valley partner institutions

1. **Preconditioning for Scalable Gaussian Process Hyperparameter Optimization**
Jonathan Wenger (University of Tübingen); Geoff Pleiss (Columbia University); Philipp Hennig (University of Tübingen); John Cunningham (Columbia); Jacob Gardner (University of Pennsylvania)

2. **Probabilistic ODE Solutions in Millions of Dimensions**
Nicholas Krämer (University of Tübingen); Nathanael Bosch (University of Tübingen); Jonathan Schmidt (University of Tübingen); Philipp Hennig (University of Tübingen)

3. **Fenrir: Physics-Enhanced Regression for Initial Value Problems**
Filip Tronarp (University of Tübingen); Nathanael Bosch (University of Tübingen); Philipp Hennig (University of Tübingen)

4. **Breaking Down Out-of-Distribution Detection: Many Popular Methods Estimate a Combination of the Same Core Quantities**
Julian Bitterwolf (University of Tübingen); Alexander Meinke (University of Tübingen); Maximilian Augustin (University of Tübingen); Matthias Hein (University of Tübingen)

5. **On the Adversarial Robustness of Causal Algorithmic Recourse**
Ricardo Dominguez-Olmedo (University of Tübingen); Amir Karimi (Max Planck Institute for Intelligent Systems); Bernhard Schölkopf (Max Planck Institute for Intelligent Systems)

6. **Score matching enables causal discovery of nonlinear additive noise models**
Paul Rolland (Ecole Polytechnique Fédérale de Lausanne); Volkan Cevher (Ecole Polytechnique Fédérale de Lausanne); Matthäus Kleindessner (Amazon); Chris Russell (Amazon); Dominik Janzing (Amazon Research Tübingen); Bernhard Schölkopf (Amazon / Max Planck Institute for Intelligent Systems); Francesco Locatello (Amazon Lablet)

7. **Evaluating the Adversarial Robustness of Adaptive Test-time Defenses**
Francesco Croce (University of Tübingen); Sven Gowal (DeepMind); Thomas Brunner (Technical University of Munich); Evan Shelhamer (DeepMind); Matthias Hein (University of Tübingen); Taylan Cemgil (DeepMind)

8. **Functional Generalized Empirical Likelihood Estimation for Conditional Moment Restrictions**
Heiner Kremer (Max Planck Institute for Intelligent Systems); Jia-Jie Zhu (Weierstrass Institute; Berlin); Krikamol Muandet (Max Planck Institute for Intelligent Systems); Bernhard Schölkopf (Max Planck Institute for Intelligent Systems)

9. **Causal Inference Through the Structural Causal Marginal Problem**
Luigi Gresele (Max Planck Institute for Intelligent Systems); Julius von Kügelgen (Max Planck Institute for Intelligent Systems / University of Cambridge); Jonas Kübler (Max Planck Institute for Intelligent Systems); Elke Kirschbaum (Amazon Research); Bernhard Schölkopf (Max Planck Institute for Intelligent Systems); Dominik Janzing (Amazon)

10. **Adversarial robustness against multiple lp-threat models at the price of one and how to quickly fine-tune robust models to another threat model**
Francesco Croce (University of Tübingen); Matthias Hein (University of Tübingen)

11. **Provably Adversarially Robust Nearest Prototype Classifiers**
Václav Voráček (University of Tübingen); Matthias Hein (University of Tübingen)

12. **Action-Sufficient State Representation Learning for Control with Structural Constraints**
Biwei Huang (Carnegie Mellon University); Chaochao Lu (University of Cambridge); Liu Leqi (Carnegie Mellon University); Jose Miguel Hernandez-Lobato (University of Cambridge); Clark Glymour (Carnegie Mellon University); Bernhard Schölkopf (Max Planck Institute for Intelligent Systems); Kun Zhang (Carnegie Mellon University)

13. **Generalization and Robustness Implications in Object-Centric Learning**
Andrea Dittadi (Technical University of Denmark); Samuele Papa (University of Amsterdam); Michele De Vita (DTU); Bernhard Schölkopf (Max Planck Institute for Intelligent Systems); Ole Winther (DTU and KU); Francesco Locatello (Amazon Lablet)

14. **Composing Partial Differential Equations with Physics-Aware Neural Networks**
Matthias Karlbauer (University of Tübingen); Timothy Praditia (University of Stuttgart); Sebastian Otte (University of Tübingen); Sergey Oladyshkin (University of Stuttgart); Wolfgang Nowak (University of Stuttgart); Martin Butz (University of Tübingen)

15. **Causal structure-based root cause analysis of outliers**
Kailash Budhathoki (Amazon Research Tübingen); Dominik Janzing (Amazon); Patrick Bloebaum (Amazon AWS); Lenon Minorics (Amazon Research Tübingen)

16. **Hermite Polynomial Features for Private Data Generation**
Margarita Vinaroz (Max Planck Institute for Intelligent Systems / University of Tübingen); Mohammad-Amin Charusaie (Max Planck Institute for Intelligent Systems); Frederik Harder (Max Planck Institute for Intelligent Systems); Kamil Adamczewski (Max Planck Institute for Intelligent Systems); Mi Jung Park (UBC)

17. **A Consistent and Efficient Evaluation Strategy for Attribution Methods**
Yao Rong (University of Tübingen); Tobias Leemann (University of Tübingen); Vadim Borisov (University of Tübingen); Gjergji Kasneci (University of Tübingen); Enkelejda Kasneci (University of Tübingen)

18. **Objective Robustness in Deep Reinforcement Learning**
Jack Koch (Unaffiliated); Lauro Langosco di Langosco (ETH); Jacob Pfau (University of Edinburgh); David Krueger (Université de Montréal); Lee Sharkey (University of Tübingen)

19. **Adapting the Linearised Laplace Model Evidence for Modern Deep Learning**
Javier Antorán (University of Cambridge); David Janz (University of Cambridge); James Allingham (University of Cambridge); Erik Daxberger (University of Cambridge / Max Planck Institute for Intelligent Systems); Riccardo Barbano (University College London); Eric Nalisnick (University of Amsterdam); Jose Miguel Hernandez-Lobato (University of Cambridge)

20. **Utilizing Expert Features for Contrastive Learning of Time-Series Representations**
Manuel Nonnenmacher (Bosch Center for Artificial Intelligence / University of Stuttgart); Lukas Oldenburg (Bosch Center for Artificial Intelligence); Ingo Steinwart (University of Stuttgart); David Reeb (Bosch Center for Artificial Intelligence)

21. **Communicating via Markov Decision Processes**
Samuel Sokota (Carnegie Mellon University); Christian Schroeder de Witt (Oxford

University); Maximilian Igl (Waymo Research); Luisa Zintgraf (Oxford University); Philip Torr (Oxford University); Martin Strohmeier (armasuisse Science + Technology); J. Zico Kolter (Carnegie Mellon University / Bosch Center for Artificial Intelligence), Shimon Whiteson (Oxford University / Waymo Research); Jakob Foerster (Oxford University)

22. **Latent Outlier Exposure for Anomaly Detection with Contaminated Data**
Chen Qiu (Bosch Center for Artificial Intelligence / TU Kaiserslautern); Aodong Li (UC Irvine); Marius Kloft (TU Kaiserslautern); Maja Rudolph (Bosch Center for Artificial Intelligence); Stephan Mandt (UC Irvine)

23. **Modeling Irregular Time Series with Continuous Recurrent Units**
Mona Schirmer (Humboldt Universität Berlin / Bosch Center for Artificial Intelligence); Mazin Eltayeb (Bosch Center for Artificial Intelligence); Stefan Lessmann (Humboldt Universität Berlin); Maja Rudolph (Bosch Center for Artificial Intelligence)