

(1902 events) Timezone: »

@ Poster Session 0 #32	Poster
<b><i>Latent Dynamic Factor Analysis of High-Dimensional Neural Recordings</i></b>	
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<b><i>Latent Dynamic Factor Analysis of High-Dimensional Neural Recordings</i></b>	
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<b><i>Rankmax: An Adaptive Projection Alternative to the Softmax Function</i></b>	
Weiwei Kong · Walid Krichene · Nic E Mayoraz · Steffen Rendle · Li Zhang	In Poster Session 1
Mon Dec 07 09:00 PM -- 11:00 PM (PST) @ Poster Session 0 #1	Poster
<b><i>Field-wise Learning for Multi-field Categorical Data</i></b>	
Zhibin Li · jian zhang · Yongshun Gong · Yazhou Yao · Qiang Wu	In Poster Session 1
Mon Dec 07 09:00 PM -- 11:00 PM (PST) @ Poster Session 0 #2	Poster
<b><i>Deep Diffusion-Invariant Wasserstein Distributional Classification</i></b>	
Sung Woo Park · Dong Wook Shu · Junseok Kwon	In Poster Session 1
Mon Dec 07 09:00 PM -- 11:00 PM (PST) @ Poster Session 0 #3	Poster
<b><i>No Subclass Left Behind: Fine-Grained Robustness in Coarse-Grained Classification Problems</i></b>	
Nimit Sohoni · Jared Dunnmon · Geoffrey Angus · Albert Gu · Christopher Ré	In Poster Session 1
Mon Dec 07 09:00 PM -- 11:00 PM (PST) @ Poster Session 0 #4	Poster
<b><i>Efficient Clustering Based On A Unified View Of K-means And Ratio-cut</i></b>	
Shenfei Pei · Feiping Nie · Rong Wang · Xuelong Li	In Poster Session 1
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<b><i>Probabilistic Fair Clustering</i></b>	
Seyed Esmaeili · Brian Brubach · Leonidas Tsepenekas · John Dickerson	In Poster Session 1
Mon Dec 07 09:00 PM -- 11:00 PM (PST) @ Poster Session 0 #6	Poster
<b><i>Sampling-Decomposable Generative Adversarial Recommender</i></b>	
Binbin Jin · Defu Lian · Zheng Liu · Qi Liu · Jianhui Ma · Xing Xie · Enhong Chen	In Poster Session 1
Mon Dec 07 09:00 PM -- 11:00 PM (PST) @ Poster Session 0 #7	Poster
<b><i>Trading Personalization for Accuracy: Data Debugging in Collaborative Filtering</i></b>	
Long Chen · Yuan Yao · Feng Xu · Miao Xu · Hanghang Tong	In Poster Session 1

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<b>Ratio Trace Formulation of Wasserstein Discriminant Analysis</b>	
Hexuan Liu · Yunfeng Cai · You-Lin Chen · Ping Li	In Poster Session 1
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<b>Coresets for Regressions with Panel Data</b>	
Lingxiao Huang · K Sudhir · Nisheeth Vishnoi	In Poster Session 1
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<b>Multi-task Additive Models for Robust Estimation and Automatic Structure Discovery</b>	
Yingjie Wang · Hong Chen · Feng Zheng · Chen Xu · Teliang Gong · Yanhong Chen	In Poster Session 1
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<b>Adversarial Learning for Robust Deep Clustering</b>	
Xu Yang · Cheng Deng · Kun Wei · Junchi Yan · Wei Liu	In Poster Session 1
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<b>Adversarial Counterfactual Learning and Evaluation for Recommender System</b>	
Da Xu · Chuanwei Ruan · Evren Korpeoglu · Sushant Kumar · Kannan Achan	In Poster Session 1
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<b>Adversarial Crowdsourcing Through Robust Rank-One Matrix Completion</b>	
Qianqian Ma · Alex Olshevsky	In Poster Session 1
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<b>Interventional Few-Shot Learning</b>	
Zhongqi Yue · hanwang Zhang · Qianru Sun · Xian-Sheng Hua	In Poster Session 1
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<b>Neural Methods for Point-wise Dependency Estimation</b>	
Yao-Hung Hubert Tsai · Han Zhao · Makoto Yamada · LP Morency · Russ Salakhutdinov	In Poster Session 1
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<b>Multi-label Contrastive Predictive Coding</b>	
Jiaming Song · Stefano Ermon	In Poster Session 1
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<b>Self-Supervised Relationship Probing</b>	
Jiuxiang Gu · Jason Kuen · Shafiq Joty · Jianfei Cai · Vlad I. Morariu · Handong Zhao · Tong Sun Sun	In Poster Session 1
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<b>Debiased Contrastive Learning</b>	
Ching-Yao Chuang · Joshua Robinson · Yen-Chen Lin · Antonio Torralba · Stefanie Jegelka	In Poster Session 1
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<b>The Autoencoding Variational Autoencoder</b>	
Taylan Cemgil · Sumedh Ghaisas · Krishnamurthy Dvijotham · Sven Gowal · Pushmeet Kohli	In Poster Session 1
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<b>Learning Diverse and Discriminative Representations via the Principle of Maximal Coding Rate Reduction</b>	
Yaodong Yu · Ryan Chan · Chong You · Chaobing Song · Yi Ma	In Poster Session 1

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<b>Unsupervised Data Augmentation for Consistency Training</b> Qizhe Xie · Zihang Dai · Eduard Hovy · Thang Luong · Quoc V Le	In Poster Session 1
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<b>Temporal Positive-unlabeled Learning for Biomedical Hypothesis Generation via Risk Estimation</b> Uchenna Akujuobi · Jun Chen · Mohamed Elhoseiny · Michael Spranger · Xiangliang Zhang	In Poster Session 1
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<b>Hard Negative Mixing for Contrastive Learning</b> Yannis Kalantidis · Mert Bulent Sarıyıldız · Noe Pion · Philippe Weinzaepfel · Diane Larlus	In Poster Session 1
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<b>Parametric Instance Classification for Unsupervised Visual Feature learning</b> Yue Cao · Zhenda Xie · Bin Liu · Yutong Lin · Zheng Zhang · Han Hu	In Poster Session 1
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<b>VIME: Extending the Success of Self- and Semi-supervised Learning to Tabular Domain</b> Jinsung Yoon · Yao Zhang · James Jordon · Mihaela van der Schaar	In Poster Session 1
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<b>Unsupervised Representation Learning by Invariance Propagation</b> Feng Wang · Huaping Liu · Di Guo · Sun Fuchun	In Poster Session 1
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<b>Joint Contrastive Learning with Infinite Possibilities</b> Qi Cai · Yu Wang · Yingwei Pan · Ting Yao · Tao Mei	In Poster Session 1
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<b>Variational Inference for Graph Convolutional Networks in the Absence of Graph Data and Adversarial Settings</b> Pantelis Elinas · Edwin Bonilla · Louis Tiao	In Poster Session 1
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<b>Restoring Negative Information in Few-Shot Object Detection</b> Yukuan Yang · Fangyun Wei · Miaojing Shi · Guoqi Li	In Poster Session 1
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<b>One-sample Guided Object Representation Disassembling</b> Zunlei Feng · Yongming He · Xinchao Wang · Xin Gao · Jie Lei · Cheng Jin · Mingli Song	In Poster Session 1
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<b>Few-shot Visual Reasoning with Meta-Analogical Contrastive Learning</b> Youngsung Kim · Jinwoo Shin · Eunho Yang · Sung Ju Hwang	In Poster Session 1
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<b>Latent Dynamic Factor Analysis of High-Dimensional Neural Recordings</b> Heejong Bong · Zongge Liu · Zhao Ren · Matthew Smith · Valerie Ventura · Rob E Robert	In Poster Session 1
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<b>Heavy-tailed Representations, Text Polarity Classification &amp; Data Augmentation</b>	

Hamid Jalalzai · Pierre Colombo · Chloé Clavel · Eric Gaussier · Giovanna Varni · Emmanuel Vignon · Anne Sabourin

In Poster Session 1

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### **Hierarchical Poset Decoding for Compositional Generalization in Language**

Yinuo Guo · Zeqi Lin · Jian-Guang Lou · Dongmei Zhang

In Poster Session 1

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### **Strongly Incremental Constituency Parsing with Graph Neural Networks**

Kaiyu Yang · Jia Deng

In Poster Session 1

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### **A Simple Language Model for Task-Oriented Dialogue**

Ehsan Hosseini-Asl · Bryan McCann · Chien-Sheng Wu · Semih Yavuz · Richard Socher

In Poster Session 1

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### **Learning Dynamic Belief Graphs to Generalize on Text-Based Games**

Ashutosh Adhikari · Eric Yuan · Marc-Alexandre Côté · Mikuláš Zelinka · Marc-Antoine Rondeau · Romain Laroche · Pascal Poupart · Jian Tang · Adam Trischler · Will Hamilton

In Poster Session 1

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### **Incorporating Pragmatic Reasoning Communication into Emergent Language**

Yipeng Kang · Tonghan Wang · Gerard de Melo

In Poster Session 1

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### **Learning Strategic Network Emergence Games**

Rakshit Trivedi · Hongyuan Zha

In Poster Session 1

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### **Fighting Copycat Agents in Behavioral Cloning from Observation Histories**

Chuan Wen · Jierui Lin · Trevor Darrell · Dinesh Jayaraman · Yang Gao

In Poster Session 1

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### **Attention-Gated Brain Propagation: How the brain can implement reward-based error backpropagation**

Isabella Pozzi · Sander Bohte · Pieter Roelfsema

In Poster Session 1

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### **Can the Brain Do Backpropagation? --- Exact Implementation of Backpropagation in Predictive Coding Networks**

Yuhang Song · Thomas Lukasiewicz · Zhenghua Xu · Rafal Bogacz

In Poster Session 1

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### **Demixed shared component analysis of neural population data from multiple brain areas**

Yu Takagi · Steven Kennerley · Jun-ichiro Hirayama · Laurence T Hunt

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### **Neural encoding with visual attention**

Meenakshi Khosla · Gia Ngo · Keith Jamison · Amy Kuceyeski · Mert Sabuncu

In Poster Session 1

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### **On Numerosity of Deep Neural Networks**

Xi Zhang · Xiaolin Wu

In Poster Session 1

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### **Compact task representations as a normative model for higher-order brain activity**

Severin Berger · Christian Machens

In Poster Session 1

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### **Using noise to probe recurrent neural network structure and prune synapses**

Eli Moore · Rishidev Chaudhuri

In Poster Session 1

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### **An Imitation from Observation Approach to Transfer Learning with Dynamics Mismatch**

Siddharth Desai · Ishan Durugkar · Haresh Karnan · Garrett Warnell · Josiah Hanna · Peter Stone

In Poster Session 1

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### **Language Models are Few-Shot Learners**

Tom B Brown · Ben Mann · Nick Ryder · Melanie Subbiah · Jared D Kaplan · Prafulla Dhariwal · Arvind Neelakantan · Pranav Shyam · Girish Sastry · Amanda Askell · Sandhini Agarwal · Ariel Herbert-Voss · Gretchen M Krueger · Tom Henighan · Rewon Child · Aditya Ramesh · Daniel Ziegler · Jeffrey Wu · Clemens Winter · Chris Hesse · Mark Chen · Eric Sigler · Mateusz Litwin · Scott Gray · Benjamin Chess · Jack Clark · Christopher Berner · Sam McCandlish · Alec Radford · Ilya Sutskever · Dario Amodei

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### **Incorporating BERT into Parallel Sequence Decoding with Adapters**

Junliang Guo · Zhirui Zhang · Linli Xu · Hao-Ran Wei · Boxing Chen · Enhong Chen

In Poster Session 1

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### **CogLTX: Applying BERT to Long Texts**

Ming Ding · Chang Zhou · Hongxia Yang · Jie Tang

In Poster Session 1

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### **MPNet: Masked and Permuted Pre-training for Language Understanding**

Kaitao Song · Xu Tan · Tao Qin · Jianfeng Lu · Tie-Yan Liu

In Poster Session 1

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### **MiniLM: Deep Self-Attention Distillation for Task-Agnostic Compression of Pre-Trained Transformers**

Wenhui Wang · Furu Wei · Li Dong · Hangbo Bao · Nan Yang · Ming Zhou

In Poster Session 1

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### **Towards Neural Programming Interfaces**

Zachary Brown · Nathaniel Robinson · David Wingate · Nancy Fulda

In Poster Session 1

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### **Language Through a Prism: A Spectral Approach for Multiscale Language Representations**

Alex Tamkin · Dan Jurafsky · Noah Goodman

In Poster Session 1

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### **ColdGANs: Taming Language GANs with Cautious Sampling Strategies**

Thomas Scialom · Paul-Alexis Dray · Sylvain Lamprier · Benjamin Piwowarski · Jacopo Staiano

In Poster Session 1

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### **ConvBERT: Improving BERT with Span-based Dynamic Convolution**

Zi-Hang Jiang · Weihao Yu · Daquan Zhou · Yunpeng Chen · Jiashi Feng · Shuicheng Yan

In Poster Session 1

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## **Investigating Gender Bias in Language Models Using Causal Mediation Analysis**

Jesse Vig · Sebastian Gehrmann · Yonatan Belinkov · Sharon Qian · Daniel Nevo · Yaron Singer · Stuart Shieber In Poster Session 1

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## **Cross-lingual Retrieval for Iterative Self-Supervised Training**

Chau Tran · Yuqing Tang · Xian Li · Jiatao Gu

In Poster Session 1

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## **DynaBERT: Dynamic BERT with Adaptive Width and Depth**

Lu Hou · Zhiqi Huang · Lifeng Shang · Xin Jiang · Xiao Chen · Qun Liu

In Poster Session 1

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## **Pre-training via Paraphrasing**

Mike Lewis · Marjan Ghazvininejad · Gargi Ghosh · Armen Aghajanyan · Sida Wang · Luke Zettlemoyer In Poster Session 1

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## **Dialog without Dialog Data: Learning Visual Dialog Agents from VQA Data**

Michael Cogswell · Jiasen Lu · Rishabh Jain · Stefan Lee · Devi Parikh · Dhruv Batra

In Poster Session 1

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## **Funnel-Transformer: Filtering out Sequential Redundancy for Efficient Language Processing**

Zihang Dai · Guokun Lai · Yiming Yang · Quoc V Le

In Poster Session 1

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## **Big Bird: Transformers for Longer Sequences**

Manzil Zaheer · Guru Guruganesh · Kumar Avinava Dubey · Joshua Ainslie · Chris Alberti · Santiago Ontanon · Philip Pham · Anirudh Ravula · Qifan Wang · Li Yang · Amr Ahmed In Poster Session 1

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## **Self-Supervised Generative Adversarial Compression**

Chong Yu · Jeff Pool

In Poster Session 1

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## **The Generalized Lasso with Nonlinear Observations and Generative Priors**

Zhaoliang Liu · Jonathan Scarlett

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## **Robust compressed sensing using generative models**

Ajil Jalal · Liu Liu · Alex Dimakis · Constantine Caramanis

In Poster Session 1

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## **Knowledge Distillation in Wide Neural Networks: Risk Bound, Data Efficiency and Imperfect Teacher**

Guangda Ji · Zhanxing Zhu

In Poster Session 1

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## **Fourier Spectrum Discrepancies in Deep Network Generated Images**

Tarik Dzanic · Karan Shah · Freddie Witherden

In Poster Session 1

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## **Minimax Optimal Nonparametric Estimation of Heterogeneous Treatment Effects**

Zijun Gao · Yanjun Han

In Poster Session 1

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## **Towards a Combinatorial Characterization of Bounded-Memory Learning**

Alon Gonen · Shachar Lovett · Michal Moshkovitz

In Poster Session 1

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## **The Power of Comparisons for Actively Learning Linear Classifiers**

Max Hopkins · Daniel Kane · Shachar Lovett

In Poster Session 1

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## **Estimating decision tree learnability with polylogarithmic sample complexity**

Guy Blanc · Neha Gupta · Jane Lange · Li-Yang Tan

In Poster Session 1

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## **Provably Efficient Neural Estimation of Structural Equation Models: An Adversarial Approach**

Luofeng Liao · You-Lin Chen · Zhuoran Yang · Bo Dai · Mladen Kolar · Zhaoran Wang

In Poster Session 1

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## **Matrix Inference and Estimation in Multi-Layer Models**

Parthe Pandit · Moji Sahraee Ardakan · Sundeep Rangan · Phil Schniter · Alyson Fletcher

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## **Election Coding for Distributed Learning: Protecting SignSGD against Byzantine Attacks**

Jy-yong Sohn · Dong-Jun Han · Beongjun Choi · Jaekyun Moon

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## **Limits on Testing Structural Changes in Ising Models**

Aditya Gangrade · Bobak Nazer · Venkatesh Saligrama

In Poster Session 1

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## **A Robust Functional EM Algorithm for Incomplete Panel Count Data**

Alexander Moreno · Zhenke Wu · Jamie Roslyn Yap · Cho Lam · David Wetter · Inbal Nahum-Shani · Walter Dempsey · James Rehg

In Poster Session 1

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## **Weston-Watkins Hinge Loss and Ordered Partitions**

Yutong Wang · Clay Scott

In Poster Session 1

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## **On the Equivalence between Online and Private Learnability beyond Binary Classification**

Young H Jung · Baekjin Kim · Ambuj Tewari

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## **Breaking the Sample Size Barrier in Model-Based Reinforcement Learning with a Generative Model**

Gen Li · Yuting Wei · Yuejie Chi · Yuantao Gu · Yuxin Chen

In Poster Session 1

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## **A Finite-Time Analysis of Two Time-Scale Actor-Critic Methods**

Yue Frank Wu · Weitong ZHANG · Pan Xu · Quanquan Gu

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<b>Reinforcement Learning for Control with Multiple Frequencies</b>	In Poster Session 1
Jongmin Lee · Byung-Jun Lee · Kee-Eung Kim	
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<b>Bridging Imagination and Reality for Model-Based Deep Reinforcement Learning</b>	In Poster Session 1
Guangxiang Zhu · Minghao Zhang · Honglak Lee · Chongjie Zhang	
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<b>First Order Constrained Optimization in Policy Space</b>	In Poster Session 1
Yiming Zhang · Quan Vuong · Keith Ross	
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<b>DisCor: Corrective Feedback in Reinforcement Learning via Distribution Correction</b>	In Poster Session 1
Aviral Kumar · Abhishek Gupta · Sergey Levine	
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<b>Natural Policy Gradient Primal-Dual Method for Constrained Markov Decision Processes</b>	In Poster Session 1
Dongsheng Ding · Kaiqing Zhang · Tamer Basar · Mihailo Jovanovic	
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<b>MOPO: Model-based Offline Policy Optimization</b>	In Poster Session 1
Tianhe (Kevin) Yu · Garrett Thomas · Lantao Yu · Stefano Ermon · James Zou · Sergey Levine · Chelsea Finn · Tengyu Ma	
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<b>Trust the Model When It Is Confident: Masked Model-based Actor-Critic</b>	In Poster Session 1
Feiyang Pan · Jia He · Dandan Tu · Qing He	
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<b>Pipeline PSRO: A Scalable Approach for Finding Approximate Nash Equilibria in Large Games</b>	In Poster Session 1
Stephen McAleer · J.B. Lanier · Roy Fox · Pierre Baldi	
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<b>Model-Based Multi-Agent RL in Zero-Sum Markov Games with Near-Optimal Sample Complexity</b>	In Poster Session 1
Kaiqing Zhang · Sham Kakade · Tamer Basar · Lin Yang	
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<b>MOReL: Model-Based Offline Reinforcement Learning</b>	In Poster Session 1
Rahul Kidambi · Aravind Rajeswaran · Praneeth Netrapalli · Thorsten Joachims	
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<b>Variance-Reduced Off-Policy TDC Learning: Non-Asymptotic Convergence Analysis</b>	In Poster Session 1
Shaocong Ma · Yi Zhou · Shaofeng Zou	
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<b>Independent Policy Gradient Methods for Competitive Reinforcement Learning</b>	In Poster Session 1
Constantinos Daskalakis · Dylan Foster · Noah Golowich	
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## **Provably Good Batch Reinforcement Learning Without Great Exploration**

Yao Liu · Adith Swaminathan · Alekh Agarwal · Emma Brunskill

In Poster Session 1

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## **(De)Randomized Smoothing for Certifiable Defense against Patch Attacks**

Alexander Levine · Soheil Feizi

In Poster Session 1

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## **Contrastive Learning with Adversarial Examples**

Chih-Hui Ho · Nuno Vasconcelos

In Poster Session 1

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## **CoADNet: Collaborative Aggregation-and-Distribution Networks for Co-Salient Object Detection**

Qijian Zhang · Runmin Cong · Junhui Hou · Chongyi Li · Yao Zhao

In Poster Session 1

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## **Glow-TTS: A Generative Flow for Text-to-Speech via Monotonic Alignment Search**

Jaehyeon Kim · Sungwon Kim · Jungil Kong · Sungroh Yoon

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## **The Cone of Silence: Speech Separation by Localization**

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### **Synthesis**

Jungil Kong · Jaehyeon Kim · Jaekyoung Bae

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Wenbo Li · Kun Zhou · Iu Qi · Nianjuan Jiang · Jiangbo Lu · Jiaya Jia

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## **Domain Generalization via Entropy Regularization**

Shanshan Zhao · Mingming Gong · Tongliang Liu · Huan Fu · Dacheng Tao

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## **Self-Supervised Few-Shot Learning on Point Clouds**

Charu Sharma · Manohar Kaul

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## **DeepSVG: A Hierarchical Generative Network for Vector Graphics Animation**

Alexandre Carlier · Martin Danelljan · Alexandre Alahi · Radu Timofte

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## **CLEARER: Multi-Scale Neural Architecture Search for Image Restoration**

Yuanbiao Gou · Boyun Li · Zitao Liu · Songfan Yang · Xi Peng

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## ***Language and Visual Entity Relationship Graph for Agent Navigation***

Yicong Hong · Cristian Rodriguez · Yuankai Qi · Qi Wu · Stephen Gould

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## ***Fast Fourier Convolution***

Lu Chi · Borui Jiang · Yadong Mu

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## ***Simulating a Primary Visual Cortex at the Front of CNNs Improves Robustness to Image Perturbations***

Joel Dapello · Tiago Marques · Martin Schrimpf · Franziska Geiger · David Cox · James J DiCarlo

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## ***The Devil is in the Detail: A Framework for Macroscopic Prediction via Microscopic Models***

Yingxiang Yang · Negar Kiyavash · Le Song · Niao He

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## ***When and How to Lift the Lockdown? Global COVID-19 Scenario Analysis and Policy Assessment using Compartmental Gaussian Processes***

Zhaozhi Qian · Ahmed Alaa · Mihaela van der Schaar

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## ***Reinforced Molecular Optimization with Neighborhood-Controlled Grammars***

Chencheng Xu · Qiao Liu · Minlie Huang · Tao Jiang

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## ***Multi-Task Temporal Shift Attention Networks for On-Device Contactless Vitals Measurement***

Xin Liu · Josh Fromm · Shwetak Patel · Daniel McDuff

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## ***MRI Banding Removal via Adversarial Training***

Aaron Defazio · Tullie Murrell · Michael Recht

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## ***Learning to Select Best Forecast Tasks for Clinical Outcome Prediction***

Yuan Xue · Nan Du · Anne Mottram · Martin Seneviratne · Andrew Dai

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Sercan Arik · Chun-Liang Li · Jinsung Yoon · Rajarishi Sinha · Arkady Epshteyn · Long Le · Vikas Menon · Shashank Singh · Leyou Zhang · Martin Nikoltchev · Yash Sonthalia · Hootan Nakhost · Elli Kanal · Tomas Pfister

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## ***Adversarial Sparse Transformer for Time Series Forecasting***

Sifan Wu · Xi Xiao · Qianggang Ding · Peilin Zhao · Ying Wei · Junzhou Huang

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Yusuke Tashiro · Yang Song · Stefano Ermon

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## **Input-Aware Dynamic Backdoor Attack**

Tuan Anh Nguyen · Anh Tran

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## **Understanding Global Feature Contributions With Additive Importance Measures**

Ian Covert · Scott Lundberg · Su-In Lee

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## **Improving Policy-Constrained Kidney Exchange via Pre-Screening**

Duncan McElfresh · Michael Curry · Tuomas Sandholm · John Dickerson

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## **Learning Black-Box Attackers with Transferable Priors and Query Feedback**

Jiancheng YANG · Yangzhou Jiang · Xiaoyang Huang · Bingbing Ni · Chenglong Zhao

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Zhen Sun · Roei Schuster · Vitaly Shmatikov

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## **Beta Embeddings for Multi-Hop Logical Reasoning in Knowledge Graphs**

Hongyu Ren · Jure Leskovec

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## **Design Space for Graph Neural Networks**

Jiaxuan You · Rex Ying · Jure Leskovec

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## **Learning Physical Graph Representations from Visual Scenes**

Daniel Bear · Chaofei Fan · Damian Mrowca · Yunzhu Li · Seth Alter · Aran Nayebi · Jeremy Schwartz · Li Fei-Fei · Jiajun Wu · Josh Tenenbaum · Daniel Yamins

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## **Equivariant Networks for Hierarchical Structures**

Ren Wang · Marjan Albooyeh · Siamak Ravanbakhsh

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## **ARMA Nets: Expanding Receptive Field for Dense Prediction**

Jiahao Su · Shiqi Wang · Furong Huang

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## **Storage Efficient and Dynamic Flexible Runtime Channel Pruning via Deep Reinforcement Learning**

Jianda Chen · Shangyu Chen · Sinno Jialin Pan

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## **How to Characterize The Landscape of Overparameterized Convolutional Neural Networks**

Yihong Gu · Weizhong Zhang · Cong Fang · Jason Lee · Tong Zhang

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## **Towards Learning Convolutions from Scratch**

Behnam Neyshabur

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## **Bayesian Attention Modules**

Xinjie Fan · Shujian Zhang · Bo Chen · Mingyuan Zhou

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## **Kalman Filtering Attention for User Behavior Modeling in CTR Prediction**

Hu Liu · Jing LU · Xiwei Zhao · Sulong Xu · Hao Peng · Yutong Liu · Zehua Zhang · Jian Li · Junsheng Jin · Yongjun Bao · Weipeng Yan

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## **Understanding and Exploring the Network with Stochastic Architectures**

Zhijie Deng · Yinpeng Dong · Shifeng Zhang · Jun Zhu

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## **Neuron Merging: Compensating for Pruned Neurons**

Woojeong Kim · Suhyun Kim · Mincheol Park · Geunseok Jeon

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Jangho Kim · KiYoon Yoo · Nojun Kwak

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## **ShiftAddNet: A Hardware-Inspired Deep Network**

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Hideki Tanaka · Daniel Kunin · Daniel Yamins · Surya Ganguli

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## **Attribution Preservation in Network Compression for Reliable Network Interpretation**

Geondo Park · Juneyong Yang · Sung Ju Hwang · Eunho Yang

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## **Language as a Cognitive Tool to Imagine Goals in Curiosity Driven Exploration**

Cédric Colas · Tristan Karch · Nicolas Lair · Jean-Michel Dussoux · Clément Moulin-Frier · Peter F Dominey · Pierre-Yves Oudeyer In Poster Session 1

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## **An Efficient Asynchronous Method for Integrating Evolutionary and Gradient-based Policy Search**

Kyunghyun Lee · Byeong-Uk Lee · Ukcheol Shin · In So Kweon

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## **Model-based Reinforcement Learning for Semi-Markov Decision Processes with Neural ODEs**

Jianzhun Du · Joseph Futoma · Finale Doshi-Velez

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## **Refactoring Policy for Compositional Generalizability using Self-Supervised Object Proposals**

Tongzhou Mu · Jiayuan Gu · Zhiwei Jia · Hao Tang · Hao Su

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## **Cooperative Heterogeneous Deep Reinforcement Learning**

Han Zheng · Pengfei Wei · Jing Jiang · Guodong Long · Qinghua Lu · Chengqi Zhang

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## **The Mean-Squared Error of Double Q-Learning**

Wentao Weng · Harsh Gupta · Niao He · Lei Ying · R. Srikant

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## **Novelty Search in Representational Space for Sample Efficient Exploration**

David Tao · Vincent Francois-Lavet · Joelle Pineau

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## **Learning Implicit Credit Assignment for Cooperative Multi-Agent Reinforcement Learning**

Meng Zhou · Ken Liu · Pengwei Sui · Yixuan Li · Yuk Ying Chung

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## **Decentralized TD Tracking with Linear Function Approximation and its Finite-Time Analysis**

Gang Wang · Songtao Lu · Georgios Giannakis · Gerald Tesauro · Jian Sun

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## **Robust Multi-Agent Reinforcement Learning with Model Uncertainty**

Kaiqing Zhang · TAO SUN · Yunzhe Tao · Sahika Genc · Sunil Mallya · Tamer Basar

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## **Bayesian Multi-type Mean Field Multi-agent Imitation Learning**

Fan Yang · Alina Vereshchaka · Changyou Chen · Wen Dong

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## **Emergent Complexity and Zero-shot Transfer via Unsupervised Environment Design**

Michael Dennis · Natasha Jaques · Eugene Vinitsky · Alexandre Bayen · Stuart Russell · Andrew Critch · Sergey Levine

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## **Inverse Rational Control with Partially Observable Continuous Nonlinear Dynamics**

Minhae Kwon · Saurabh Daptardar · Paul R Schrater · Xaq Pitkow

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## **Safe Reinforcement Learning via Curriculum Induction**

Matteo Turchetta · Andrey Kolobov · Shital Shah · Andreas Krause · Alekh Agarwal

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## **On the Stability and Convergence of Robust Adversarial Reinforcement Learning: A Case Study on Linear Quadratic Systems**

Kaiqing Zhang · Bin Hu · Tamer Basar

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## **Sample Complexity of Asynchronous Q-Learning: Sharper Analysis and Variance Reduction**

Gen Li · Yuting Wei · Yuejie Chi · Yuantao Gu · Yuxin Chen

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## **Off-Policy Evaluation via the Regularized Lagrangian**

Sherry Yang · Ofir Nachum · Bo Dai · Lihong Li · Dale Schuurmans

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## **Dynamic Regret of Policy Optimization in Non-Stationary Environments**

Yingjie Fei · Zhuoran Yang · Zhaoran Wang · Qiaomin Xie

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## **Constrained episodic reinforcement learning in concave-convex and knapsack settings**

Kianté Brantley · Miro Dudik · Thodoris Lykouris · Sobhan Miryoosefi · Max Simchowitz · Alex Slivkins · Dale Schuurmans · Wen Sun

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## **Off-Policy Interval Estimation with Lipschitz Value Iteration**

Ziyang Tang · Yihao Feng · Na Zhang · Jian Peng · Qiang Liu

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## **CoinDICE: Off-Policy Confidence Interval Estimation**

Bo Dai · Ofir Nachum · Yinlam Chow · Lihong Li · Csaba Szepesvari · Dale Schuurmans

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## **Risk-Sensitive Reinforcement Learning: Near-Optimal Risk-Sample Tradeoff in Regret**

Yingjie Fei · Zhuoran Yang · Yudong Chen · Zhaoran Wang · Qiaomin Xie

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## **Reinforcement Learning with General Value Function Approximation: Provably Efficient Approach via Bounded Eluder Dimension**

Ruosong Wang · Russ Salakhutdinov · Lin Yang

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## **Task-agnostic Exploration in Reinforcement Learning**

Xuezhou Zhang · Yuzhe Ma · Adish Singla

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## **Provably Efficient Exploration for Reinforcement Learning Using Unsupervised Learning**

Fei Feng · Ruosong Wang · Wotao Yin · Simon Du · Lin Yang

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## **On Function Approximation in Reinforcement Learning: Optimism in the Face of Large State Spaces**

Zhuoran Yang · Chi Jin · Zhaoran Wang · Mengdi Wang · Michael Jordan

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**Upper Confidence Primal-Dual Reinforcement Learning for CMDP with Adversarial Loss**

Shuang Qiu · Xiaohan Wei · Zhuoran Yang · Jieping Ye · Zhaoran Wang

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**Minimax Value Interval for Off-Policy Evaluation and Policy Optimization**

Nan Jiang · Jiawei Huang

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**Logarithmic Regret Bound in Partially Observable Linear Dynamical Systems**

Sahin Lale · Kamyar Azizzadenesheli · Babak Hassibi · Anima Anandkumar

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**The Power of Predictions in Online Control**

Chenkai Yu · Guanya Shi · Soon-Jo Chung · Yisong Yue · Adam Wierman

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**Information Theoretic Regret Bounds for Online Nonlinear Control**

Sham Kakade · Akshay Krishnamurthy · Kendall Lowrey · Motoya Ohnishi · Wen Sun

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Yao Fu · Chuanqi Tan · Bin Bi · Moshia Chen · Yansong Feng · Alexander Rush

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**Federated Principal Component Analysis**

Andreas Grammenos · Rodrigo Mendoza Smith · Jon Crowcroft · Cecilia Mascolo

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**Learning Differential Equations that are Easy to Solve**

Jacob Kelly · Jesse Bettencourt · Matthew Johnson · David Duvenaud

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**Learning Rich Rankings**

Arjun Seshadri · Stephen Ragaini · Johan Ugander

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**Self-supervised Co-Training for Video Representation Learning**

Tengda Han · Weidi Xie · Andrew Zisserman

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**Prophet Attention: Predicting Attention with Future Attention**

Fenglin Liu · Xuancheng Ren · Xian Wu · Shen Ge · Wei Fan · Yuexian Zou · Xu Sun

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**Audeo: Audio Generation for a Silent Performance Video**

Kun Su · Xiulong Liu · Eli Shlizerman

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**Cascaded Text Generation with Markov Transformers**

Yuntian Deng · Alexander Rush

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**All Word Embeddings from One Embedding**

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**Data Diversification: A Simple Strategy For Neural Machine Translation**

Xuan-Phi Nguyen · Shafiq Joty · Kui Wu · Ai Ti Aw

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**Learning Sparse Prototypes for Text Generation**

Junxian He · Taylor Berg-Kirkpatrick · Graham Neubig

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**A Discrete Variational Recurrent Topic Model without the Reparametrization Trick**

Mehdi Rezaee · Frank Ferraro

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**AVID Dataset: Anonymized Videos from Diverse Countries**

AJ Piergiovanni · Michael S Ryoo

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**Convolutional Tensor-Train LSTM for Spatio-Temporal Learning**

Jiahao Su · Wonmin Byeon · Jean Kossaifi · Furong Huang · Jan Kautz · Anima Anandkumar

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**End-to-End Learning and Intervention in Games**

Jiayang Li · Jing Yu · Yu Nie · Zhaoran Wang

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**Cross-validation Confidence Intervals for Test Error**

Pierre Bayle · Alexandre Bayle · Lucas Janson · Lester Mackey

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**Learning Robust Decision Policies from Observational Data**

Muhammad Osama · Dave Zachariah · Peter Stoica

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**Improved Sample Complexity for Incremental Autonomous Exploration in MDPs**

Jean Tarbouriech · Matteo Pirotta · Michal Valko · Alessandro Lazaric

In Poster Session 2

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**Self-Imitation Learning via Generalized Lower Bound Q-learning**

Yunhao Tang

In Poster Session 2

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**An Improved Analysis of (Variance-Reduced) Policy Gradient and Natural Policy Gradient Methods**

Yanli Liu · Kaiqing Zhang · Tamer Basar · Wotao Yin

In Poster Session 2

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**One Solution is Not All You Need: Few-Shot Extrapolation via Structured MaxEnt RL**

Saurabh Kumar · Aviral Kumar · Sergey Levine · Chelsea Finn

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**An operator view of policy gradient methods**

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**Robust Reinforcement Learning via Adversarial training with Langevin Dynamics**

Parameswaran Kamalaruban · Yu-Ting Huang · Ya-Ping Hsieh · Paul Rolland · Cheng Shi · Volkan Cevher In Poster Session 2

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**Improving Sample Complexity Bounds for (Natural) Actor-Critic Algorithms**

Tengyu Xu · Zhe Wang · Yingbin Liang In Poster Session 2

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**How to Learn a Useful Critic? Model-based Action-Gradient-Estimator Policy Optimization**

Pierluca D'Oro · Wojciech Jaśkowski In Poster Session 2

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**The Value Equivalence Principle for Model-Based Reinforcement Learning**

Christopher Grimm · Andre Barreto · Satinder Singh · David Silver In Poster Session 2

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**Doubly Robust Off-Policy Value and Gradient Estimation for Deterministic Policies**

Nathan Kallus · Masatoshi Uehara In Poster Session 2

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**Neurosymbolic Reinforcement Learning with Formally Verified Exploration**

Greg Anderson · Abhinav Verma · Isil Dillig · Swarat Chaudhuri In Poster Session 2

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**Near-Optimal Reinforcement Learning with Self-Play**

Yu Bai · Chi Jin · Tiancheng Yu In Poster Session 2

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**Variational Policy Gradient Method for Reinforcement Learning with General Utilities**

Junyu Zhang · Alec Koppel · Amrit Bedi · Csaba Szepesvari · Mengdi Wang In Poster Session 2

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**PC-PG: Policy Cover Directed Exploration for Provable Policy Gradient Learning**

Alekh Agarwal · Mikael Henaff · Sham Kakade · Wen Sun In Poster Session 2

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**Deep Multimodal Fusion by Channel Exchanging**

Yikai Wang · Wenbing Huang · Fuchun Sun · Tingyang Xu · Yu Rong · Junzhou Huang In Poster Session 2

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**Learning Representations from Audio-Visual Spatial Alignment**

Pedro Morgado · Yi Li · Nuno Vasconcelos In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #208

Poster

**Knowledge Augmented Deep Neural Networks for Joint Facial Expression and Action Unit Recognition**

Zijun Cui · Tengfei Song · Yuru Wang · Qiang Ji In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #209

Poster

**Causal Intervention for Weakly-Supervised Semantic Segmentation**

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #210

Poster

**Generative View Synthesis: From Single-view Semantics to Novel-view Images**

Tewodros Amberbir Habtegebril · Varun Jampani · Orazio Gallo · Didier Stricker

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #211

Poster

**Labelling unlabelled videos from scratch with multi-modal self-supervision**

Yuki Asano · Mandela Patrick · Christian Rupprecht · Andrea Vedaldi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #212

Poster

**Unfolding the Alternating Optimization for Blind Super Resolution**

LOG Luo · Yan Huang · Shang Li · Liang Wang · Tieniu Tan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #213

Poster

**Video Frame Interpolation without Temporal Priors**

Youjian Zhang · Chaoyue Wang · Dacheng Tao

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #214

Poster

**Delving into the Cyclic Mechanism in Semi-supervised Video Object Segmentation**

Yuxi Li · Ning Xu · Jinlong Peng · John See · Weiyao Lin

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #215

Poster

**Color Visual Illusions: A Statistics-based Computational Model**

Elad Hirsch · Ayellet Tal

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #216

Poster

**A Ranking-based, Balanced Loss Function Unifying Classification and Localisation in Object Detection**

Kemal Oksuz · Baris Can Cam · Emre Akbas · Sinan Kalkan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #217

Poster

**Make One-Shot Video Object Segmentation Efficient Again**

Tim Meinhardt · Laura Leal-Taixé

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #218

Poster

**SIRI: Spatial Relation Induced Network For Spatial Description Resolution**

peiyao wang · Weixin Luo · Yanyu Xu · Haojie Li · Shugong Xu · Jianyu Yang · Shenghua Gao

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #219

Poster

**Multi-Plane Program Induction with 3D Box Priors**

Yikai Li · Jiayuan Mao · Xiuming Zhang · Bill Freeman · Josh Tenenbaum · Noah Snavely · Jiajun Wu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #220

Poster

**RELATE: Physically Plausible Multi-Object Scene Synthesis Using Structured Latent Spaces**

Sebastien Ehrhardt · Oliver Groth · Aron Monszpart · Martin Engelcke · Ingmar Posner · Niloy Mitra · Andrea Vedaldi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #221

Poster

**Unsupervised object-centric video generation and decomposition in 3D**

Paul Henderson · Christoph Lampert

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #222	Poster
<b>Dissecting Neural ODEs</b>	
Stefano Massaroli · Michael Poli · Jinkyoo Park · Atsushi Yamashita · Hajime Asama	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #223	Poster
<b>On ranking via sorting by estimated expected utility</b>	
Clement Calauzenes · Nicolas Usunier	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #224	Poster
<b>Constant-Expansion Suffices for Compressed Sensing with Generative Priors</b>	
Constantinos Daskalakis · Dhruv Rohatgi · Emmanouil Zampetakis	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #225	Poster
<b>Model Interpretability through the Lens of Computational Complexity</b>	
Pablo Barceló · Mikaël Monet · Jorge Pérez · Bernardo Subercaseaux	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #226	Poster
<b>Agnostic <math>Q</math>-learning with Function Approximation in Deterministic Systems: Near-Optimal Bounds on Approximation Error and Sample Complexity</b>	
Simon Du · Jason Lee · Gaurav Mahajan · Ruosong Wang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #227	Poster
<b>Smoothed Analysis of Online and Differentially Private Learning</b>	
Nika Haghtalab · Tim Roughgarden · Abhishek Shetty	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #228	Poster
<b>Non-Convex SGD Learns Halfspaces with Adversarial Label Noise</b>	
Ilias Diakonikolas · Vasilis Kontonis · Christos Tzamos · Nikos Zarifis	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #229	Poster
<b>Hardness of Learning Neural Networks with Natural Weights</b>	
Amit Daniely · Gal Vardi	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #230	Poster
<b>Classification Under Misspecification: Halfspaces, Generalized Linear Models, and Evolvability</b>	
Sitan Chen · Frederic Koehler · Ankur Moitra · Morris Yau	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #231	Poster
<b>The Complexity of Adversarially Robust Proper Learning of Halfspaces with Agnostic Noise</b>	
Ilias Diakonikolas · Daniel M. Kane · Pasin Manurangsi	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #232	Poster
<b>The phase diagram of approximation rates for deep neural networks</b>	
Dmitry Yarotsky · Anton Zhevnerchuk	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #233	Poster
<b>A Dynamical Central Limit Theorem for Shallow Neural Networks</b>	
Zhengdao Chen · Grant Rotskoff · Joan Bruna · Eric Vanden-Eijnden	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #234	Poster

## **Learning Bounds for Risk-sensitive Learning**

Jaeho Lee · Sejun Park · Jinwoo Shin

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #235

Poster

## **Agnostic Learning of a Single Neuron with Gradient Descent**

Spencer Frei · Yuan Cao · Quanquan Gu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #236

Poster

## **Information theoretic limits of learning a sparse rule**

Clément Luneau · jean barbier · Nicolas Macris

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #237

Poster

## **From Finite to Countable-Armed Bandits**

Anand Kalvit · Assaf Zeevi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #238

Poster

## **Optimal Best-arm Identification in Linear Bandits**

Yassir Jedra · Alexandre Proutiere

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #239

Poster

## **Restless-UCB, an Efficient and Low-complexity Algorithm for Online Restless Bandits**

Siwei Wang · Longbo Huang · John C. S. Lui

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #240

Poster

## **Finite Continuum-Armed Bandits**

Solenne Gaucher

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #241

Poster

## **Adversarial Blocking Bandits**

Nicholas Bishop · Hau Chan · Debmalya Mandal · Long Tran-Thanh

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #242

Poster

## **Inference for Batched Bandits**

Kelly Zhang · Lucas Janson · Susan Murphy

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #243

Poster

## **Online Algorithm for Unsupervised Sequential Selection with Contextual Information**

Arun Verma · Manjesh Kumar Hanawal · Csaba Szepesvari · Venkatesh Saligrama

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #244

Poster

## **Adversarial Attacks on Linear Contextual Bandits**

Evrard Garcelon · Baptiste Roziere · Laurent Meunier · Jean Tarbouriech · Olivier Teytaud · Alessandro Lazaric · In Poster Session 2  
Matteo Pirotta

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #245

Poster

## **Crush Optimism with Pessimism: Structured Bandits Beyond Asymptotic Optimality**

Kwang-Sung Jun · Chicheng Zhang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #246

Poster

## **Finding All $\epsilon$ -Good Arms in Stochastic Bandits**

Blake Mason · Lalit Jain · Ardhendu Tripathy · Robert Nowak

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #247

Poster

**An Optimal Elimination Algorithm for Learning a Best Arm**

Avinatan Hassidim · Ron Kupfer · Yaron Singer

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #248

Poster

**Instance-wise Feature Grouping**

Aria Masoomi · Chieh T Wu · Tingting Zhao · Zifeng Wang · Peter Castaldi · Jennifer Dy

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #249

Poster

**POLY-HOOT: Monte-Carlo Planning in Continuous Space MDPs with Non-Asymptotic Analysis**

Weichao Mao · Kaiqing Zhang · Qiaomin Xie · Tamer Basar

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #250

Poster

**Online Planning with Lookahead Policies**

Yonathan Efroni · Mohammad Ghavamzadeh · Shie Mannor

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #251

Poster

**Escaping the Gravitational Pull of Softmax**

Jincheng Mei · Chenjun Xiao · Bo Dai · Lihong Li · Csaba Szepesvari · Dale Schuurmans

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #252

Poster

**Online Bayesian Persuasion**

Matteo Castiglioni · Andrea Celli · Alberto Marchesi · Nicola Gatti

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #253

Poster

**KFC: A Scalable Approximation Algorithm for  $k$ -center Fair Clustering**

Farouk Harb · Sharon Lam

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #254

Poster

**CoinPress: Practical Private Mean and Covariance Estimation**

Sourav Biswas · Yihe Dong · Gautam Kamath · Jonathan Ullman

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #255

Poster

**Auditing Differentially Private Machine Learning: How Private is Private SGD?**

Matthew Jagielski · Jonathan Ullman · Alina Oprea

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #256

Poster

**Private Learning of Halfspaces: Simplifying the Construction and Reducing the Sample Complexity**

Haim Kaplan · Yishay Mansour · Uri Stemmer · Eliad Tsfadia

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #257

Poster

**Smoothly Bounding User Contributions in Differential Privacy**

Alessandro Epasto · Mohammad Mahdian · Jieming Mao · Vahab Mirrokni · Lijie Ren

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #258

Poster

**Learning from Mixtures of Private and Public Populations**

Raef Bassily · Shay Moran · Anupama Nandi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #259

Poster

**A Computational Separation between Private Learning and Online Learning**

Mark Bun

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #260

Poster

## ***Instance-optimality in differential privacy via approximate inverse sensitivity mechanisms***

Hilal Asi · John Duchi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #261

Poster

## ***Improving Sparse Vector Technique with Renyi Differential Privacy***

Yuqing Zhu · Yu-Xiang Wang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #262

Poster

## ***GS-WGAN: A Gradient-Sanitized Approach for Learning Differentially Private Generators***

Dingfan Chen · Tribhuvanesh Orekondy · Mario Fritz

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #263

Poster

## ***Private Identity Testing for High-Dimensional Distributions***

Clément L Canonne · Gautam Kamath · Audra McMillan · Jonathan Ullman · Lydia Zakynthinou

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #264

Poster

## ***Optimal Private Median Estimation under Minimal Distributional Assumptions***

Christos Tzamos · Manolis Vlatakis-Gkaragkounis · Ilias Zadik

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #265

Poster

## ***Learning discrete distributions: user vs item-level privacy***

Yuhan Liu · Ananda Theertha Suresh · Felix Xinnan Yu · Sanjiv Kumar · Michael D Riley

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #266

Poster

## ***Locally private non-asymptotic testing of discrete distributions is faster using interactive mechanisms***

Tom Berrett · Cristina Butucea

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #267

Poster

## ***Mitigating Manipulation in Peer Review via Randomized Reviewer Assignments***

Steven Jecmen · Hanrui Zhang · Ryan Liu · Nihar Shah · Vincent Conitzer · Fei Fang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #268

Poster

## ***Phase retrieval in high dimensions: Statistical and computational phase transitions***

Antoine Maillard · Bruno Loureiro · Florent Krzakala · Lenka Zdeborová

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #269

Poster

## ***Higher-Order Spectral Clustering of Directed Graphs***

Steinar Laenen · He Sun

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #270

Poster

## ***Deep Transformation-Invariant Clustering***

Tom Monnier · Thibault Groueix · Mathieu Aubry

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #271

Poster

## ***Faster DBSCAN via subsampled similarity queries***

Heinrich Jiang · Jennifer Jang · Jakub Lacki

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #272

Poster

## ***From Trees to Continuous Embeddings and Back: Hyperbolic Hierarchical Clustering***

Ines Chami · Albert Gu · Vaggos Chatziafratis · Chris Ré

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #273

Poster

## **Strongly local $p$ -norm-cut algorithms for semi-supervised learning and local graph clustering**

Meng Liu · David Gleich

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #274

Poster

## **Exact Recovery of Mangled Clusters with Same-Cluster Queries**

Marco Bressan · Nicolò Cesa-Bianchi · Silvio Lattanzi · Andrea Paudice

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #275

Poster

## **Simple and Scalable Sparse $k$ -means Clustering via Feature Ranking**

Zhiyue Zhang · Kenneth Lange · Jason Xu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #276

Poster

## **Efficient Clustering for Stretched Mixtures: Landscape and Optimality**

Kaizheng Wang · Yuling Yan · Mateo Diaz

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #277

Poster

## **Community detection in sparse time-evolving graphs with a dynamical Bethe-Hessian**

Lorenzo Dall'Amico · Romain Couillet · Nicolas Tremblay

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #278

Poster

## **Classification with Valid and Adaptive Coverage**

Yaniv Romano · Matteo Sesia · Emmanuel Candès

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #279

Poster

## **Self-Supervised Learning by Cross-Modal Audio-Video Clustering**

Humam Alwassel · Dhruv Mahajan · Bruno Korbar · Lorenzo Torresani · Bernard Ghanem · Du Tran

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #280

Poster

## **HyNet: Learning Local Descriptor with Hybrid Similarity Measure and Triplet Loss**

Yurun Tian · Axel Barroso Laguna · Tony Ng · Vassileios Balntas · Krystian Mikolajczyk

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #281

Poster

## **Distributionally Robust Local Non-parametric Conditional Estimation**

Viet Anh Nguyen · Fan Zhang · Jose Blanchet · Erick Delage · Yinyu Ye

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #282

Poster

## **Differentially Private Clustering: Tight Approximation Ratios**

Badih Ghazi · Ravi Kumar · Pasin Manurangsi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #283

Poster

## **Faster Differentially Private Samplers via Rényi Divergence Analysis of Discretized Langevin MCMC**

Arun Ganesh · Kunal Talwar

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #284

Poster

## **Learning to Decode: Reinforcement Learning for Decoding of Sparse Graph-Based Channel Codes**

Salman Habib · Allison Beemer · Joerg Kliewer

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #285

Poster

## **Non-Euclidean Universal Approximation**

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #286

Poster

**WoodFisher: Efficient Second-Order Approximation for Neural Network Compression**

Sidak Pal Singh · Dan Alistarh

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #287

Poster

**Deep Transformers with Latent Depth**

Xian Li · Asa Cooper Stickland · Yuqing Tang · Xiang Kong

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #288

Poster

**Movement Pruning: Adaptive Sparsity by Fine-Tuning**

Victor Sanh · Thomas Wolf · Alexander Rush

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #289

Poster

**Sanity-Checking Pruning Methods: Random Tickets can Win the Jackpot**

Jingtong Su · Yihang Chen · Tianle Cai · Tianhao Wu · Ruiqi Gao · Liwei Wang · Jason Lee

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #290

Poster

**Pruning Filter in Filter**

Fanxu Meng · Hao Cheng · Ke Li · Huixiang Luo · Xiaowei Guo · Guangming Lu · Xing Sun

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #292

Poster

**The Lottery Ticket Hypothesis for Pre-trained BERT Networks**

Tianlong Chen · Jonathan Frankle · Shiyu Chang · Sijia Liu · Yang Zhang · Zhangyang Wang · Michael Carbin In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #293

Poster

**The Generalization-Stability Tradeoff In Neural Network Pruning**

Brian Bartoldson · Ari Morcos · Adrian Barbu · Gordon Erlebacher

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #294

Poster

**Greedy Optimization Provably Wins the Lottery: Logarithmic Number of Winning Tickets is Enough**

Mao Ye · Lemeng Wu · Qiang Liu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #295

Poster

**Firefly Neural Architecture Descent: a General Approach for Growing Neural Networks**

Lemeng Wu · Bo Liu · Peter Stone · Qiang Liu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #296

Poster

**HYDRA: Pruning Adversarially Robust Neural Networks**

Vikash Sehwag · Shiqi Wang · Prateek Mittal · Suman Jana

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #297

Poster

**Logarithmic Pruning is All You Need**

Laurent Orseau · Marcus Hutter · Omar Rivasplata

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #298

Poster

**Optimal Lottery Tickets via Subset Sum: Logarithmic Over-Parameterization is Sufficient**

Ankit Pensia · Shashank Rajput · Alliot Nagle · Harit Vishwakarma · Dimitrios Papailiopoulos

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #300

Poster

**Higher-Order Certification For Randomized Smoothing**

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #301

Poster

**Adversarial robustness via robust low rank representations**

Pranjal Awasthi · Himanshu Jain · Ankit Singh Rawat · Aravindan Vijayaraghavan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #302

Poster

**Denoised Smoothing: A Provable Defense for Pretrained Classifiers**

Hadi Salman · Mingjie Sun · Greg Yang · Ashish Kapoor · J. Zico Kolter

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #303

Poster

**Margins are Insufficient for Explaining Gradient Boosting**

Allan Grønlund · Lior Kamma · Kasper Green Larsen

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #304

Poster

**On the Power of Louvain in the Stochastic Block Model**

Vincent Cohen-Addad · Adrian Kosowski · Frederik Mallmann-Trenn · David Saulpic

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #305

Poster

**Robust large-margin learning in hyperbolic space**

Melanie Weber · Manzil Zaheer · Ankit Singh Rawat · Aditya Menon · Sanjiv Kumar

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #306

Poster

**Self-Learning Transformations for Improving Gaze and Head Redirection**

Yufeng Zheng · Seonwook Park · Xucong Zhang · Shalini De Mello · Otmar Hilliges

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #307

Poster

**Exactly Computing the Local Lipschitz Constant of ReLU Networks**

Matt Jordan · Alex Dimakis

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #308

Poster

**Optimizing Mode Connectivity via Neuron Alignment**

Joseph J Tatro · Pin-Yu Chen · Payel Das · Igor Melnyk · Prasanna Sattigeri · Rongjie Lai

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #309

Poster

**An Efficient Framework for Clustered Federated Learning**

Avishek Ghosh · Jichan Chung · Dong Yin · Kannan Ramchandran

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #310

Poster

**On the distance between two neural networks and the stability of learning**

Jeremy Bernstein · Arash Vahdat · Yisong Yue · Ming-Yu Liu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #311

Poster

**One Ring to Rule Them All: Certifiably Robust Geometric Perception with Outliers**

Heng Yang · Luca Carlone

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #312

Poster

**Multi-Robot Collision Avoidance under Uncertainty with Probabilistic Safety Barrier Certificates**

Wenhai Luo · Wen Sun · Ashish Kapoor

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #313

Poster

**Consequences of Misaligned AI**

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #314

Poster

**Certified Defense to Image Transformations via Randomized Smoothing**

Marc Fischer · Maximilian Baader · Martin Vechev

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #315

Poster

**Certifying Strategyproof Auction Networks**

Michael Curry · Ping-yeh Chiang · Tom Goldstein · John Dickerson

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #316

Poster

**Enabling certification of verification-agnostic networks via memory-efficient semidefinite programming**

Sumanth Dathathri · Krishnamurthy Dvijotham · Alexey Kurakin · Aditi Raghunathan · Jonathan Uesato · Rudy Bunel · Shreya Shankar · Jacob Steinhardt · Ian Goodfellow · Percy Liang · Pushmeet Kohli

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #317

Poster

**Improving robustness against common corruptions by covariate shift adaptation**

Steffen Schneider · Evgenia Rusak · Luisa Eck · Oliver Bringmann · Wieland Brendel · Matthias Bethge

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #318

Poster

**Deeply Learned Spectral Total Variation Decomposition**

Tamara G. Grossmann · Yury Korolev · Guy Gilboa · Carola Schoenlieb

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #319

Poster

**Stochastic Segmentation Networks: Modelling Spatially Correlated Aleatoric Uncertainty**

Miguel Monteiro · Loic Le Folgoc · Daniel Coelho de Castro · Nick Pawlowski · Bernardo Marques · Konstantinos Kamnitsas · Mark van der Wilk · Ben Glocker

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #320

Poster

**Multiscale Deep Equilibrium Models**

Shaojie Bai · Vladlen Koltun · J. Zico Kolter

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #321

Poster

**Faithful Embeddings for Knowledge Base Queries**

Haitian Sun · Andrew Arnold · Tania Bedrax Weiss · Fernando Pereira · William Cohen

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #322

Poster

**GradAug: A New Regularization Method for Deep Neural Networks**

Taojiannan Yang · Sijie Zhu · Chen Chen

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #323

Poster

**Monotone operator equilibrium networks**

Ezra Winston · J. Zico Kolter

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #324

Poster

**Hierarchical nucleation in deep neural networks**

Diego Doimo · Aldo Glielmo · Alessio Ansuini · Alessandro Laio

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #325

Poster

**What Do Neural Networks Learn When Trained With Random Labels?**

Hartmut Maennel · Ibrahim Alabdulmohsin · Ilya Tolstikhin · Robert Baldock · Olivier Bousquet · Sylvain Gelly · Daniel Keysers

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #326

Poster

## **H-Mem: Harnessing synaptic plasticity with Hebbian Memory Networks**

Thomas Limbacher · Robert Legenstein

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #327

Poster

## **ExpandNets: Linear Over-parameterization to Train Compact Convolutional Networks**

Shuxuan Guo · Jose M. Alvarez · Mathieu Salzmann

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #328

Poster

## **Throughput-Optimal Topology Design for Cross-Silo Federated Learning**

Othmane Marfoq · CHUAN XU · Giovanni Neglia · Richard Vidal

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #329

Poster

## **Wavelet Flow: Fast Training of High Resolution Normalizing Flows**

Jason Yu · Konstantinos Derpanis · Marcus Brubaker

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #330

Poster

## **Woodbury Transformations for Deep Generative Flows**

You Lu · Bert Huang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #331

Poster

## **Why Normalizing Flows Fail to Detect Out-of-Distribution Data**

Polina Kirichenko · Pavel Izmailov · Andrew Wilson

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #332

Poster

## **The Convex Relaxation Barrier, Revisited: Tightened Single-Neuron Relaxations for Neural Network Verification**

Christian Tjandraatmadja · Ross Anderson · Joey Huchette · Will Ma · KRUNAL KISHOR PATEL · Juan Pablo Vielma

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #333

Poster

## **Regret in Online Recommendation Systems**

Kaito Ariu · Narae Ryu · Se-Young Yun · Alexandre Proutiere

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #334

Poster

## **Simplify and Robustify Negative Sampling for Implicit Collaborative Filtering**

Jingtao Ding · Yuhang Quan · Quanming Yao · Yong Li · Depeng Jin

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #335

Poster

## **Myersonian Regression**

Allen Liu · Renato Leme · Jon Schneider

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #336

Poster

## **On Convergence of Nearest Neighbor Classifiers over Feature Transformations**

Luka Rimanic · Cedric Renggli · Bo Li · Ce Zhang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #337

Poster

## **Learning Utilities and Equilibria in Non-Truthful Auctions**

Hu Fu · Tao Lin

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #338

Poster

## **Contextual Reserve Price Optimization in Auctions via Mixed Integer Programming**

Joey Huchette · Haihao Lu · Hossein Esfandiari · Vahab Mirrokni

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #339	Poster
<b>Secretary and Online Matching Problems with Machine Learned Advice</b>	
Antonios Antoniadis · Themis Gouleakis · Pieter Kleer · Pavel Kolev	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #340	Poster
<b>On the Error Resistance of Hinge-Loss Minimization</b>	
Kunal Talwar	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #341	Poster
<b>Polynomial-Time Computation of Optimal Correlated Equilibria in Two-Player Extensive-Form Games with Public Chance Moves and Beyond</b>	
Gabriele Farina · Tuomas Sandholm	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #342	Poster
<b>Chaos, Extremism and Optimism: Volume Analysis of Learning in Games</b>	
Yun Kuen Cheung · Georgios Piliouras	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #343	Poster
<b>A Game-Theoretic Analysis of the Empirical Revenue Maximization Algorithm with Endogenous Sampling</b>	
Xiaotie Deng · Ron Lavi · Tao Lin · Qi Qi · Wenwei WANG · Xiang Yan	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #344	Poster
<b>A Bandit Learning Algorithm and Applications to Auction Design</b>	
Kim Thang Nguyen	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #345	Poster
<b>No-regret Learning in Price Competitions under Consumer Reference Effects</b>	
Negin Golrezaei · Patrick Jaillet · Jason Liang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #346	Poster
<b>Robust and Heavy-Tailed Mean Estimation Made Simple, via Regret Minimization</b>	
Sam Hopkins · Jerry Li · Fred Zhang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #347	Poster
<b>Partially View-aligned Clustering</b>	
Zhenyu Huang · Peng Hu · Joey Tianyi Zhou · Jiancheng Lv · Xi Peng	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #348	Poster
<b>MeshSDF: Differentiable Iso-Surface Extraction</b>	
Edoardo Remelli · Artem Lukianov · Stephan Richter · Benoit Guillard · Timur Bagautdinov · Pierre Baque · Pascal Fua	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #349	Poster
<b>Joint Policy Search for Multi-agent Collaboration with Imperfect Information</b>	
Yuandong Tian · Qucheng Gong · Yu Jiang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #350	Poster
<b>On Infinite-Width Hypernetworks</b>	
Etai Littwin · Tomer Galanti · Lior Wolf · Greg Yang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #351	Poster

## **Training Generative Adversarial Networks with Limited Data**

Tero Karras · Miika Aittala · Janne Hellsten · Samuli Laine · Jaakko Lehtinen · Timo Aila

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #352

Poster

## **Reinforcement Learning with Combinatorial Actions: An Application to Vehicle Routing**

Arthur Delarue · Ross Anderson · Christian Tjandraatmadja

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #353

Poster

## **A Self-Tuning Actor-Critic Algorithm**

Tom Zahavy · Zhongwen Xu · Vivek Veeriah · Matteo Hessel · Junhyuk Oh · Hado van Hasselt · David Silver · Satinder Singh

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #354

Poster

## **Residual Force Control for Agile Human Behavior Imitation and Extended Motion**

### **Synthesis**

Ye Yuan · Kris Kitani

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #355

Poster

## **See, Hear, Explore: Curiosity via Audio-Visual Association**

Victoria Dean · Shubham Tulsiani · Abhinav Gupta

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #356

Poster

## **Finite-Time Analysis for Double Q-learning**

Huaqing Xiong · Lin Zhao · Yingbin Liang · Wei Zhang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #357

Poster

## **Adaptive Discretization for Model-Based Reinforcement Learning**

Sean Sinclair · Tianyu Wang · Gauri Jain · Sid Banerjee · Christina Yu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #358

Poster

## **Object Goal Navigation using Goal-Oriented Semantic Exploration**

Devendra Singh Chaplot · Dhiraj Prakashchand Gandhi · Abhinav Gupta · Russ Salakhutdinov

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #359

Poster

## **Online Algorithms for Multi-shop Ski Rental with Machine Learned Advice**

Shufan Wang · Jian Li · Shiqiang Wang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #360

Poster

## **Planning in Markov Decision Processes with Gap-Dependent Sample Complexity**

Anders Jonsson · Emilie Kaufmann · Pierre Menard · Omar Darwiche Domingues · Edouard Leurent · Michal Valko

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #361

Poster

## **A new convergent variant of Q-learning with linear function approximation**

Diogo Carvalho · Francisco S. Melo · Pedro A. Santos

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #362

Poster

## **A Unified Switching System Perspective and Convergence Analysis of Q-Learning**

### **Algorithms**

Donghwan Lee · Niao He

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #363

Poster

## **Adversarially Robust Streaming Algorithms via Differential Privacy**

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #364

Poster

**Generalized Boosting**

Arun Suggala · Bingbin Liu · Pradeep Ravikumar

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #365

Poster

**A Topological Filter for Learning with Label Noise**

Pengxiang Wu · Songzhu Zheng · Mayank Goswami · Dimitris Metaxas · Chao Chen

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #366

Poster

**Learning by Minimizing the Sum of Ranked Range**

Shu Hu · Yiming Ying · xin wang · Siwei Lyu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #367

Poster

**Partial Optimal Transport with applications on Positive-Unlabeled Learning**

Laetitia Chapel · Mokhtar Z. Alaya · Gilles Gasso

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #368

Poster

**Assisted Learning: A Framework for Multi-Organization Learning**

Xun Xian · Xinran Wang · Jie Ding · Reza Ghanadan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #369

Poster

**Learning Disentangled Representations and Group Structure of Dynamical Environments**

Robin Quessard · Thomas Barrett · William Clements

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #370

Poster

**Posterior Network: Uncertainty Estimation without OOD Samples via Density-Based Pseudo-Counts**

Bertrand Charpentier · Daniel Zügner · Stephan Günnemann

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #371

Poster

**Retrieval-Augmented Generation for Knowledge-Intensive NLP Tasks**

Patrick Lewis · Ethan Perez · Aleksandra Piktus · Fabio Petroni · Vladimir Karpukhin · Naman Goyal · Heinrich Küttler · Mike Lewis · Scott Yih · Tim Rocktäschel · Sebastian Riedel · Douwe Kiela

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #372

Poster

**Improving Natural Language Processing Tasks with Human Gaze-Guided Neural Attention**

Ekta Sood · Simon Tannert · Philipp Mueller · Andreas Bulling

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #373

Poster

**COBE: Contextualized Object Embeddings from Narrated Instructional Video**

Gedas Bertasius · Lorenzo Torresani

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #374

Poster

**Beyond Homophily in Graph Neural Networks: Current Limitations and Effective Designs**

Jiong Zhu · Yujun Yan · Lingxiao Zhao · Mark Heimann · Leman Akoglu · Danai Koutra

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #375

Poster

**Evolving Graphical Planner: Contextual Global Planning for Vision-and-Language Navigation**

Zhiwei Deng · Karthik Narasimhan · Olga Russakovsky

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #376	Poster
<b>Can Q-Learning with Graph Networks Learn a Generalizable Branching Heuristic for a SAT Solver?</b>	
Vitaly Kurin · Saad Godil · Shimon Whiteson · Bryan Catanzaro	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #377	Poster
<b>Probably Approximately Correct Constrained Learning</b>	
Luiz Chamon · Alejandro Ribeiro	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #378	Poster
<b>Sharp uniform convergence bounds through empirical centralization</b>	
Cyrus Cousins · Matteo Riondato	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #379	Poster
<b>Interpolation Technique to Speed Up Gradients Propagation in Neural ODEs</b>	
Talgat Daulbaev · Alexandr Katrutsa · Larisa Markeeva · Julia Gusak · Andrzej Cichocki · Ivan Oseledets	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #380	Poster
<b>Gaussian Gated Linear Networks</b>	
David Budden · Adam Marblestone · Eren Sezener · Tor Lattimore · Greg Wayne · Joel Veness	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #381	Poster
<b>BayReL: Bayesian Relational Learning for Multi-omics Data Integration</b>	
Ehsan Hajiramezanali · Arman Hasanzadeh · Nick Duffield · Krishna Narayanan · Xiaoning Qian	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #382	Poster
<b>Manifold structure in graph embeddings</b>	
Patrick Rubin-Delanchy	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #383	Poster
<b>GAIT-prop: A biologically plausible learning rule derived from backpropagation of error</b>	
Nasir Ahmad · Marcel A. J. van Gerven · Luca Ambrogioni	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #384	Poster
<b>Learning to Learn with Feedback and Local Plasticity</b>	
Jack Lindsey · Ashok Litwin-Kumar	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #385	Poster
<b>A Theoretical Framework for Target Propagation</b>	
Alexander Meulemans · Francesco Carzaniga · Johan Suykens · João Sacramento · Benjamin F. Grewe	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #386	Poster
<b>Inductive Quantum Embedding</b>	
Santosh Kumar Srivastava · Dinesh Khandelwal · Dhiraj Madan · Dinesh Garg · Hima Karanam · L Venkata Subramanian	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #387	Poster
<b>Optimizing Neural Networks via Koopman Operator Theory</b>	
Akshunna S. Dogra · Will Redman	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #388	Poster
<b>Biological credit assignment through dynamic inversion of feedforward networks</b>	
Bill Podlaski · Christian K. Machens	In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #389

Poster

### **On 1/n neural representation and robustness**

Josue Nassar · Piotr Sokol · Sueyeon Chung · Daniel D Harris · Memming Park

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #390

Poster

### **Real World Games Look Like Spinning Tops**

Wojciech Czarnecki · Gauthier Gidel · Brendan Tracey · Karl Tuyls · Shayegan Omidshafiei · David Balduzzi · In Poster Session 2  
Max Jaderberg

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #391

Poster

### **Quantitative Propagation of Chaos for SGD in Wide Neural Networks**

Valentin De Bortoli · Alain Durmus · Xavier Fontaine · Umut Simsekli

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #392

Poster

### **Network size and size of the weights in memorization with two-layers neural networks**

Sebastien Bubeck · Ronen Eldan · Yin Tat Lee · Dan Mikulincer

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #393

Poster

### **Consistent Estimation of Identifiable Nonparametric Mixture Models from Grouped Observations**

Alexander Ritchie · Robert Vandermeulen · Clay Scott

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #394

Poster

### **All-or-nothing statistical and computational phase transitions in sparse spiked matrix estimation**

jean barbier · Nicolas Macris · Cynthia Rush

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #395

Poster

### **Soft Contrastive Learning for Visual Localization**

Janine Thoma · Danda Pani Paudel · Luc V Gool

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #396

Poster

### **A Flexible Framework for Designing Trainable Priors with Adaptive Smoothing and Game Encoding**

Bruno Lecouat · Jean Ponce · Julien Mairal

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #397

Poster

### **Human Parsing Based Texture Transfer from Single Image to 3D Human via Cross-View Consistency**

Fang Zhao · Shengcai Liao · Kaihao Zhang · Ling Shao

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #398

Poster

### **Cross-Scale Internal Graph Neural Network for Image Super-Resolution**

Shangchen Zhou · Jiawei Zhang · Wangmeng Zuo · Chen Change Loy

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #399

Poster

### **GPS-Net: Graph-based Photometric Stereo Network**

Zhuokun Yao · Kun Li · Ying Fu · Haofeng Hu · Boxin Shi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #400

Poster

### **Convolutional Generation of Textured 3D Meshes**

Dario Pavllo · Graham Spinks · Thomas Hofmann · Marie-Francine Moens · Aurelien Lucchi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #401

Poster

## **Beta R-CNN: Looking into Pedestrian Detection from Another Perspective**

Zixuan Xu · Banghuai Li · Ye Yuan · Anhong Dang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #402

Poster

## **Neural Sparse Representation for Image Restoration**

Yuchen Fan · Jiahui Yu · Yiqun Mei · Yulun Zhang · Yun Fu · Ding Liu · Thomas Huang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #403

Poster

## **GRAF: Generative Radiance Fields for 3D-Aware Image Synthesis**

Katja Schwarz · Yiyi Liao · Michael Niemeyer · Andreas Geiger

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #404

Poster

## **Watch out! Motion is Blurring the Vision of Your Deep Neural Networks**

Qing Guo · Felix Juefei-Xu · Xiaofei Xie · Lei Ma · Jian Wang · Bing Yu · Wei Feng · Yang Liu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #405

Poster

## **Continuous Object Representation Networks: Novel View Synthesis without Target View Supervision**

Nicolai Hani · Selim Engin · Jun-Jee Chao · Volkan Isler

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #406

Poster

## **Learning Semantic-aware Normalization for Generative Adversarial Networks**

Heliang Zheng · Jianlong Fu · zengyh Zeng · Jiebo Luo · Zheng-Jun Zha

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #407

Poster

## **3D Multi-bodies: Fitting Sets of Plausible 3D Human Models to Ambiguous Image Data**

Benjamin Biggs · David Novotny · Sebastien Ehrhardt · Hanbyul Joo · Ben Graham · Andrea Vedaldi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #408

Poster

## **Learning to Detect Objects with a 1 Megapixel Event Camera**

Etienne Perot · Pierre de Tournemire · Davide Nitti · Jonathan Masci · Amos Sironi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #409

Poster

## **A Loss Function for Generative Neural Networks Based on Watson's Perceptual Model**

Steffen Czolbe · Oswin Krause · Ingemar Cox · Christian Igel

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #410

Poster

## **GANSpace: Discovering Interpretable GAN Controls**

Erik Härkönen · Aaron Hertzmann · Jaakkko Lehtinen · Sylvain Paris

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #411

Poster

## **Deep Energy-based Modeling of Discrete-Time Physics**

Takashi Matsubara · Ai Ishikawa · Takaharu Yaguchi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #412

Poster

## **SLIP: Learning to Predict in Unknown Dynamical Systems with Long-Term Memory**

Paria Rashidinejad · Jiantao Jiao · Stuart Russell

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #413

Poster

## **Weak Form Generalized Hamiltonian Learning**

Kevin Course · Trefor Evans · Prasanth Nair

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #414	Poster
<b>Disentangling by Subspace Diffusion</b>	
David Pfau · Irina Higgins · Alex Botev · Seb Racanière	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #415	Poster
<b>Simultaneous Preference and Metric Learning from Paired Comparisons</b>	
Austin Xu · Mark Davenport	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #416	Poster
<b>Hausdorff Dimension, Heavy Tails, and Generalization in Neural Networks</b>	
Umut Simsekli · Ozan Sener · George Deligiannidis · Murat Erdogdu	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #417	Poster
<b>Hold me tight! Influence of discriminative features on deep network boundaries</b>	
Guillermo Ortiz-Jimenez · Apostolos Modas · Seyed Moosavi · Pascal Frossard	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #418	Poster
<b>Training Generative Adversarial Networks by Solving Ordinary Differential Equations</b>	
Chongli Qin · Yan Wu · Jost Tobias Springenberg · Andy Brock · Jeff Donahue · Timothy Lillicrap · Pushmeet Kohli	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #419	Poster
<b>Sparse Graphical Memory for Robust Planning</b>	
Scott Emmons · Ajay Jain · Misha Laskin · Thanard Kurutach · Pieter Abbeel · Deepak Pathak	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #420	Poster
<b>Task-Agnostic Online Reinforcement Learning with an Infinite Mixture of Gaussian Processes</b>	
Mengdi Xu · Wenhao Ding · Jiacheng Zhu · ZUXIN LIU · Baiming Chen · Ding Zhao	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #421	Poster
<b>Bayesian Robust Optimization for Imitation Learning</b>	
Daniel S. Brown · Scott Niekum · Marek Petrik	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #422	Poster
<b>Learning Parities with Neural Networks</b>	
Amit Daniely · Eran Malach	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #423	Poster
<b>Learning the Linear Quadratic Regulator from Nonlinear Observations</b>	
Zakaria Mhammedi · Dylan Foster · Max Simchowitz · Dipendra Misra · Wen Sun · Akshay Krishnamurthy · Alexander Rakhlin · John Langford	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #424	Poster
<b>Optimal Robustness-Consistency Trade-offs for Learning-Augmented Online Algorithms</b>	
Alexander Wei · Fred Zhang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #425	Poster
<b>Stateful Posted Pricing with Vanishing Regret via Dynamic Deterministic Markov Decision Processes</b>	
Yuval Emek · Ron Lavi · Rad Niazadeh · Yangguang Shi	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #426	Poster

**On the Theory of Transfer Learning: The Importance of Task Diversity**

Nilesh Tripuraneni · Michael Jordan · Chi Jin

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #427

Poster

**Online Agnostic Boosting via Regret Minimization**

Nataly Brukhim · Xinyi Chen · Elad Hazan · Shay Moran

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #428

Poster

**Minimax Classification with 0-1 Loss and Performance Guarantees**

Santiago Mazuelas · Andrea Zanoni · Aritz Pérez

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #429

Poster

**Robust Density Estimation under Besov IPM Losses**

Ananya Uppal · Shashank Singh · Barnabas Poczos

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #430

Poster

**Online Multitask Learning with Long-Term Memory**

Mark Herbster · Stephen Pasteris · Lisa Tse

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #431

Poster

**Improving Local Identifiability in Probabilistic Box Embeddings**

Shib Dasgupta · Michael Boratko · Dongxu Zhang · Luke Vilnis · Xiang Li · Andrew McCallum

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #432

Poster

**Finite-Sample Analysis of Contractive Stochastic Approximation Using Smooth Convex Envelopes**

Zaiwei Chen · Siva Theja Maguluri · Sanjay Shakkottai · Karthikeyan Shanmugam

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #433

Poster

**Synthetic Data Generators -- Sequential and Private**

Olivier Bousquet · Roi Livni · Shay Moran

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #434

Poster

**Near-Optimal SQ Lower Bounds for Agnostically Learning Halfspaces and ReLUs under Gaussian Marginals**

Ilias Diakonikolas · Daniel Kane · Nikos Zarifis

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #435

Poster

**Statistical-Query Lower Bounds via Functional Gradients**

Surbhi Goel · Aravind Gollakota · Adam Klivans

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #436

Poster

**PAC-Bayes Learning Bounds for Sample-Dependent Priors**

Pranjal Awasthi · Satyen Kale · Stefani Karp · Mehryar Mohri

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #437

Poster

**Sharpened Generalization Bounds based on Conditional Mutual Information and an Application to Noisy, Iterative Algorithms**

Mahdi Haghifam · Jeffrey Negrea · Ashish Khisti · Dan Roy · Gintare Karolina Dziugaite

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #438

Poster

**Decision trees as partitioning machines to characterize their generalization properties**

Jean-Samuel Leboeuf · Frédéric LeBlanc · Mario Marchand

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #439	Poster
<b>A Limitation of the PAC-Bayes Framework</b>	In Poster Session 2
Roi Livni · Shay Moran	
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #440	Poster
<b>Conditioning and Processing: Techniques to Improve Information-Theoretic Generalization Bounds</b>	
Hassan Hafez-Kolah · Zeinab Golgooni · Shohreh Kasaei · Mahdieh Soleymani	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #441	Poster
<b>Second Order PAC-Bayesian Bounds for the Weighted Majority Vote</b>	
Andres Masegosa · Stephan Lorenzen · Christian Igel · Yevgeny Seldin	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #442	Poster
<b>PAC-Bayes Analysis Beyond the Usual Bounds</b>	
Omar Rivasplata · Ilya Kuzborskij · Csaba Szepesvari · John Shawe-Taylor	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #443	Poster
<b>Maximum-Entropy Adversarial Data Augmentation for Improved Generalization and Robustness</b>	
Long Zhao · Ting Liu · Xi Peng · Dimitris Metaxas	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #444	Poster
<b>Probabilistic Orientation Estimation with Matrix Fisher Distributions</b>	
David Mohlin · Josephine Sullivan · Gérald Bianchi	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #445	Poster
<b>Discover, Hallucinate, and Adapt: Open Compound Domain Adaptation for Semantic Segmentation</b>	
KwanYong Park · Sanghyun Woo · Inkyu Shin · In So Kweon	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #446	Poster
<b>Inference Stage Optimization for Cross-scenario 3D Human Pose Estimation</b>	
Jianfeng Zhang · Xuecheng Nie · Jiashi Feng	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #447	Poster
<b>Deep Wiener Deconvolution: Wiener Meets Deep Learning for Image Deblurring</b>	
Jiangxin Dong · Stefan Roth · Bernt Schiele	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #448	Poster
<b>Calibrating CNNs for Lifelong Learning</b>	
Pravendra Singh · Vinay Kumar Verma · Pratik Mazumder · Lawrence Carin · Piyush Rai	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #449	Poster
<b>Long-Tailed Classification by Keeping the Good and Removing the Bad Momentum Causal Effect</b>	
Kaihua Tang · Jianqiang Huang · hanwang Zhang	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #450	Poster
<b>Diverse Image Captioning with Context-Object Split Latent Spaces</b>	
Shweta Mahajan · Stefan Roth	In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #451

Poster

## **An Analysis of SVD for Deep Rotation Estimation**

Jake Levinson · Carlos Esteves · Kefan Chen · Noah Snavely · Angjoo Kanazawa · Afshin Rostamizadeh · Ameesh Makadia

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #452

Poster

## **DISK: Learning local features with policy gradient**

Michał Tyszkiewicz · Pascal Fua · Eduard Trulls

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #453

Poster

## **Wasserstein Distances for Stereo Disparity Estimation**

Div Garg · Yan Wang · Bharath Hariharan · Mark Campbell · Kilian Weinberger · Wei-Lun (Harry) Chao

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #454

Poster

## **GOCor: Bringing Globally Optimized Correspondence Volumes into Your Neural Network**

Prune Truong · Martin Danelljan · Luc V Gool · Radu Timofte

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #455

Poster

## **On the Value of Out-of-Distribution Testing: An Example of Goodhart's Law**

Damien Teney · Ehsan Abbasnejad · Kushal Kafle · Robik Shrestha · Christopher Kanan · Anton van den Hengel

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #456

Poster

## **A Dictionary Approach to Domain-Invariant Learning in Deep Networks**

Ze Wang · Xiuyuan Cheng · Guillermo Sapiro · Qiang Qiu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #457

Poster

## **Balanced Meta-Softmax for Long-Tailed Visual Recognition**

Jiawei Ren · Cunjun Yu · shunan sheng · Xiao Ma · Haiyu Zhao · Shuai Yi · hongsheng Li

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #458

Poster

## **Evidential Sparsification of Multimodal Latent Spaces in Conditional Variational**

### **Autoencoders**

Masha Itkina · Boris Ivanovic · Ransalu Senanayake · Mykel J Kochenderfer · Marco Pavone

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #459

Poster

## **Sparse Symplectically Integrated Neural Networks**

Daniel DiPietro · Shiying Xiong · Bo Zhu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #460

Poster

## **Node Embeddings and Exact Low-Rank Representations of Complex Networks**

Sudhanshu Chanpuriya · Cameron Musco · Konstantinos Sotiropoulos · Charalampos Tsourakakis

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #461

Poster

## **Global Convergence of Deep Networks with One Wide Layer Followed by Pyramidal Topology**

Quynh Nguyen · Marco Mondelli

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #462

Poster

## **Towards Understanding Hierarchical Learning: Benefits of Neural Representations**

Minshuo Chen · Yu Bai · Jason Lee · Tuo Zhao · Huan Wang · Caiming Xiong · Richard Socher

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #463

Poster

## **Stochasticity of Deterministic Gradient Descent: Large Learning Rate for Multiscale**

### **Objective Function**

Lingkai Kong · Molei Tao

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #464

Poster

## **Stochastic Gradient Descent in Correlated Settings: A Study on Gaussian Processes**

Hao Chen · Lili Zheng · Raed AL Kontar · Garvesh Raskutti

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #465

Poster

## **Penalized Langevin dynamics with vanishing penalty for smooth and log-concave targets**

Aravik Karagulyan · Arnak Dalalyan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #466

Poster

## **Universal guarantees for decision tree induction via a higher-order splitting criterion**

Guy Blanc · Neha Gupta · Jane Lange · Li-Yang Tan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #467

Poster

## **Learning Restricted Boltzmann Machines with Sparse Latent Variables**

Guy Bresler · Rares-Darius Buhai

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #468

Poster

## **The Adaptive Complexity of Maximizing a Gross Substitutes Valuation**

Ron Kupfer · Sharon Qian · Eric Balkanski · Yaron Singer

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #469

Poster

## **Hedging in games: Faster convergence of external and swap regrets**

Xi Chen · Binghui Peng

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #470

Poster

## **Nonasymptotic Guarantees for Spiked Matrix Recovery with Generative Priors**

Jorio Cocola · Paul Hand · Vlad Voroninski

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #471

Poster

## **In search of robust measures of generalization**

Gintare Karolina Dziugaite · Alexandre Drouin · Brady Neal · Nitarshan Rajkumar · Ethan Caballero · Linbo Wang In Poster Session 2  
· Ioannis Mitliagkas · Dan Roy

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #472

Poster

## **On Convergence and Generalization of Dropout Training**

Poorya Mianjy · Raman Arora

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #473

Poster

## **Dynamical mean-field theory for stochastic gradient descent in Gaussian mixture classification**

Francesca Mignacco · Florent Krzakala · Pierfrancesco Urbani · Lenka Zdeborová

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #474

Poster

## **Complex Dynamics in Simple Neural Networks: Understanding Gradient Flow in Phase Retrieval**

Stefano Sarao Mannelli · Giulio Biroli · Chiara Cammarota · Florent Krzakala · Pierfrancesco Urbani · Lenka Zdeborová In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #475

Poster

**Correspondence learning via linearly-invariant embedding**

Riccardo Marin · Marie-Julie Rakotosaona · Simone Melzi · Maks Ovsjanikov

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #476

Poster

**PIE-NET: Parametric Inference of Point Cloud Edges**

Xiaogang Wang · Yuelang Xu · Kevin Xu · Andrea Tagliasacchi · Bin Zhou · Ali Mahdavi-Amiri · Hao Zhang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #477

Poster

**Neural Non-Rigid Tracking**

Aljaz Bozic · Pablo Palafox · Michael Zollhöfer · Angela Dai · Justus Thies · Matthias Niessner

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #478

Poster

**Continuous Surface Embeddings**

Natalia Neverova · David Novotny · Marc Szafraniec · Vasil Khalidov · Patrick Labatut · Andrea Vedaldi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #479

Poster

**Learning to Orient Surfaces by Self-supervised Spherical CNNs**

Riccardo Spezialetti · Federico Stella · Marlon Marcon · Luciano Silva · Samuele Salti · Luigi Di Stefano

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #480

Poster

**SDF-SRN: Learning Signed Distance 3D Object Reconstruction from Static Images**

Chen-Hsuan Lin · Chaoyang Wang · Simon Lucey

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #481

Poster

**Neural Unsigned Distance Fields for Implicit Function Learning**

Julian Chibane · Mohamad Aymen mir · Gerard Pons-Moll

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #482

Poster

**Skeleton-bridged Point Completion: From Global Inference to Local Adjustment**

Yinyu Nie · Yiqun Lin · Xiaoguang Han · Shihui Guo · Jian Chang · Shuguang Cui · Jian.J Zhang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #483

Poster

**Rotation-Invariant Local-to-Global Representation Learning for 3D Point Cloud**

SEOHYUN KIM · JaeYoo Park · Bohyung Han

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #484

Poster

**Deep Shells: Unsupervised Shape Correspondence with Optimal Transport**

Marvin Eisenberger · Aysim Toker · Laura Leal-Taixé · Daniel Cremers

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #485

Poster

**Dense Correspondences between Human Bodies via Learning Transformation****Synchronization on Graphs**

Xiangru Huang · Haitao Yang · Etienne Vouga · Qixing Huang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #486

Poster

**3D Shape Reconstruction from Vision and Touch**

Edward Smith · Roberto Calandra · Adriana Romero · Georgia Gkioxari · David Meger · Jitendra Malik · Michal Drozdzal

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #487

Poster

**Canonical 3D Deformer Maps: Unifying parametric and non-parametric methods for dense weakly-supervised category reconstruction**

David Novotny · Roman Shapovalov · Andrea Vedaldi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #488

Poster

## **Multiview Neural Surface Reconstruction by Disentangling Geometry and Appearance**

Lior Yariv · Yoni Kasten · Dror Moran · Meirav Galun · Matan Atzmon · Basri Ronen · Yaron Lipman

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #489

Poster

## **Neural Sparse Voxel Fields**

Lingjie Liu · Jiatao Gu · Kyaw Zaw Lin · Tat-Seng Chua · Christian Theobalt

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #490

Poster

## **RepPoints v2: Verification Meets Regression for Object Detection**

Yihong Chen · Zheng Zhang · Yue Cao · Liwei Wang · Stephen Lin · Han Hu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #491

Poster

## **Efficient Contextual Bandits with Continuous Actions**

Maryam Majzoubi · Chicheng Zhang · Rajan Chari · Akshay Krishnamurthy · John Langford · Alex Slivkins  
Slivkins

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #492

Poster

## **Collapsing Bandits and Their Application to Public Health Intervention**

Aditya Mate · Jackson Killian · Haifeng Xu · Andrew Perrault · Milind Tambe

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #493

Poster

## **Learning to Play Sequential Games versus Unknown Opponents**

Pier Giuseppe Sessa · Ilija Bogunovic · Maryam Kamgarpour · Andreas Krause

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #494

Poster

## **Interferobot: aligning an optical interferometer by a reinforcement learning agent**

Dmitry Sorokin · Alexander Ulanov · Ekaterina Sazhina · Alexander Lvovsky

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #495

Poster

## **Reinforcement Learning in Factored MDPs: Oracle-Efficient Algorithms and Tighter**

### **Regret Bounds for the Non-Episodic Setting**

Ziping Xu · Ambuj Tewari

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #496

Poster

## **Reinforcement Learning with Feedback Graphs**

Christoph Dann · Yishay Mansour · Mehryar Mohri · Ayush Sekhari · Karthik Sridharan

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #497

Poster

## **A Unifying View of Optimism in Episodic Reinforcement Learning**

Gergely Neu · Ciara Pike-Burke

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #498

Poster

## **Provably Efficient Reward-Agnostic Navigation with Linear Value Iteration**

Andrea Zanette · Alessandro Lazaric · Mykel J Kochenderfer · Emma Brunskill

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #499

Poster

## **On Reward-Free Reinforcement Learning with Linear Function Approximation**

Ruosong Wang · Simon Du · Lin Yang · Russ Salakhutdinov

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #500

Poster

## **On Efficiency in Hierarchical Reinforcement Learning**

Zheng Wen · Doina Precup · Morteza Ibrahimi · Andre Barreto · Benjamin Van Roy · Satinder Singh

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #501	Poster
<b>Towards Minimax Optimal Reinforcement Learning in Factored Markov Decision Processes</b>	
Yi Tian · Jian Qian · Suvrit Sra	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #502	Poster
<b>Efficient Model-Based Reinforcement Learning through Optimistic Policy Search and Planning</b>	
Sebastian Curi · Felix Berkenkamp · Andreas Krause	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #503	Poster
<b>Belief-Dependent Macro-Action Discovery in POMDPs using the Value of Information</b>	
Genevieve Flaspoehler · Nicholas Roy · John Fisher III	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #504	Poster
<b>High-Throughput Synchronous Deep RL</b>	
Adam Liu · Raymond Yeh · Alex Schwing	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #505	Poster
<b>AttendLight: Universal Attention-Based Reinforcement Learning Model for Traffic Signal Control</b>	
Afshin Oroojlooy · Reza Nazari · Davood Hajinezhad · Jorge Silva	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #507	Poster
<b>Dynamic Submodular Maximization</b>	
Technische Monemizadeh	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #508	Poster
<b>Adaptive Shrinkage Estimation for Streaming Graphs</b>	
Nesreen K. Ahmed · Nick Duffield	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #509	Poster
<b>Near-Optimal Comparison Based Clustering</b>	
Michaël Perrot · Pascal Esser · Debarghya Ghoshdastidar	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #510	Poster
<b>Impossibility Results for Grammar-Compressed Linear Algebra</b>	
Amir Abboud · Arturs Backurs · Karl Bringmann · Marvin Künnemann	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #511	Poster
<b>Statistical control for spatio-temporal MEG/EEG source imaging with desparsified multi-task Lasso</b>	
Jerome-Alexis Chevalier · Joseph Salmon · Alexandre Gramfort · Bertrand Thirion	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #512	Poster
<b>Submodular Meta-Learning</b>	
Arman Adibi · Aryan Mokhtari · Hamed Hassani	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #513	Poster
<b>Fairness in Streaming Submodular Maximization: Algorithms and Hardness</b>	
Marwa El Halabi · Slobodan Mitrović · Ashkan Norouzi-Fard · Jakab Tardos · Jakub Tarnawski	In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #514

Poster

## **Fast Adaptive Non-Monotone Submodular Maximization Subject to a Knapsack Constraint**

Georgios Amanatidis · Federico Fusco · Philip Lazos · Stefano Leonardi · Rebecca Reiffenhäuser

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #515

Poster

## **Direct Policy Gradients: Direct Optimization of Policies in Discrete Action Spaces**

Guy Lorberbom · Chris Maddison · Nicolas Heess · Tamir Hazan · Daniel Tarlow

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #516

Poster

## **Efficient active learning of sparse halfspaces with arbitrary bounded noise**

Chicheng Zhang · Jie Shen · Pranjal Awasthi

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #517

Poster

## **Learning Structured Distributions From Untrusted Batches: Faster and Simpler**

Sitan Chen · Jerry Li · Ankur Moitra

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #519

Poster

## **Outlier Robust Mean Estimation with Subgaussian Rates via Stability**

Ilias Diakonikolas · Daniel M. Kane · Ankit Pensia

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #520

Poster

## **Fictitious Play for Mean Field Games: Continuous Time Analysis and Applications**

Sarah Perrin · Julien Perolat · Mathieu Lauriere · Matthieu Geist · Romuald Elie · Olivier Pietquin

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #521

Poster

## **Hitting the High Notes: Subset Selection for Maximizing Expected Order Statistics**

Aranyak Mehta · Uri Nadav · Alexandros Psomas · Aviad Rubinstein

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #522

Poster

## **PAC-Bayesian Bound for the Conditional Value at Risk**

Zakaria Mhammedi · Benjamin Guedj · Robert Williamson

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #523

Poster

## **Universal Function Approximation on Graphs**

Rickard Brüel Gabrielsson

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #524

Poster

## **Model Class Reliance for Random Forests**

Gavin Smith · Roberto Mansilla · James Goulding

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #525

Poster

## **Hypersolvers: Toward Fast Continuous-Depth Models**

Michael Poli · Stefano Massaroli · Atsushi Yamashita · Hajime Asama · Jinkyoo Park

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #526

Poster

## **Almost Surely Stable Deep Dynamics**

Nathan Lawrence · Philip Loewen · Michael Forbes · Johan Backstrom · Bhushan Gopaluni

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #527

Poster

## **Learning Optimal Representations with the Decodable Information Bottleneck**

Yann Dubois · Douwe Kiela · David Schwab · Ramakrishna Vedantam

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #528

Poster

## **Provable Online CP/PARAFAC Decomposition of a Structured Tensor via Dictionary Learning**

Sirisha Rambhatla · Xingguo Li · Jarvis Haupt

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #529

Poster

## **Measuring Systematic Generalization in Neural Proof Generation with Transformers**

Nicolas Gontier · Koustuv Sinha · Siva Reddy · Chris Pal

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #530

Poster

## **Online Decision Based Visual Tracking via Reinforcement Learning**

Ke Song · Wei Zhang · Ran Song · Yibin Li

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #531

Poster

## **On the Modularity of Hypernetworks**

Tomer Galanti · Lior Wolf

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #532

Poster

## **Pushing the Limits of Narrow Precision Inferencing at Cloud Scale with Microsoft Floating Point**

Bita Darvish Rouhani · Daniel Lo · Ritchie Zhao · Ming Liu · Jeremy Fowers · Kalin Ovtcharov · Anna Vinogradsky · Sarah Massengill · Lita Yang · Ray Bittner · Alessandro Forin · Haishan Zhu · Taesik Na · Prerak Patel · Shuai Che · Lok Chand Koppaka · XIA SONG · Subhojit Som · Kaustav Das · Saurabh K T · Steve Reinhardt · Sitaram Lanka · erchung Chung · Doug Burger

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #533

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## **Counterexample-Guided Learning of Monotonic Neural Networks**

Aishwarya Sivaraman · Golnoosh Farnadi · Todd Millstein · Guy Van den Broeck

In Poster Session 2

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## **Permute-and-Flip: A new mechanism for differentially private selection**

Ryan McKenna · Dan Sheldon

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #535

Poster

## **No-Regret Learning Dynamics for Extensive-Form Correlated Equilibrium**

Andrea Celli · Alberto Marchesi · Gabriele Farina · Nicola Gatti

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #536

Poster

## **Spike and slab variational Bayes for high dimensional logistic regression**

Kolyan Ray · Botond Szabo · Gabriel Clara

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #537

Poster

## **How does Weight Correlation Affect Generalisation Ability of Deep Neural Networks?**

Gaojie Jin · Xinping Yi · Liang Zhang · Lijun Zhang · Sven Schewe · Xiaowei Huang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #538

Poster

## **Learning discrete distributions with infinite support**

Doron Cohen · Aryeh Kontorovich · Geoffrey Wolfer

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #539

Poster

## **Off-policy Policy Evaluation For Sequential Decisions Under Unobserved Confounding**

Hong Namkoong · Ramtin Keramati · Steve Yadlowsky · Emma Brunskill

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #540

Poster

## **A Maximum-Entropy Approach to Off-Policy Evaluation in Average-Reward MDPs**

Nevena Lazic · Dong Yin · Mehrdad Farajtabar · Nir Levine · DILAN Gorur · Chris Harris · Dale Schuurmans      In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #541

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## **Instance-based Generalization in Reinforcement Learning**

Martin Bertran · Natalia Martinez · Mariano Philipp · Guillermo Sapiro

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #542

Poster

## **Efficient Planning in Large MDPs with Weak Linear Function Approximation**

Roshan Shariff · Csaba Szepesvari

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #543

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## **Multi-agent active perception with prediction rewards**

Mikko Lauri · Frans Oliehoek

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #544

Poster

## **Gamma-Models: Generative Temporal Difference Learning for Infinite-Horizon Prediction**

Michael Janner · Igor Mordatch · Sergey Levine

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #545

Poster

## **The LoCA Regret: A Consistent Metric to Evaluate Model-Based Behavior in Reinforcement Learning**

Harm Van Seijen · Hadi Nekoei · Evan Racah · Sarath Chandar

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #546

Poster

## **Expert-Supervised Reinforcement Learning for Offline Policy Learning and Evaluation**

Aaron Sonabend · Junwei Lu · Leo Anthony Celi · Tianxi Cai · Peter Szolovits

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #547

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## **Model-based Policy Optimization with Unsupervised Model Adaptation**

Jian Shen · Han Zhao · Weinan Zhang · Yong Yu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #548

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## **Deep Reinforcement and InfoMax Learning**

Bogdan Mazoure · Remi Tachet des Combes · Thang Doan · Philip Bachman · R Devon Hjelm

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #549

Poster

## **Zap Q-Learning With Nonlinear Function Approximation**

Shuhang Chen · Adithya M Devraj · Fan Lu · Ana Busic · Sean Meyn

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #550

Poster

## **MDP Homomorphic Networks: Group Symmetries in Reinforcement Learning**

Elise van der Pol · Daniel E Worrall · Herke van Hoof · Frans Oliehoek · Max Welling

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #551

Poster

## **Stochastic Latent Actor-Critic: Deep Reinforcement Learning with a Latent Variable Model**

Alex X. Lee · Anusha Nagabandi · Pieter Abbeel · Sergey Levine

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #552

Poster

## **FLAMBE: Structural Complexity and Representation Learning of Low Rank MDPs**

Alekh Agarwal · Sham Kakade · Akshay Krishnamurthy · Wen Sun

In Poster Session 2

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Poster

## **Sample-Efficient Reinforcement Learning of Undercomplete POMDPs**

Chi Jin · Sham Kakade · Akshay Krishnamurthy · Qinghua Liu

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #554

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## **Provably Efficient Online Hyperparameter Optimization with Population-Based Bandits**

Jack Parker-Holder · Vu Nguyen · Stephen J Roberts

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #555

Poster

## **Self-Supervised MultiModal Versatile Networks**

Jean-Baptiste Alayrac · Adria Recasens · Rosalia Schneider · Relja Arandjelović · Jason Ramapuram · Jeffrey De Fauw · Lucas Smaira · Sander Dieleman · Andrew Zisserman

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #556

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## **Deep Subspace Clustering with Data Augmentation**

Mahdi Abavisani · Alireza Naghizadeh · Dimitris Metaxas · Vishal Patel

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #557

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## **Learning Retrospective Knowledge with Reverse Reinforcement Learning**

Shangtong Zhang · Vivek Veeriah · Shimon Whiteson

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #558

Poster

## **The MAGICAL Benchmark for Robust Imitation**

Sam Toyer · Rohin Shah · Andrew Critch · Stuart Russell

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #559

Poster

## **Sample Efficient Reinforcement Learning via Low-Rank Matrix Estimation**

Devavrat Shah · Dogyoon Song · Zhi Xu · Yuzhe Yang

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #560

Poster

## **Counterfactual Data Augmentation using Locally Factored Dynamics**

Silviu Pitis · Elliot Creager · Animesh Garg

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #561

Poster

## **POMDPs in Continuous Time and Discrete Spaces**

Bastian Alt · Matthias Schultheis · Heinz Koepll

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #562

Poster

## **Long-Horizon Visual Planning with Goal-Conditioned Hierarchical Predictors**

Karl Pertsch · Oleh Rybkin · Frederik Ebert · Shenghao Zhou · Dinesh Jayaraman · Chelsea Finn · Sergey Levine

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #563

Poster

## **Forethought and Hindsight in Credit Assignment**

Veronica Chelu · Doina Precup · Hado van Hasselt

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #564

Poster

## **Learning Multi-Agent Communication through Structured Attentive Reasoning**

Murtaza Rangwala · Ryan K Williams

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #565

Poster

## **MultiON: Benchmarking Semantic Map Memory using Multi-Object Navigation**

Saim Wani · Shivansh Patel · Unnat Jain · Angel Chang · Manolis Savva

In Poster Session 2

Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #566	Poster
<b>Influence-Augmented Online Planning for Complex Environments</b>	
Jinke He · Miguel Suau de Castro · Frans Oliehoek	In Poster Session 2
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<b>Security Analysis of Safe and Seldonian Reinforcement Learning Algorithms</b>	
Pinar Ozisik · Philip Thomas	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #568	Poster
<b>Provably Efficient Neural GTD for Off-Policy Learning</b>	
Hoi-To Wai · Zhuoran Yang · Zhaoran Wang · Mingyi Hong	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #569	Poster
<b>An Equivalence between Loss Functions and Non-Uniform Sampling in Experience Replay</b>	
Scott Fujimoto · David Meger · Doina Precup	In Poster Session 2
Tue Dec 08 09:00 AM -- 11:00 AM (PST) @ Poster Session 1 #1020	Poster
<b>Comparator-Adaptive Convex Bandits</b>	
Dirk van der Hoeven · Ashok Cutkosky · Haipeng Luo	In Poster Session 2
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #83	Poster
<b>Conservative Q-Learning for Offline Reinforcement Learning</b>	
Aviral Kumar · Aurick Zhou · George Tucker · Sergey Levine	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #571	Poster
<b>Towards Playing Full MOBA Games with Deep Reinforcement Learning</b>	
Deheng Ye · Guibin Chen · Wen Zhang · Sheng Chen · Bo Yuan · Bo Liu · Jia Chen · Zhao Liu · Fuhao Qiu · Hongsheng Yu · Yinyuting Yin · Bei Shi · Liang Wang · Tengfei Shi · Qiang Fu · Wei Yang · Lanxiao Huang · Wei Liu	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #572	Poster
<b>Federated Bayesian Optimization via Thompson Sampling</b>	
Zhongxiang Dai · Bryan Kian Hsiang Low · Patrick Jaillet	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #573	Poster
<b>Deep Reinforcement Learning with Stacked Hierarchical Attention for Text-based Games</b>	
Yunqiu Xu · Meng Fang · Ling Chen · Yali Du · Joey Tianyi Zhou · Chengqi Zhang	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #574	Poster
<b>Reinforcement Learning with Augmented Data</b>	
Misha Laskin · Kimin Lee · Adam Stooke · Lerrel Pinto · Pieter Abbeel · Aravind Srinivas	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #575	Poster
<b>Generating Adjacency-Constrained Subgoals in Hierarchical Reinforcement Learning</b>	
Tianren Zhang · Shangqi Guo · Tian Tan · Xiaolin Hu · Feng Chen	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #576	Poster
<b>Almost Optimal Model-Free Reinforcement Learning via Reference-Advantage Decomposition</b>	
Zihan Zhang · Yuan Zhou · Xiangyang Ji	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #577	Poster

## **Weighted QMIX: Expanding Monotonic Value Function Factorisation for Deep Multi-Agent Reinforcement Learning**

Tabish Rashid · Gregory Farquhar · Bei Peng · Shimon Whiteson

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #578

Poster

## **Succinct and Robust Multi-Agent Communication With Temporal Message Control**

Sai Qian Zhang · Qi Zhang · Jieyu Lin

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #579

Poster

## **Scalable Multi-Agent Reinforcement Learning for Networked Systems with Average Reward**

Guannan Qu · Yiheng Lin · Adam Wierman · Na Li

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #580

Poster

## **Learning Individually Inferred Communication for Multi-Agent Cooperation**

Ziluo Ding · Tiejun Huang · Zongqing Lu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #581

Poster

## **Emergent Reciprocity and Team Formation from Randomized Uncertain Social Preferences**

Bowen Baker

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #582

Poster

## **Marginal Utility for Planning in Continuous or Large Discrete Action Spaces**

Zaheen Ahmad · Levi Lelis · Michael Bowling

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #583

Poster

## **A Novel Automated Curriculum Strategy to Solve Hard Sokoban Planning Instances**

Dieqiao Feng · Carla Gomes · Bart Selman

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #584

Poster

## **Softmax Deep Double Deterministic Policy Gradients**

Ling Pan · Qingpeng Cai · Longbo Huang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #585

Poster

## **Non-Crossing Quantile Regression for Distributional Reinforcement Learning**

Fan Zhou · Jianing Wang · Xingdong Feng

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #586

Poster

## **Improving Generalization in Reinforcement Learning with Mixture Regularization**

KAIXIN WANG · Bingyi Kang · Jie Shao · Jiashi Feng

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #587

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## **Choice Bandits**

Arpit Agarwal · Nicholas Johnson · Shivani Agarwal

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #588

Poster

## **Differentiable Meta-Learning of Bandit Policies**

Craig Boutilier · Chih-wei Hsu · Branislav Kveton · Martin Mladenov · Csaba Szepesvari · Manzil Zaheer

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #589

Poster

## **Latent Bandits Revisited**

Joey Hong · Branislav Kveton · Manzil Zaheer · Yinlam Chow · Amr Ahmed · Craig Boutilier

In Poster Session 3

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<b><i>Finite-Time Analysis of Round-Robin Kullback-Leibler Upper Confidence Bounds for Optimal Adaptive Allocation with Multiple Plays and Markovian Rewards</i></b>	
Vrettos Moulos	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #591	Poster
<b><i>Sub-sampling for Efficient Non-Parametric Bandit Exploration</i></b>	
Dorian Baudry · Emilie Kaufmann · Odalric-Ambrym Maillard	In Poster Session 3
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<b><i>Online Learning in Contextual Bandits using Gated Linear Networks</i></b>	
Eren Sezener · Marcus Hutter · David Budden · Jianan Wang · Joel Veness	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #593	Poster
<b><i>High-Dimensional Contextual Policy Search with Unknown Context Rewards using Bayesian Optimization</i></b>	
Qing Feng · Ben Letham · Hongzi Mao · Eytan Bakshy	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #594	Poster
<b><i>Rewriting History with Inverse RL: Hindsight Inference for Policy Improvement</i></b>	
Benjamin Eysenbach · XINYANG GENG · Sergey Levine · Russ Salakhutdinov	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #595	Poster
<b><i>RD<sup>2</sup>: Reward Decomposition with Representation Decomposition</i></b>	
Zichuan Lin · Derek Yang · Li Zhao · Tao Qin · Guangwen Yang · Tie-Yan Liu	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #596	Poster
<b><i>Efficient Exploration of Reward Functions in Inverse Reinforcement Learning via Bayesian Optimization</i></b>	
Sreejith Balakrishnan · Quoc Phong Nguyen · Bryan Kian Hsiang Low · Harold Soh	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #597	Poster
<b><i>Learning Guidance Rewards with Trajectory-space Smoothing</i></b>	
Tanmay Gangwani · Yuan Zhou · Jian Peng	In Poster Session 3
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<b><i>Avoiding Side Effects in Complex Environments</i></b>	
Alex Turner · Neale Ratzlaff · Prasad Tadepalli	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #599	Poster
<b><i>Reward-rational (implicit) choice: A unifying formalism for reward learning</i></b>	
Hong Jun Jeon · Smitha Milli · Anca Dragan	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #600	Poster
<b><i>Planning with General Objective Functions: Going Beyond Total Rewards</i></b>	
Ruosong Wang · Peilin Zhong · Simon Du · Russ Salakhutdinov · Lin Yang	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #601	Poster
<b><i>Preference-based Reinforcement Learning with Finite-Time Guarantees</i></b>	
Yichong Xu · Ruosong Wang · Lin Yang · Aarti Singh · Artur Dubrawski	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #602	Poster

## **Is Long Horizon RL More Difficult Than Short Horizon RL?**

Ruosong Wang · Simon Du · Lin Yang · Sham Kakade

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #603

Poster

## **Online Meta-Critic Learning for Off-Policy Actor-Critic Methods**

Wei Zhou · Yiyi Li · Yongxin Yang · Huaimin Wang · Timothy Hospedales

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #604

Poster

## **POMO: Policy Optimization with Multiple Optima for Reinforcement Learning**

Yeong-Dae Kwon · Jinho Choo · Byoungjip Kim · Iljoo Yoon · Youngjune Gwon · Seungjai Min

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #605

Poster

## **Error Bounds of Imitating Policies and Environments**

Tian Xu · Ziniu Li · Yang Yu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #606

Poster

## **Model-based Adversarial Meta-Reinforcement Learning**

Zichuan Lin · Garrett Thomas · Guangwen Yang · Tengyu Ma

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #608

Poster

## **Offline Imitation Learning with a Misspecified Simulator**

Shengyi Jiang · Jingcheng Pang · Yang Yu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #609

Poster

## **Policy Improvement via Imitation of Multiple Oracles**

Ching-An Cheng · Andrey Kolobov · Alekh Agarwal

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #610

Poster

## **Toward the Fundamental Limits of Imitation Learning**

Nived Rajaraman · Lin Yang · Jiantao Jiao · Kannan Ramchandran

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #611

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## **Trajectory-wise Multiple Choice Learning for Dynamics Generalization in Reinforcement Learning**

Younggyo Seo · Kimin Lee · Ignasi Clavera Gilaberte · Thanard Kurutach · Jinwoo Shin · Pieter Abbeel

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #612

Poster

## **Can Temporal-Difference and Q-Learning Learn Representation? A Mean-Field Theory**

Yufeng Zhang · Qi Cai · Zhuoran Yang · Yongxin Chen · Zhaoran Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #613

Poster

## **Multi-task Batch Reinforcement Learning with Metric Learning**

Jiachen Li · Quan Vuong · Shuang Liu · Minghua Liu · Kamil Ciosek · Henrik Christensen · Hao Su

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #614

Poster

## **Multi-Task Reinforcement Learning with Soft Modularization**

Ruihan Yang · Huazhe Xu · YI WU · Xiaolong Wang

In Poster Session 3

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## **Generalized Hindsight for Reinforcement Learning**

Alex Li · Lerrel Pinto · Pieter Abbeel

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #616

Poster

**Learning to Dispatch for Job Shop Scheduling via Deep Reinforcement Learning**

Cong Zhang · Wen Song · Zhiguang Cao · Jie Zhang · Puay Siew Tan · Xu Chi

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #617

Poster

**BAIL: Best-Action Imitation Learning for Batch Deep Reinforcement Learning**

Xinyue Chen · Zijian Zhou · Zheng Wang · Che Wang · Yanqiu Wu · Keith Ross

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #618

Poster

**Steady State Analysis of Episodic Reinforcement Learning**

Huang Bojun

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #619

Poster

**The Hateful Memes Challenge: Detecting Hate Speech in Multimodal Memes**

Douwe Kiela · Hamed Firooz · Aravind Mohan · Vedanuj Goswami · Amanpreet Singh · Pratik Ringshia · Davide Testuggine

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #620

Poster

**Learning Disentangled Representations of Videos with Missing Data**

Armand Comas · Chi Zhang · Zlatan Feric · Octavia Camps · Rose Yu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #621

Poster

**Cycle-Contrast for Self-Supervised Video Representation Learning**

Quan Kong · Wengpeng Wei · Ziwei Deng · Tomoaki Yoshinaga · Tomokazu Murakami

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #622

Poster

**Fewer is More: A Deep Graph Metric Learning Perspective Using Fewer Proxies**

Yuehua Zhu · Muli Yang · Cheng Deng · Wei Liu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #623

Poster

**Blind Video Temporal Consistency via Deep Video Prior**

Chenyang Lei · Yazhou Xing · Qifeng Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #624

Poster

**Hierarchical Patch VAE-GAN: Generating Diverse Videos from a Single Sample**

Shir Gur · Sagie Benaim · Lior Wolf

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #625

Poster

**Space-Time Correspondence as a Contrastive Random Walk**

Allan Jabri · Andrew Owens · Alexei Efros

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #626

Poster

**Do Adversarially Robust ImageNet Models Transfer Better?**

Hadi Salman · Andrew Ilyas · Logan Engstrom · Ashish Kapoor · Aleksander Madry

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #627

Poster

**Video Object Segmentation with Adaptive Feature Bank and Uncertain-Region Refinement**

Yongqing Liang · Xin Li · Navid Jafari · Jim Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #628

Poster

**Counterfactual Contrastive Learning for Weakly-Supervised Vision-Language Grounding**

Zhu Zhang · Zhou Zhao · Zhijie Lin · jieming zhu · Xiuqiang He

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #629

Poster

## **Forget About the LiDAR: Self-Supervised Depth Estimators with MED Probability Volumes**

Juan Luis GonzalezBello · Munchurl Kim

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #630

Poster

## **COOT: Cooperative Hierarchical Transformer for Video-Text Representation Learning**

Simon Ging · Mohammadreza Zolfaghari · Hamed Pirsiavash · Thomas Brox

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #631

Poster

## **Stochastic Normalization**

Zhi Kou · Kaichao You · Mingsheng Long · Jianmin Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #632

Poster

## **Curriculum By Smoothing**

Samarth Sinha · Animesh Garg · Hugo Larochelle

In Poster Session 3

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Poster

## **Focus of Attention Improves Information Transfer in Visual Features**

Matteo Tiezzi · Stefano Melacci · Alessandro Betti · Marco Maggini · Marco Gori

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #634

Poster

## **Semantic Visual Navigation by Watching YouTube Videos**

Matthew Chang · Arjun Gupta · Saurabh Gupta

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #635

Poster

## **Lipschitz-Certifiable Training with a Tight Outer Bound**

Sungyoon Lee · Jaewook Lee · Saerom Park

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #636

Poster

## **Efficient Exact Verification of Binarized Neural Networks**

Kai Jia · Martin Rinard

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #637

Poster

## **Information Theoretic Counterfactual Learning from Missing-Not-At-Random Feedback**

Zifeng Wang · Xi Chen · Rui Wen · Shao-Lun Huang · Ercan E Kuruoglu · Yefeng Zheng

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #638

Poster

## **CASTLE: Regularization via Auxiliary Causal Graph Discovery**

Trent Kyono · Yao Zhang · Mihaela van der Schaar

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #639

Poster

## **Multi-Stage Influence Function**

Hongge Chen · Si Si · Yang Li · Ciprian Chelba · Sanjiv Kumar · Duane Boning · Cho-Jui Hsieh

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #640

Poster

## **On Completeness-aware Concept-Based Explanations in Deep Neural Networks**

Chih-Kuan Yeh · Been Kim · Sercan Arik · Chun-Liang Li · Tomas Pfister · Pradeep Ravikumar

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #641

Poster

## **Adaptive Online Estimation of Piecewise Polynomial Trends**

Dheeraj Baby · Yu-Xiang Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #642

Poster

## **Robust Optimization for Fairness with Noisy Protected Groups**

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #643

Poster

**Beyond Individualized Recourse: Interpretable and Interactive Summaries of Actionable Recourses**

Kai Rawal · Himabindu Lakkaraju

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #644

Poster

**The Discrete Gaussian for Differential Privacy**

Clément L Canonne · Gautam Kamath · Thomas Steinke

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #645

Poster

**Locally Differentially Private (Contextual) Bandits Learning**

Kai Zheng · Tianle Cai · Weiran Huang · Zhenguo Li · Liwei Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #646

Poster

**A Scalable Approach for Privacy-Preserving Collaborative Machine Learning**

Jinhyun So So · Basak Guler · Salman Avestimehr

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #647

Poster

**Privacy Amplification via Random Check-Ins**

Borja Balle · Peter Kairouz · Brendan McMahan · Om Thakkar · Abhradeep Guha Thakurta

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #648

Poster

**The Flajolet-Martin Sketch Itself Preserves Differential Privacy: Private Counting with Minimal Space**

Adam Smith · Shuang Song · Abhradeep Guha Thakurta

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #649

Poster

**Breaking the Communication-Privacy-Accuracy Trilemma**

Wei-Ning Chen · Peter Kairouz · Ayfer Ozgur

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #650

Poster

**Towards practical differentially private causal graph discovery**

Lun Wang · Qi Pang · Dawn Song

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #651

Poster

**Optimal and Practical Algorithms for Smooth and Strongly Convex Decentralized Optimization**

Dmitry Kovalev · Adil Salim · Peter Richtarik

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #652

Poster

**Relative gradient optimization of the Jacobian term in unsupervised deep learning**

Luigi Gresele · Giancarlo Fissore · Adrián Javaloy · Bernhard Schölkopf · Aapo Hyvärinen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #653

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**Multipole Graph Neural Operator for Parametric Partial Differential Equations**

Zongyi Li · Nikola Kovachki · Kamyar Azizzadenesheli · Burigede Liu · Andrew Stuart · Kaushik Bhattacharya · Anima Anandkumar

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #654

Poster

**Learning Discrete Energy-based Models via Auxiliary-variable Local Exploration**

Hanjun Dai · Rishabh Singh · Bo Dai · Charles Sutton · Dale Schuurmans

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #655	Poster
<b>Proximity Operator of the Matrix Perspective Function and its Applications</b>	In Poster Session 3
Joong-Ho (Johann) Won	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #656	Poster
<b>Improved Algorithms for Convex-Concave Minimax Optimization</b>	In Poster Session 3
Yuanhao Wang · Jian Li	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #657	Poster
<b>Decentralized Accelerated Proximal Gradient Descent</b>	In Poster Session 3
Haishan Ye · Ziang Zhou · Luo Luo · Tong Zhang	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #658	Poster
<b>Optimal Epoch Stochastic Gradient Descent Ascent Methods for Min-Max Optimization</b>	In Poster Session 3
Yan Yan · Yi Xu · Qihang Lin · Wei Liu · Tianbao Yang	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #659	Poster
<b>Lower Bounds and Optimal Algorithms for Personalized Federated Learning</b>	In Poster Session 3
Filip Hanzely · Slavomír Hanzely · Samuel Horváth · Peter Richtarik	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #660	Poster
<b>A Scalable MIP-based Method for Learning Optimal Multivariate Decision Trees</b>	In Poster Session 3
Haoran Zhu · Pavankumar Murali · Dzung Phan · Lam Nguyen · Jayant Kalagnanam	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #661	Poster
<b>A Feasible Level Proximal Point Method for Nonconvex Sparse Constrained Optimization</b>	In Poster Session 3
Digvijay Boob · Qi Deng · Guanghui Lan · Yilin Wang	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #662	Poster
<b>Subgroup-based Rank-1 Lattice Quasi-Monte Carlo</b>	In Poster Session 3
Yueming LYU · Yuan Yuan · Ivor Tsang	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #663	Poster
<b>Efficient Nonmyopic Bayesian Optimization via One-Shot Multi-Step Trees</b>	In Poster Session 3
Shali Jiang · Daniel Jiang · Max Balandat · Brian Karrer · Jacob Gardner · Roman Garnett	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #664	Poster
<b>Optimal Query Complexity of Secure Stochastic Convex Optimization</b>	In Poster Session 3
Wei Tang · Chien-Ju Ho · Yang Liu	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #665	Poster
<b>Approximate Cross-Validation with Low-Rank Data in High Dimensions</b>	In Poster Session 3
Will Stephenson · Madeleine Udell · Tamara Broderick	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #666	Poster
<b>Revisiting the Sample Complexity of Sparse Spectrum Approximation of Gaussian Processes</b>	In Poster Session 3
Minh Hoang · Nghia Hoang · Hai Pham · David Woodruff	
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #667	Poster
<b>A Closer Look at Accuracy vs. Robustness</b>	In Poster Session 3
Yao-Yuan Yang · Cyrus Rashtchian · Hongyang Zhang · Russ Salakhutdinov · Kamalika Chaudhuri	

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #668

Poster

## **Dual Manifold Adversarial Robustness: Defense against $L_p$ and non- $L_p$ Adversarial Attacks**

Wei-An Lin · Chun Pong Lau · Alexander Levine · Rama Chellappa · Soheil Feizi

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #669

Poster

## **AdvFlow: Inconspicuous Black-box Adversarial Attacks using Normalizing Flows**

Hadi Mohaghegh Dolatabadi · Sarah Erfani · Christopher Leckie

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #670

Poster

## **Once-for-All Adversarial Training: In-Situ Tradeoff between Robustness and Accuracy for Free**

Haotao Wang · Tianlong Chen · Shupeng Gui · TingKuei Hu · Prof. Ji Liu Liu · Zhangyang Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #671

Poster

## **Adversarial Distributional Training for Robust Deep Learning**

Yinpeng Dong · Zhijie Deng · Tianyu Pang · Jun Zhu · Hang Su

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #672

Poster

## **On the Trade-off between Adversarial and Backdoor Robustness**

Cheng-Hsin Weng · Yan-Ting Lee · Shan-Hung (Brandon) Wu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #673

Poster

## **An Efficient Adversarial Attack for Tree Ensembles**

Chong Zhang · Huan Zhang · Cho-Jui Hsieh

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #674

Poster

## **Adversarial Self-Supervised Contrastive Learning**

Minseon Kim · Jihoon Tack · Sung Ju Hwang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #675

Poster

## **Adversarial Weight Perturbation Helps Robust Generalization**

Dongxian Wu · Shu-Tao Xia · Yisen Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #676

Poster

## **Large-Scale Adversarial Training for Vision-and-Language Representation Learning**

Zhe Gan · Yen-Chun Chen · Linjie Li · Chen Zhu · Yu Cheng · Jingjing Liu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #677

Poster

## **GreedyFool: Distortion-Aware Sparse Adversarial Attack**

Xiaoyi Dong · Dongdong Chen · Jianmin Bao · Chuan Qin · Lu Yuan · Weiming Zhang · Nenghai Yu · Dong Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #678

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## **Consistency Regularization for Certified Robustness of Smoothed Classifiers**

Jongheon Jeong · Jinwoo Shin

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #679

Poster

## **Measuring Robustness to Natural Distribution Shifts in Image Classification**

Rohan Taori · Achal Dave · Vaishaal Shankar · Nicholas Carlini · Benjamin Recht · Ludwig Schmidt

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #680

Poster

## **Certified Monotonic Neural Networks**

Xingchao Liu · Aaron Han · Na Zhang · Qiang Liu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #681

Poster

## **Backpropagating Linearly Improves Transferability of Adversarial Examples**

Yiwen Guo · Qizhang Li · Hao Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #682

Poster

## **Practical No-box Adversarial Attacks against DNNs**

Qizhang Li · Yiwen Guo · Hao Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #683

Poster

## **Learning to Adapt to Evolving Domains**

Hong Liu · Mingsheng Long · Jianmin Wang · Yu Wang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #684

Poster

## **MetaPerturb: Transferable Regularizer for Heterogeneous Tasks and Architectures**

Jeong Un Ryu · JWoong Shin · Hae Beom Lee · Sung Ju Hwang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #685

Poster

## **Heuristic Domain Adaptation**

Shuhao Cui · Xuan Jin · Shuhui Wang · Yuan He · Qingming Huang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #686

Poster

## **Adversarial Style Mining for One-Shot Unsupervised Domain Adaptation**

Yawei Luo · Ping Liu · Tao Guan · Junqing Yu · Yi Yang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #687

Poster

## **Robust Recovery via Implicit Bias of Discrepant Learning Rates for Double Over-parameterization**

Chong You · Zhihui Zhu · Qing Qu · Yi Ma

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #688

Poster

## **Self-paced Contrastive Learning with Hybrid Memory for Domain Adaptive Object Re-ID**

Yixiao Ge · Feng Zhu · Dapeng Chen · Rui Zhao · hongsheng Li

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #689

Poster

## **Implicit Neural Representations with Periodic Activation Functions**

Vincent Sitzmann · Julien N.P Martel · Alexander Bergman · David Lindell · Gordon Wetzstein

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #690

Poster

## **Rethinking Pre-training and Self-training**

Barret Zoph · Golnaz Ghiasi · Tsung-Yi Lin · Yin Cui · Hanxiao Liu · Dogus Cubuk · Quoc V Le

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #691

Poster

## **MetaSDF: Meta-Learning Signed Distance Functions**

Vincent Sitzmann · Eric Chan · Richard Tucker · Noah Snavely · Gordon Wetzstein

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #692

Poster

## **CSI: Novelty Detection via Contrastive Learning on Distributionally Shifted Instances**

Jihoon Tack · Sangwoo Mo · Jongheon Jeong · Jinwoo Shin

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #693

Poster

## **Pixel-Level Cycle Association: A New Perspective for Domain Adaptive Semantic Segmentation**

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #694

Poster

**Deep Automodulators**

Ari Heljakkala · Yuxin Hou · Juho Kannala · Arno Solin

In Poster Session 3

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Poster

**Autoregressive Score Matching**

Chenlin Meng · Lantao Yu · Yang Song · Jiaming Song · Stefano Ermon

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #696

Poster

**Compositional Visual Generation with Energy Based Models**

Yilun Du · Shuang Li · Igor Mordatch

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #697

Poster

**How does This Interaction Affect Me? Interpretable Attribution for Feature Interactions**

Michael Tsang · Sirisha Rambhatla · Yan Liu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #698

Poster

**Domain Adaptation as a Problem of Inference on Graphical Models**

Kun Zhang · Mingming Gong · Petar Stojanov · Biwei Huang · QINGSONG LIU · Clark Glymour

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #699

Poster

**Fast Unbalanced Optimal Transport on a Tree**

Ryoma Sato · Makoto Yamada · Hisashi Kashima

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #700

Poster

**Coupling-based Invertible Neural Networks Are Universal Diffeomorphism Approximators**

Takeshi Teshima · Isao Ishikawa · Koichi Tojo · Kenta Oono · Masahiro Ikeda · Masashi Sugiyama

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #701

Poster

 **$O(n)$  Connections are Expressive Enough: Universal Approximability of Sparse Transformers**

Chulhee Yun · Yin-Wen Chang · Srinadh Bhojanapalli · Ankit Singh Rawat · Sashank Reddi · Sanjiv Kumar

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #702

Poster

**A Universal Approximation Theorem of Deep Neural Networks for Expressing Probability Distributions**

Yulong Lu · Jianfeng Lu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #703

Poster

**Robust Sub-Gaussian Principal Component Analysis and Width-Independent Schatten Packing**

Arun Jambulapati · Jerry Li · Kevin Tian

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #704

Poster

**Is Plug-in Solver Sample-Efficient for Feature-based Reinforcement Learning?**

Qiwen Cui · Lin Yang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #705

Poster

**Black-Box Certification with Randomized Smoothing: A Functional Optimization Based Framework**

Dinghuai Zhang · Mao Ye · Chengyue Gong · Zhanxing Zhu · Qiang Liu

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #706	Poster
<b>Preference learning along multiple criteria: A game-theoretic perspective</b>	
Kush Bhatia · Ashwin Pananjady · Peter Bartlett · Anca Dragan · Martin Wainwright	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #707	Poster
<b>On Correctness of Automatic Differentiation for Non-Differentiable Functions</b>	
Wonyeol Lee · Hangyeol Yu · Xavier Rival · Hongseok Yang	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #708	Poster
<b>Robust Gaussian Covariance Estimation in Nearly-Matrix Multiplication Time</b>	
Jerry Li · Guanghao Ye	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #709	Poster
<b>Cooperative Multi-player Bandit Optimization</b>	
Ilai Bistritz · Nicholas Bambos	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #710	Poster
<b>Neutralizing Self-Selection Bias in Sampling for Sortition</b>	
Bailey Flanigan · Paul Götz · Anupam Gupta · Ariel Procaccia	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #711	Poster
<b>The Complete Lasso Tradeoff Diagram</b>	
Hua Wang · Elsa Yang · Zhiqi Bu · Weijie Su	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #712	Poster
<b>Quantifying the Empirical Wasserstein Distance to a Set of Measures: Beating the Curse of Dimensionality</b>	
Nian Si · Jose Blanchet · Soumyadip Ghosh · Mark Squillante	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #713	Poster
<b>Distributional Robustness with IPMs and links to Regularization and GANs</b>	
Hisham Husain	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #714	Poster
<b>Towards Convergence Rate Analysis of Random Forests for Classification</b>	
Wei Gao · Zhi-Hua Zhou	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #715	Poster
<b>Learning to Mutate with Hypergradient Guided Population</b>	
Zhiqiang Tao · Yaliang Li · Bolin Ding · Ce Zhang · Jingren Zhou · Yun Fu	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #716	Poster
<b>Robust Disentanglement of a Few Factors at a Time using rPU-VAE</b>	
Benjamin Estermann · Markus Marks · Mehmet Fatih Yanik	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #717	Poster
<b>Self-Supervised Graph Transformer on Large-Scale Molecular Data</b>	
Yu Rong · Yatao Bian · Tingyang Xu · Weiyang Xie · Ying Wei · Wenbing Huang · Junzhou Huang	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #718	Poster
<b>TorsionNet: A Reinforcement Learning Approach to Sequential Conformer Search</b>	
	In Poster Session 3

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Poster

## ***CogMol: Target-Specific and Selective Drug Design for COVID-19 Using Deep Generative Models***

Vijil Chenthamarakshan · Payel Das · Samuel Hoffman · Hendrik Strobelt · Inkit Padhi · Kar Wai Lim · Ben Hoover · Matteo Manica · Jannis Born · Teodoro Laino · Aleksandra Mojsilovic

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #720

Poster

## ***TaylorGAN: Neighbor-Augmented Policy Update Towards Sample-Efficient Natural Language Generation***

Chun-Hsing Lin · Siang-Ruei Wu · Hung-yi Lee · Yun-Nung (Vivian) Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #721

Poster

## ***Towards Interpretable Natural Language Understanding with Explanations as Latent Variables***

Wangchunshu Zhou · Jinyi Hu · Hanlin Zhang · Xiaodan Liang · Maosong Sun · Chenyan Xiong · Jian Tang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #722

Poster

## ***Learning to summarize with human feedback***

Nisan Stiennon · Long Ouyang · Jeffrey Wu · Daniel Ziegler · Ryan Lowe · Chelsea Voss · Alec Radford · Dario Amodei · Paul Christiano

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #723

Poster

## ***Language-Conditioned Imitation Learning for Robot Manipulation Tasks***

Simon Stepputtis · Joseph Campbell · Mariano Philipp · Stefan Lee · Chitta Baral · Heni Ben Amor

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #724

Poster

## ***Guiding Deep Molecular Optimization with Genetic Exploration***

Sungsoo Ahn · Junsu Kim · Hankook Lee · Jinwoo Shin

In Poster Session 3

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## ***What is being transferred in transfer learning?***

Behnam Neyshabur · Hanie Sedghi · Chiyuan Zhang

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #726

Poster

## ***What shapes feature representations? Exploring datasets, architectures, and training***

Katherine L. Hermann · Andrew Lampinen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #727

Poster

## ***FracTrain: Fractionally Squeezing Bit Savings Both Temporally and Spatially for Efficient DNN Training***

Yonggan Fu · Haoran You · Yang Zhao · Yue Wang · Chaojian Li · Kailash Gopalakrishnan · Zhangyang Wang · Yingyan Lin

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #728

Poster

## ***Benchmarking Deep Learning Interpretability in Time Series Predictions***

Aya Abdelsalam Ismail · Mohamed Gunady · Hector Corrada Bravo · Soheil Feizi

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #729

Poster

## ***Stochastic Deep Gaussian Processes over Graphs***

Naiqi Li · Wenjie Li · Jifeng Sun · Yinghua Gao · Yong Jiang · Shu-Tao Xia

In Poster Session 3

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<b>Minimax Lower Bounds for Transfer Learning with Linear and One-hidden Layer Neural Networks</b>	
Mohammadreza Mousavi Kalan · Zalan Fabian · Salman Avestimehr · Mahdi Soltanolkotabi	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #731	Poster
<b>Rethinking Learnable Tree Filter for Generic Feature Transform</b>	
Lin Song · Yanwei Li · Zhengkai Jiang · Zeming Li · Xiangyu Zhang · Hongbin Sun · Jian Sun · Nanning Zheng	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #732	Poster
<b>SOLOV2: Dynamic and Fast Instance Segmentation</b>	
Xinlong Wang · Rufeng Zhang · Tao Kong · Lei Li · Chunhua Shen	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #733	Poster
<b>HOI Analysis: Integrating and Decomposing Human-Object Interaction</b>	
Yong-Lu Li · Xinpeng Liu · Xiaoqian Wu · Yizhuo Li · Cewu Lu	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #734	Poster
<b>RANet: Region Attention Network for Semantic Segmentation</b>	
Dingguo Shen · Yuanfeng Ji · Ping Li · Yi Wang · Di Lin	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #735	Poster
<b>ICNet: Intra-saliency Correlation Network for Co-Saliency Detection</b>	
Wen-Da Jin · Jun Xu · Ming-Ming Cheng · Yi Zhang · Wei Guo	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #736	Poster
<b>Few-Cost Salient Object Detection with Adversarial-Paced Learning</b>	
Dingwen Zhang · HaiBin Tian · Jungong Han	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #737	Poster
<b>Detecting Hands and Recognizing Physical Contact in the Wild</b>	
Supreeth Narasimhaswamy · Trung Nguyen · Minh Hoai Nguyen	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #738	Poster
<b>Targeted Adversarial Perturbations for Monocular Depth Prediction</b>	
Alex Wong · Safa Cicek · Stefano Soatto	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #739	Poster
<b>Self-Supervised Visual Representation Learning from Hierarchical Grouping</b>	
Xiao Zhang · Michael Maire	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #740	Poster
<b>Learning Affordance Landscapes for Interaction Exploration in 3D Environments</b>	
Tushar Nagarajan · Kristen Grauman	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #741	Poster
<b>Deep Variational Instance Segmentation</b>	
Jialin Yuan · Chao Chen · Fuxin Li	In Poster Session 3
Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #742	Poster
<b>Auto-Panoptic: Cooperative Multi-Component Architecture Search for Panoptic Segmentation</b>	

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #743

Poster

**Fine-Grained Dynamic Head for Object Detection**

Lin Song · Yanwei Li · Zhengkai Jiang · Zeming Li · Hongbin Sun · Jian Sun · Nanning Zheng

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #744

Poster

**Learning About Objects by Learning to Interact with Them**

Martin Lohmann · Jordi Salvador · Ani Kembhavi · Roozbeh Mottaghi

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #745

Poster

**Rel3D: A Minimally Contrastive Benchmark for Grounding Spatial Relations in 3D**

Ankit Goyal · Kaiyu Yang · Dawei Yang · Jia Deng

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #1146

Poster

**Optimal visual search based on a model of target detectability in natural images**

Shima Rashidi · Krista Ehinger · Andrew Turpin · Lars Kulik

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #1163

Poster

**Online Influence Maximization under Linear Threshold Model**

Shuai Li · Fang Kong · Kejie Tang · Qizhi Li · Wei Chen

In Poster Session 3

Tue Dec 08 09:00 PM -- 11:00 PM (PST) @ Poster Session 2 #1190

Poster

**Profile Entropy: A Fundamental Measure for the Learnability and Compressibility of Distributions**

Yi Hao · Alon Orlitsky

In Poster Session 3

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #291

Poster

**Model Fusion via Optimal Transport**

Sidak Pal Singh · Martin Jaggi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #746

Poster

**What if Neural Networks had SVDs?**

Alexander Mathiasen · Frederik Hvilstøj · Jakob Rødsgaard Jørgensen · Anshul Nasery · Davide Mottin

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #747

Poster

**Understanding and Improving Fast Adversarial Training**

Maksym Andriushchenko · Nicolas Flammarion

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #748

Poster

**Posterior Re-calibration for Imbalanced Datasets**

Junjiao Tian · Yen-Cheng Liu · Nathaniel Glaser · Yen-Chang Hsu · Zsolt Kira

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #749

Poster

**Just Pick a Sign: Optimizing Deep Multitask Models with Gradient Sign Dropout**

Zhao Chen · Jiquan Ngiam · Yanping Huang · Thang Luong · Henrik Kretzschmar · Yuning Chai · Dragomir Anguelov

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #750

Poster

**GCN meets GPU: Decoupling “When to Sample” from “How to Sample”**

Morteza Ramezani · Weilin Cong · Mehrdad Mahdavi · Anand Sivasubramaniam · Mahmut Kandemir

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #751

Poster

***Improving model calibration with accuracy versus uncertainty optimization***

Ranganath Krishnan · Omesh Tickoo

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #752

Poster

***Deep Evidential Regression***

Alexander Amini · Wilko Schwarting · Ava P Soleimany · Daniela Rus

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #753

Poster

***Practical Quasi-Newton Methods for Training Deep Neural Networks***

Donald Goldfarb · Yi Ren · Achraf Bahamou

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #754

Poster

***Ultra-Low Precision 4-bit Training of Deep Neural Networks***Xiao Sun · Naigang Wang · Chia-Yu Chen · Jiamin Ni · Ankur Agrawal · Xiaodong Cui · Swagath Venkataramani In Poster Session 4  
· Kaoutar El Maghraoui · Vijayalakshmi (Viji) Srinivasan · Kailash Gopalakrishnan

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #755

Poster

***Improving Neural Network Training in Low Dimensional Random Bases***

Frithjof Gressmann · Zach Eaton-Rosen · Carlo Luschi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #756

Poster

***Bandit Samplers for Training Graph Neural Networks***

Ziqi Liu · Zhengwei Wu · Zhiqiang Zhang · Jun Zhou · Shuang Yang · Le Song · Yuan Qi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #757

Poster

***ScaleCom: Scalable Sparsified Gradient Compression for Communication-Efficient******Distributed Training***

Chia-Yu Chen · Jiamin Ni · Songtao Lu · Xiaodong Cui · Pin-Yu Chen · Xiao Sun · Naigang Wang · Swagath Venkataramani · Vijayalakshmi (Viji) Srinivasan · Wei Zhang · Kailash Gopalakrishnan In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #758

Poster

***Robust Optimal Transport with Applications in Generative Modeling and Domain******Adaptation***

Yogesh Balaji · Rama Chellappa · Soheil Feizi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #759

Poster

***Bayesian filtering unifies adaptive and non-adaptive neural network optimization methods***

Laurence Aitchison

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #760

Poster

***MomentumRNN: Integrating Momentum into Recurrent Neural Networks***

Tan Nguyen · Richard Baraniuk · Andrea Bertozzi · Stanley Osher · Bao Wang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #761

Poster

***Why are Adaptive Methods Good for Attention Models?***

Jingzhao Zhang · Sai Praneeth Karimireddy · Andreas Veit · Seungyeon Kim · Sashank Reddi · Sanjiv Kumar · Suvrit Sra In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #762

Poster

***MESA: Boost Ensemble Imbalanced Learning with MEta-SAmpler***

Zhining Liu · Pengfei Wei · Jing Jiang · Wei Cao · Jiang Bian · Yi Chang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #763

Poster

## **Dark Experience for General Continual Learning: a Strong, Simple Baseline**

Pietro Buzzega · Matteo Boschini · Angelo Porrello · Davide Abati · SIMONE CALDERARA

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #764

Poster

## **RATT: Recurrent Attention to Transient Tasks for Continual Image Captioning**

Riccardo Del Chiaro · Bartłomiej Twardowski · Andrew D Bagdanov · Joost van de Weijer

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #765

Poster

## **Continual Learning of a Mixed Sequence of Similar and Dissimilar Tasks**

Zixuan Ke · Bing Liu · Xingchang Huang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #766

Poster

## **Continual Deep Learning by Functional Regularisation of Memorable Past**

Pingbo Pan · Siddharth Swaroop · Alexander Immer · Runa Eschenhagen · Richard Turner · Emtilay Khan

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #767

Poster

## **Look-ahead Meta Learning for Continual Learning**

Gunshi Gupta · Karmesh Yadav · Liam Paull

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #768

Poster

## **A Combinatorial Perspective on Transfer Learning**

Jianan Wang · Eren Sezener · David Budden · Marcus Hutter · Joel Veness

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #769

Poster

## **Continual Learning in Low-rank Orthogonal Subspaces**

Arslan Chaudhry · Naeemullah Khan · Puneet Dokania · Philip Torr

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #770

Poster

## **Mitigating Forgetting in Online Continual Learning via Instance-Aware Parameterization**

Hung-Jen Chen · An-Chieh Cheng · Da-Cheng Juan · Wei Wei · Min Sun

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #771

Poster

## **Online Fast Adaptation and Knowledge Accumulation (OSAKA): a New Approach to Continual Learning**

Massimo Caccia · Pau Rodriguez · Oleksiy Ostapenko · Fabrice Normandin · Min Lin · Lucas Page-Caccia · Issam Hadj Laradji · Irina Rish · Alexandre Lacoste · David Vázquez · Laurent Charlin

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #772

Poster

## **Bayesian Meta-Learning for the Few-Shot Setting via Deep Kernels**

Massimiliano Patacchiola · Jack Turner · Elliot Crowley · Michael O'Boyle · Amos Storkey

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #773

Poster

## **Task-Robust Model-Agnostic Meta-Learning**

Liam Collins · Aryan Mokhtari · Sanjay Shakkottai

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #774

Poster

## **Learning to Learn Variational Semantic Memory**

Xiantong Zhen · Yingjun Du · Huan Xiong · Qiang Qiu · Cees Snoek · Ling Shao

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #775

Poster

## **Continuous Meta-Learning without Tasks**

James Harrison · Apoorva Sharma · Chelsea Finn · Marco Pavone

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #776	Poster
<b>Auxiliary Task Reweighting for Minimum-data Learning</b>	
Baifeng Shi · Judy Hoffman · Kate Saenko · Trevor Darrell · Huijuan Xu	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #777	Poster
<b>Hierarchically Organized Latent Modules for Exploratory Search in Morphogenetic Systems</b>	
Mayalen Etcheverry · Clément Moulin-Frier · Pierre-Yves Oudeyer	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #778	Poster
<b>Estimation and Imputation in Probabilistic Principal Component Analysis with Missing Not At Random Data</b>	
Aude Sportisse · Claire Boyer · Julie Josse	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #779	Poster
<b>PLANS: Neuro-Symbolic Program Learning from Videos</b>	
Raphaël Dang-Nhu	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #780	Poster
<b>Probabilistic Linear Solvers for Machine Learning</b>	
Jonathan Wenger · Philipp Hennig	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #781	Poster
<b>A/B Testing in Dense Large-Scale Networks: Design and Inference</b>	
Preetam Nandy · Kinjal Basu · Shaunak Chatterjee · Ye Tu	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #782	Poster
<b>Dual Instrumental Variable Regression</b>	
Krikamol Muandet · Arash Mehrjou · Si Kai Lee · Anant Raj	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #783	Poster
<b>Estimating the Effects of Continuous-valued Interventions using Generative Adversarial Networks</b>	
Ioana Bica · James Jordon · Mihaela van der Schaar	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #784	Poster
<b>Gradient Regularized V-Learning for Dynamic Treatment Regimes</b>	
Yao Zhang · Mihaela van der Schaar	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #785	Poster
<b>Identifying Causal-Effect Inference Failure with Uncertainty-Aware Models</b>	
Andrew Jesson · Sören Mindermann · Uri Shalit · Yarin Gal	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #786	Poster
<b>Causal Estimation with Functional Confounders</b>	
Aahlad Puli · Adler Perotte · Rajesh Ranganath	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #787	Poster
<b>Counterfactual Prediction for Bundle Treatment</b>	
Hao Zou · Peng Cui · Bo Li · Zheyuan Shen · Jianxin Ma · Hongxia Yang · Yue He	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #788	Poster

**Minimax Estimation of Conditional Moment Models**

Nishanth Dikkala · Greg Lewis · Lester Mackey · Vasilis Syrgkanis

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #789

Poster

**Off-Policy Evaluation and Learning for External Validity under a Covariate Shift**

Masatoshi Uehara · Masahiro Kato · Shota Yasui

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #790

Poster

**Sense and Sensitivity Analysis: Simple Post-Hoc Analysis of Bias Due to Unobserved Confounding**

Victor Veitch · Anisha Zaveri

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #791

Poster

**Multi-task Causal Learning with Gaussian Processes**

Virginia Aglietti · Theo Damoulas · Mauricio Álvarez · Javier González

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #792

Poster

**Causal Shapley Values: Exploiting Causal Knowledge to Explain Individual Predictions of Complex Models**

Tom Heskes · Evi Sijben · Ioan Gabriel Bucur · Tom Claassen

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #793

Poster

**Algorithmic recourse under imperfect causal knowledge: a probabilistic approach**

Amir Karimi · Julius von Kügelgen · Bernhard Schölkopf · Isabel Valera

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #794

Poster

**Compositional Generalization via Neural-Symbolic Stack Machines**

Xinyun Chen · Chen Liang · Adams Wei Yu · Dawn Song · Denny Zhou

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #795

Poster

**Learning Invariants through Soft Unification**

Nuri Cingilioglu · Alessandra Russo

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #796

Poster

**Linear Disentangled Representations and Unsupervised Action Estimation**

Matthew Painter · Adam Prugel-Bennett · Jonathon Hare

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #797

Poster

**Identifying Mislabeled Data using the Area Under the Margin Ranking**

Geoff Pleiss · Tianyi Zhang · Ethan Elenberg · Kilian Weinberger

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #798

Poster

**A Bayesian Nonparametrics View into Deep Representations**

Michał Jamroż · Marcin Kurzak · Mateusz Opala

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #799

Poster

**Learning Invariances in Neural Networks from Training Data**

Greg Benton · Marc Finzi · Pavel Izmailov · Andrew Wilson

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #800

Poster

**Inverse Learning of Symmetries**

Mario Wieser · Sonali Parbhoo · Aleksander Wieczorek · Volker Roth

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #801 <b>Post-training Iterative Hierarchical Data Augmentation for Deep Networks</b> Adil Khan · Khadija Fraz	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #802 <b>Exemplar VAE: Linking Generative Models, Nearest Neighbor Retrieval, and Data Augmentation</b> Sajad Norouzi · David Fleet · Mohammad Norouzi	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #803 <b>Goal-directed Generation of Discrete Structures with Conditional Generative Models</b> Amina Mollaysa · Brooks Paige · Alexandros Kalousis	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #804 <b>CoSE: Compositional Stroke Embeddings</b> Emre Aksan · Thomas Deselaers · Andrea Tagliasacchi · Otmar Hilliges	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #805 <b>A Causal View on Robustness of Neural Networks</b> Cheng Zhang · Kun Zhang · Yingzhen Li	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #806 <b>Regularizing Towards Permutation Invariance In Recurrent Models</b> Edo Cohen-Karlik · Avichai Ben David · Amir Globerson	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #807 <b>STLnet: Signal Temporal Logic Enforced Multivariate Recurrent Neural Networks</b> Meiyi Ma · Ji Gao · Lu Feng · John A Stankovic	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #808 <b>Generative causal explanations of black-box classifiers</b> Matt O'Shaughnessy · Greg Canal · Marissa Connor · Christopher Rozell · Mark Davenport	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #809 <b>Assessing SATNet's Ability to Solve the Symbol Grounding Problem</b> Oscar Chang · Lampros Flokas · Hod Lipson · Michael Spranger	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #810 <b>Towards Better Generalization of Adaptive Gradient Methods</b> Yingxue Zhou · Belhal Karimi · Jinxing Yu · Zhiqiang Xu · Ping Li	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #811 <b>Adam with Bandit Sampling for Deep Learning</b> Rui Liu · Tianyi Wu · Barzan Mozafari	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #812 <b>Random Reshuffling: Simple Analysis with Vast Improvements</b> Kostya Mishchenko · Ahmed Khaled Ragab Bayoumi · Peter Richtarik	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #813 <b>Explore Aggressively, Update Conservatively: Stochastic Extragradient Methods with Variable Stepsize Scaling</b>	Poster

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #814

Poster

**Boosting First-Order Methods by Shifting Objective: New Schemes with Faster Worst-Case Rates**

Kaiwen Zhou · Anthony Man-Cho So · James Cheng

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #815

Poster

**A Catalyst Framework for Minimax Optimization**

Junchi Yang · Siqi Zhang · Negar Kiyavash · Niao He

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #816

Poster

**Global Convergence and Variance Reduction for a Class of Nonconvex-Nonconcave Minimax Problems**

Junchi Yang · Negar Kiyavash · Niao He

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #817

Poster

**On the Almost Sure Convergence of Stochastic Gradient Descent in Non-Convex Problems**

Panayotis Mertikopoulos · Nadav Hallak · Ali Kavis · Volkan Cevher

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #818

Poster

**Hybrid Variance-Reduced SGD Algorithms For Minimax Problems with Nonconvex-Linear Function**

Quoc Tran Dinh · Deyi Liu · Lam Nguyen

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #819

Poster

**An Improved Analysis of Stochastic Gradient Descent with Momentum**

Yanli Liu · Yuan Gao · Wotao Yin

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #820

Poster

**Robustness Analysis of Non-Convex Stochastic Gradient Descent using Biased Expectations**

Kevin Scaman · Cedric Malherbe

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #821

Poster

**Online Robust Regression via SGD on the L1 loss**

Scott Pesme · Nicolas Flammarion

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #822

Poster

**Stochastic Optimization with Heavy-Tailed Noise via Accelerated Gradient Clipping**

Eduard Gorbunov · Marina Danilova · Alexander Gasnikov

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #823

Poster

**Large-Scale Methods for Distributionally Robust Optimization**

Daniel Levy · Yair Carmon · John Duchi · Aaron Sidford

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #824

Poster

**Least Squares Regression with Markovian Data: Fundamental Limits and Algorithms**

Dheeraj Nagaraj · Xian Wu · Guy Bresler · Prateek Jain · Praneeth Netrapalli

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #825

Poster

## **Stochastic Recursive Gradient Descent Ascent for Stochastic Nonconvex-Strongly-Concave Minimax Problems**

Luo Luo · Haishan Ye · Zhichao Huang · Tong Zhang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #826

Poster

## **Provable Overlapping Community Detection in Weighted Graphs**

Jimit Majmudar · Stephen Vavasis

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #827

Poster

## **Improving Inference for Neural Image Compression**

Yibo Yang · Robert Bamler · Stephan Mandt

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #828

Poster

## **Bongard-LOGO: A New Benchmark for Human-Level Concept Learning and Reasoning**

Weili Nie · Zhiding Yu · Lei Mao · Ankit Patel · Yuke Zhu · Anima Anandkumar

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #829

Poster

## **Kernel Methods Through the Roof: Handling Billions of Points Efficiently**

Giacomo Meanti · Luigi Carratino · Lorenzo Rosasco · Alessandro Rudi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #830

Poster

## **Discovering conflicting groups in signed networks**

Ruo-Chun Tzeng · Bruno Ordozgoiti · Aris Gionis

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #831

Poster

## **StratLearner: Learning a Strategy for Misinformation Prevention in Social Networks**

Amo Tong

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #832

Poster

## **Learning Differentiable Programs with Admissible Neural Heuristics**

Ameesh Shah · Eric Zhan · Jennifer Sun · Abhinav Verma · Yisong Yue · Swarat Chaudhuri

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #833

Poster

## **Neural Execution Engines: Learning to Execute Subroutines**

Yujun Yan · Kevin Swersky · Danai Koutra · Parthasarathy Ranganathan · Milad Hashemi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #834

Poster

## **Multimodal Graph Networks for Compositional Generalization in Visual Question Answering**

Raeid Saqr · Karthik Narasimhan

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #835

Poster

## **RL Unplugged: A Suite of Benchmarks for Offline Reinforcement Learning**

CAGLAR Gulcehre · Ziyu Wang · Alexander Novikov · Thomas Paine · Sergio Gómez · Konrad Zolna · Rishabh Iyer · Mohammad Norouzi · Matthew Hoffman · Nicolas Heess · Nando de Freitas

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #836

Poster

## **SEVIR : A Storm Event Imagery Dataset for Deep Learning Applications in Radar and Satellite Meteorology**

Mark Veillette · Siddharth Samsi · Chris Mattioli

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #837

Poster

## **Instead of Rewriting Foreign Code for Machine Learning, Automatically Synthesize Fast Gradients**

William Moses · Valentin Churavy

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #838

Poster

### **Fast geometric learning with symbolic matrices**

Jean Feydy · Joan Glaunès · Benjamin Charlier · Michael Bronstein

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #839

Poster

### **Symbols: Probing Learning Algorithms with Synthetic Datasets**

Alexandre Lacoste · Pau Rodríguez López · Frederic Branchaud-Charron · Parmida Atighehchian · Massimo Caccia · Issam Hadj Laradji · Alexandre Drouin · Matthew Craddock · Laurent Charlin · David Vázquez

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #840

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### **Evaluating Attribution for Graph Neural Networks**

Benjamin Sanchez-Lengeling · Jennifer Wei · Brian Lee · Emily Reif · Peter Wang · Wesley Qian · Kevin McCloskey · Lucy Colwell · Alexander Wiltschko

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #841

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### **Accelerating Reinforcement Learning through GPU Atari Emulation**

Steven Dalton · iuri frosio

In Poster Session 4

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### **Adaptive Gradient Quantization for Data-Parallel SGD**

Fartash Faghri · Iman Tabrizian · Ilia Markov · Dan Alistarh · Dan Roy · Ali Ramezani-Kebrya

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #843

Poster

### **Universally Quantized Neural Compression**

Eirikur Agustsson · Lucas Theis

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #844

Poster

### **Searching for Low-Bit Weights in Quantized Neural Networks**

Zhaohui Yang · Yunhe Wang · Kai Han · Chunjing XU · Chao Xu · Dacheng Tao · Chang Xu

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #845

Poster

### **Bayesian Bits: Unifying Quantization and Pruning**

Mart van Baalen · Christos Louizos · Markus Nagel · Rana Ali Amjad · Ying Wang · Tijmen Blankevoort · Max Welling

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #846

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### **FleXOR: Trainable Fractional Quantization**

Dongsoo Lee · Se Jung Kwon · Byeongwook Kim · Yongkweon Jeon · Baeseong Park · Jeongin Yun

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #847

Poster

### **Robust Quantization: One Model to Rule Them All**

moran shkolnik · Brian Chmiel · Ron Banner · Gil Shomron · Yury Nahshan · Alex Bronstein · Uri Weiser

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #848

Poster

### **A Statistical Framework for Low-bitwidth Training of Deep Neural Networks**

Jianfei Chen · Yu Gai · Zhewei Yao · Michael Mahoney · Joseph Gonzalez

In Poster Session 4

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### **Invertible Gaussian Reparameterization: Revisiting the Gumbel-Softmax**

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***DisARM: An Antithetic Gradient Estimator for Binary Latent Variables***

Zhe Dong · Andriy Mnih · George Tucker

In Poster Session 4

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***Efficient semidefinite-programming-based inference for binary and multi-class MRFs***

Chirag Pabbaraju · Po-Wei Wang · J. Zico Kolter

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #852

Poster

***Gradient Estimation with Stochastic Softmax Tricks***

Max Paulus · Dami Choi · Daniel Tarlow · Andreas Krause · Chris Maddison

In Poster Session 4

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***Quantized Variational Inference***

Amir Dib

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #854

Poster

***Approximation Based Variance Reduction for Reparameterization Gradients***

Tomas Geffner · Justin Domke

In Poster Session 4

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***VarGrad: A Low-Variance Gradient Estimator for Variational Inference***

Lorenz Richter · Ayman Boustati · Nikolas Nüsken · Francisco Ruiz · Ö. Deniz Akyildiz

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #856

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***Optimal Variance Control of the Score-Function Gradient Estimator for Importance-Weighted Bounds***

Valentin Liévin · Andrea Dittadi · Anders Christensen · Ole Winther

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #857

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***AutoPrivacy: Automated Layer-wise Parameter Selection for Secure Neural Network Inference***

Qian Lou · Song Bian · Lei Jiang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #858

Poster

***Group-Fair Online Allocation in Continuous Time***

Semih Cayci · Swati Gupta · Atilla Eryilmaz

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #859

Poster

***Fair Hierarchical Clustering***

Sara Ahmadian · Alessandro Epasto · Marina Knittel · Ravi Kumar · Mohammad Mahdian · Benjamin Moseley · Philip Pham · Sergei Vassilvitskii · Yuyan Wang

In Poster Session 4

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***Approximate Heavily-Constrained Learning with Lagrange Multiplier Models***

Harikrishna Narasimhan · Andy Cotter · Yichen Zhou · Serena Wang · Wenshuo Guo

In Poster Session 4

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Poster

***Metric-Free Individual Fairness in Online Learning***

Yahav Bechavod · Christopher Jung · Steven Wu

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #862

Poster

## **Fair regression via plug-in estimator and recalibration with statistical guarantees**

Evgenii Chzhen · Christophe Denis · Mohamed Hebiri · Luca Oneto · Massimiliano Pontil

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #863

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## **Fair Multiple Decision Making Through Soft Interventions**

Yaowei Hu · Yongkai Wu · Lu Zhang · Xintao Wu

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #864

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## **Intra-Processing Methods for Debiasing Neural Networks**

Yash Savani · Colin White · Naveen Sundar Govindarajulu

In Poster Session 4

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## **Ensuring Fairness Beyond the Training Data**

Debmalya Mandal · Samuel Deng · Suman Jana · Jeannette Wing · Daniel Hsu

In Poster Session 4

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## **Fair Performance Metric Elicitation**

Gaurush Hiranandani · Harikrishna Narasimhan · Sanmi Koyejo

In Poster Session 4

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## **Fairness without Demographics through Adversarially Reweighted Learning**

Preethi Lahoti · Alex Beutel · Jilin Chen · Kang Lee · Flavien Prost · Nithum Thain · Xuezhi Wang · Ed Chi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #868

Poster

## **Exploiting MMD and Sinkhorn Divergences for Fair and Transferable Representation Learning**

Luca Oneto · Michele Donini · Giulia Luise · Carlo Ciliberto · Andreas Maurer · Massimiliano Pontil

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #869

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## **How do fair decisions fare in long-term qualification?**

Xueru Zhang · Ruibo Tu · Yang Liu · Mingyan Liu · Hedvig Kjellstrom · Kun Zhang · Cheng Zhang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #870

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## **Fair regression with Wasserstein barycenters**

Evgenii Chzhen · Christophe Denis · Mohamed Hebiri · Luca Oneto · Massimiliano Pontil

In Poster Session 4

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## **Learning Certified Individually Fair Representations**

Anian Ruoss · Mislav Balunovic · Marc Fischer · Martin Vechev

In Poster Session 4

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## **Fairness with Overlapping Groups; a Probabilistic Perspective**

Forest Yang · Mouhamadou M Cisse · Sanmi Koyejo

In Poster Session 4

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## **Consistent Plug-in Classifiers for Complex Objectives and Constraints**

Shiv Tavker · Harish Guruprasad Ramaswamy · Harikrishna Narasimhan

In Poster Session 4

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## **Causal Discovery in Physical Systems from Videos**

Yunzhu Li · Antonio Torralba · Anima Anandkumar · Dieter Fox · Animesh Garg

In Poster Session 4

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## **Causal Imitation Learning With Unobserved Confounders**

Junzhe Zhang · Daniel Kumor · Elias Bareinboim

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #876

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## **A Class of Algorithms for General Instrumental Variable Models**

Niki Kilbertus · Matt Kusner · Ricardo Silva

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #877

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## **Active Invariant Causal Prediction: Experiment Selection through Stability**

Juan Gamella · Christina Heinze-Deml

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #878

Poster

## **Causal Discovery from Soft Interventions with Unknown Targets: Characterization and Learning**

Amin Jaber · Murat Kocaoglu · Karthikeyan Shanmugam · Elias Bareinboim

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #879

Poster

## **Deep Structural Causal Models for Tractable Counterfactual Inference**

Nick Pawlowski · Daniel Coelho de Castro · Ben Glocker

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #880

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## **Reconsidering Generative Objectives For Counterfactual Reasoning**

Danni Lu · Chenyang Tao · Junya Chen · Fan Li · Feng Guo · Lawrence Carin

In Poster Session 4

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## **High-recall causal discovery for autocorrelated time series with latent confounders**

Andreas Gerhardus · Jakob Runge

In Poster Session 4

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## **Applications of Common Entropy for Causal Inference**

Murat Kocaoglu · Sanjay Shakkottai · Alex Dimakis · Constantine Caramanis · Sriram Vishwanath

In Poster Session 4

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## **Entropic Causal Inference: Identifiability and Finite Sample Results**

Spencer Compton · Murat Kocaoglu · Kristjan Greenewald · Dmitriy Katz

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #884

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## **General Transportability of Soft Interventions: Completeness Results**

Juan Correa · Elias Bareinboim

In Poster Session 4

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## **Learning Causal Effects via Weighted Empirical Risk Minimization**

Yonghan Jung · Jin Tian · Elias Bareinboim

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #886

Poster

## **Differentiable Causal Discovery from Interventional Data**

Philippe Brouillard · Sébastien Lachapelle · Alexandre Lacoste · Simon Lacoste-Julien · Alexandre Drouin

In Poster Session 4

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## **Generalized Independent Noise Condition for Estimating Latent Variable Causal Graphs**

Feng Xie · Ruichu Cai · Biwei Huang · Clark Glymour · Zhifeng Hao · Kun Zhang

In Poster Session 4

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<b>Bayesian Causal Structural Learning with Zero-Inflated Poisson Bayesian Networks</b>	
Junsouk Choi · Robert Chapkin · Yang Ni	In Poster Session 4
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<b>A polynomial-time algorithm for learning nonparametric causal graphs</b>	
Ming Gao · Yi Ding · Bryon Aragam	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #890	Poster
<b>Linear Time Sinkhorn Divergences using Positive Features</b>	
Meyer Scetbon · Marco Cuturi	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #891	Poster
<b>Learning Kernel Tests Without Data Splitting</b>	
Jonas Kübler · Wittawat Jitkrittum · Bernhard Schölkopf · Krikamol Muandet	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #892	Poster
<b>Learning with Operator-valued Kernels in Reproducing Kernel Krein Spaces</b>	
Aakash Saha · Balamurugan Palaniappan	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #893	Poster
<b>A kernel test for quasi-independence</b>	
Tamara Fernandez · Wenkai Xu · Marc Ditzhaus · Arthur Gretton	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #894	Poster
<b>Hard Shape-Constrained Kernel Machines</b>	
Pierre-Cyril Aubin-Frankowski · Zoltan Szabo	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #895	Poster
<b>Statistical Optimal Transport posed as Learning Kernel Embedding</b>	
Saketha Nath Jagarlapudi · Pratik Kumar Jawanpuria	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #896	Poster
<b>Learning Search Space Partition for Black-box Optimization using Monte Carlo Tree Search</b>	
Linnan Wang · Rodrigo Fonseca · Yuandong Tian	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #897	Poster
<b>Continuous Regularized Wasserstein Barycenters</b>	
Lingxiao Li · Aude Genevay · Mikhail Yurochkin · Justin Solomon	In Poster Session 4
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<b>Entropic Optimal Transport between Unbalanced Gaussian Measures has a Closed Form</b>	
Hicham Janati · Boris Muzellec · Gabriel Peyré · Marco Cuturi	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #899	Poster
<b>Multi-Fidelity Bayesian Optimization via Deep Neural Networks</b>	
Shibo Li · Wei Xing · Robert Kirby · Shandian Zhe	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #900	Poster
<b>Re-Examining Linear Embeddings for High-Dimensional Bayesian Optimization</b>	
Ben Letham · Roberto Calandra · Akshara Rai · Eytan Bakshy	In Poster Session 4

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Poster

### **Hybrid Models for Learning to Branch**

Prateek Gupta · Maxime Gasse · Elias Khalil · Pawan K Mudigonda · Andrea Lodi · Yoshua Bengio

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #902

Poster

### **Interior Point Solving for LP-based prediction+optimisation**

Jayanta Mandi · Tias Guns

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #903

Poster

### **Curriculum learning for multilevel budgeted combinatorial problems**

Adel Nabli · Margarida Carvalho

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #904

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### **BOSS: Bayesian Optimization over String Spaces**

Henry Moss · David Leslie · Daniel Beck · Javier González · Paul Rayson

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #905

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### **An implicit function learning approach for parametric modal regression**

Yangchen Pan · Ehsan Imani · Amir-massoud Farahmand · Martha White

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #906

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### **Adversarial Example Games**

Joey Bose · Gauthier Gidel · Hugo Berard · Andre Cianflone · Pascal Vincent · Simon Lacoste-Julien · Will Hamilton

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #907

Poster

### **Robust Pre-Training by Adversarial Contrastive Learning**

Ziyu Jiang · Tianlong Chen · Ting Chen · Zhangyang Wang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #908

Poster

### **Provably Robust Metric Learning**

Lu Wang · Xuanqing Liu · Jinfeng Yi · Yuan Jiang · Cho-Jui Hsieh

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #909

Poster

### **A Game Theoretic Analysis of Additive Adversarial Attacks and Defenses**

Ambar Pal · Rene Vidal

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #910

Poster

### **Adversarial Training is a Form of Data-dependent Operator Norm Regularization**

Kevin Roth · Yannic Kilcher · Thomas Hofmann

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #911

Poster

### **Adversarial Robustness of Supervised Sparse Coding**

Jeremias Sulam · Ramchandran Muthukumar · Raman Arora

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #912

Poster

### **Boosting Adversarial Training with Hypersphere Embedding**

Tianyu Pang · Xiao Yang · Yinpeng Dong · Kun Xu · Jun Zhu · Hang Su

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #913

Poster

### **On the Loss Landscape of Adversarial Training: Identifying Challenges and How to Overcome Them**

Chen Liu · Mathieu Salzmann · Tao Lin · Ryota Tomioka · Sabine Süsstrunk

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #914	Poster
<b>DVERGE: Diversifying Vulnerabilities for Enhanced Robust Generation of Ensembles</b> Huanrui Yang · Jingyang Zhang · Hongliang Dong · Nathan Inkawich · Andrew Gardner · Andrew Touchet · Wesley Wilkes · Heath Berry · Helen Li	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #915	Poster
<b>Attack of the Tails: Yes, You Really Can Backdoor Federated Learning</b> Hongyi Wang · Kartik Sreenivasan · Shashank Rajput · Harit Vishwakarma · Saurabh Agarwal · Jy-yong Sohn · Kangwook Lee · Dimitrios Papailiopoulos	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #916	Poster
<b>Adversarially Robust Few-Shot Learning: A Meta-Learning Approach</b> Micah Goldblum · Liam Fowl · Tom Goldstein	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #917	Poster
<b>Guided Adversarial Attack for Evaluating and Enhancing Adversarial Defenses</b> Gaurang Sriramanan · Sravanti Addepalli · Arya Baburaj · Venkatesh Babu R	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #918	Poster
<b>Perturbing Across the Feature Hierarchy to Improve Standard and Strict Blackbox Attack Transferability</b> Nathan Inkawich · Kevin J Liang · Binghui Wang · Matthew Inkawich · Lawrence Carin · Yiran Chen	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #919	Poster
<b>Robustness of Bayesian Neural Networks to Gradient-Based Attacks</b> Ginevra Carbone · Matthew Wicker · Luca Laurenti · Andrea Patane' · Luca Bortolussi · Guido Sanguinetti	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #920	Poster
<b>Robust Deep Reinforcement Learning against Adversarial Perturbations on State Observations</b> Huan Zhang · Hongge Chen · Chaowei Xiao · Bo Li · Mingyan Liu · Duane Boning · Cho-Jui Hsieh	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #921	Poster
<b>On Adaptive Attacks to Adversarial Example Defenses</b> Florian Tramer · Nicholas Carlini · Wieland Brendel · Aleksander Madry	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #922	Poster
<b>High-Fidelity Generative Image Compression</b> Fabian Mentzer · George D Toderici · Michael Tschanen · Eirikur Agustsson	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #923	Poster
<b>Attribute Prototype Network for Zero-Shot Learning</b> Wenjia Xu · Yongqin Xian · Jiuniu Wang · Bernt Schiele · Zeynep Akata	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #924	Poster
<b>Removing Bias in Multi-modal Classifiers: Regularization by Maximizing Functional Entropies</b> Itai Gat · Idan Schwartz · Alex Schwing · Tamir Hazan	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #925	Poster
<b>Variational Interaction Information Maximization for Cross-domain Disentanglement</b> HyeongJoo Hwang · Geon-Hyeong Kim · Seunghoon Hong · Kee-Eung Kim	In Poster Session 4

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Poster

## **Hard Example Generation by Texture Synthesis for Cross-domain Shape Similarity Learning**

Huan Fu · Shunming Li · Rongfei Jia · Mingming Gong · Binqiang Zhao · Dacheng Tao

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #927

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## **Few-shot Image Generation with Elastic Weight Consolidation**

Yijun Li · Richard Zhang · Jingwan (Cynthia) Lu · Eli Shechtman

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #928

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## **DeepI2I: Enabling Deep Hierarchical Image-to-Image Translation by Transferring from GANs**

yaxing wang · Lu Yu · Joost van de Weijer

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #929

Poster

## **Generating Correct Answers for Progressive Matrices Intelligence Tests**

Niv Pekar · Yaniv Benny · Lior Wolf

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #930

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## **GramGAN: Deep 3D Texture Synthesis From 2D Exemplars**

Tiziano Portenier · Siavash Arjomand Bigdeli · Orcun Goksel

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #931

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## **Network-to-Network Translation with Conditional Invertible Neural Networks**

Robin Rombach · Patrick Esser · Bjorn Ommer

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #932

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## **Lightweight Generative Adversarial Networks for Text-Guided Image Manipulation**

Bowen Li · Xiaojuan Qi · Philip Torr · Thomas Lukasiewicz

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #933

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## **Instance Selection for GANs**

Terrance DeVries · Michal Drozdzal · Graham Taylor

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #934

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## **Quantifying Learnability and Describability of Visual Concepts Emerging in Representation Learning**

Iro Laina · Ruth Fong · Andrea Vedaldi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #935

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## **ICAM: Interpretable Classification via Disentangled Representations and Feature Attribution Mapping**

Cher Bass · Mariana da Silva · Carole Sudre · Petru-Daniel Tudosiu · Stephen Smith · Emma Robinson

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #936

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## **Smoothed Geometry for Robust Attribution**

Zifan Wang · Haofan Wang · Shakul Ramkumar · Peter Mardziel · Matt Fredrikson · Anupam Datta

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #937

Poster

## **Neural Networks with Recurrent Generative Feedback**

Yujia Huang · James Gornet · Sihui Dai · Zhiding Yu · Tan Nguyen · Ying Tsao · Anima Anandkumar

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #938

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### **COT-GAN: Generating Sequential Data via Causal Optimal Transport**

Tianlin Xu · Li Kevin Wenliang · Michael Munn · Beatrice Acciaio

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #939

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### **ICE-BeeM: Identifiable Conditional Energy-Based Deep Models Based on Nonlinear ICA**

Ilyes Khemakhem · Ricardo Monti · Diederik Kingma · Aapo Hyvärinen

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #940

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### **Unsupervised Learning of Lagrangian Dynamics from Images for Prediction and Control**

Yaofeng Desmond Zhong · Naomi Leonard

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #941

Poster

### **Implicit Rank-Minimizing Autoencoder**

Li Jing · Jure Zbontar · yann lecun

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #942

Poster

### **Elastic-InfoGAN: Unsupervised Disentangled Representation Learning in Class-Imbalanced Data**

Utkarsh Ojha · Krishna Kumar Singh · Cho-Jui Hsieh · Yong Jae Lee

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #943

Poster

### **Set2Graph: Learning Graphs From Sets**

Hadar Serviansky · Nimrod Segol · Jonathan Shlomi · Kyle Cranmer · Eilam Gross · Haggai Maron · Yaron Lipman

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #944

Poster

### **Efficient Generation of Structured Objects with Constrained Adversarial Networks**

Luca Di Liello · Pierfrancesco Ardino · Jacopo Gobbi · Paolo Morettin · Stefano Teso · Andrea Passerini

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #945

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### **Improving GAN Training with Probability Ratio Clipping and Sample Reweighting**

Yue Wu · Pan Zhou · Andrew Wilson · Eric Xing · Zhiting Hu

In Poster Session 4

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### **Regularized linear autoencoders recover the principal components, eventually**

Xuchan Bao · James Lucas · Sushant Sachdeva · Roger Grosse

In Poster Session 4

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### **BoxE: A Box Embedding Model for Knowledge Base Completion**

Ralph Abboud · Ismail Ceylan · Thomas Lukasiewicz · Tommaso Salvatori

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #948

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### **BlockGAN: Learning 3D Object-aware Scene Representations from Unlabelled Images**

Thu Nguyen-Phuoc · Christian Richardt · Long Mai · Yongliang Yang · Niloy Mitra

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #949

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### **Learning Object-Centric Representations of Multi-Object Scenes from Multiple Views**

Nanbo Li · Cian Eastwood · Robert Fisher

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #950

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### **Deep Statistical Solvers**

Balthazar Donon · Zhengying Liu · Wenzhuo LIU · Isabelle Guyon · Antoine Marot · Marc Schoenauer

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #951

Poster

### **Learning of Discrete Graphical Models with Neural Networks**

Abhijith Jayakumar · Andrey Likhov · Sidhant Misra · Marc Vuffray

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #952

Poster

### **Efficient Marginalization of Discrete and Structured Latent Variables via Sparsity**

Gonçalo Correia · Vlad Niculae · Wilker Aziz · André Martins

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #953

Poster

### **Falcon: Fast Spectral Inference on Encrypted Data**

Qian Lou · Wen-jie Lu · Cheng Hong · Lei Jiang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #954

Poster

### **Solver-in-the-Loop: Learning from Differentiable Physics to Interact with Iterative PDE-Solvers**

Kiwon Um · Robert Brand · Yun (Raymond) Fei · Philipp Holl · Nils Thuerey

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #955

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### **Learning Composable Energy Surrogates for PDE Order Reduction**

Alex Beatson · Jordan Ash · Geoffrey Roeder · Tianju Xue · Ryan Adams

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #956

Poster

### **AvE: Assistance via Empowerment**

Yuqing Du · Stas Tiomkin · Emre Kiciman · Daniel Polani · Pieter Abbeel · Anca Dragan

In Poster Session 4

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### **EcoLight: Intersection Control in Developing Regions Under Extreme Budget and Network Constraints**

Sachin Chauhan · Kashish Bansal · Rijurekha Sen

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #958

Poster

### **RetroXpert: Decompose Retrosynthesis Prediction Like A Chemist**

Chaochao Yan · Qianggang Ding · Peilin Zhao · Shuangjia Zheng · JINYU YANG · Yang Yu · Junzhou Huang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #959

Poster

### **Barking up the right tree: an approach to search over molecule synthesis DAGs**

John Bradshaw · Brooks Paige · Matt Kusner · Marwin Segler · Jose Miguel Hernández-Lobato

In Poster Session 4

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### **Synthesizing Tasks for Block-based Programming**

Umair Ahmed · Maria Christakis · Aleksandr Efremov · Nigel Fernandez · Ahana Ghosh · Abhik Roychoudhury · Adish Singla

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### **Deep Imitation Learning for Bimanual Robotic Manipulation**

Fan Xie · Alexander Chowdhury · Clara De Paolis Kaluza · Linfeng Zhao · Lawson Wong · Rose Yu

In Poster Session 4

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### **PRANK: motion Prediction based on RANKing**

Yuriy Biktairov · Maxim Stebelev · Irina Rudenko · Oleh Shliazhko · Boris Yangel

In Poster Session 4

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## **Meta-trained agents implement Bayes-optimal agents**

Vlad Mikulik · Grégoire Delétang · Tom McGrath · Tim Genewein · Miljan Martic · Shane Legg · Pedro Ortega In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #964

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## **On the equivalence of molecular graph convolution and molecular wave function with poor basis set**

Masashi Tsubaki · Teruyasu Mizoguchi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #965

Poster

## **Dynamic allocation of limited memory resources in reinforcement learning**

Nisheet Patel · Luigi Acerbi · Alexandre Pouget

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #966

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## **Ensembling geophysical models with Bayesian Neural Networks**

Ushnish Sengupta · Matt Amos · Scott Hosking · Carl Edward Rasmussen · Matthew Juniper · Paul Young

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #967

Poster

## **Neurosymbolic Transformers for Multi-Agent Communication**

Jeevana Priya Inala · Yichen Yang · James Paulos · Yewen Pu · Osbert Bastani · Vijay Kumar · Martin Rinard · Armando Solar-Lezama In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #968

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## **Avoiding Side Effects By Considering Future Tasks**

Victoria Krakovna · Laurent Orseau · Richard Ngo · Miljan Martic · Shane Legg

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #969

Poster

## **What Did You Think Would Happen? Explaining Agent Behaviour through Intended Outcomes**

Herman Yau · Chris Russell · Simon Hadfield

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #970

Poster

## **Sequence to Multi-Sequence Learning via Conditional Chain Mapping for Mixture Signals**

Jing Shi · Xuankai Chang · Pengcheng Guo · Shinji Watanabe · Yusuke Fujita · Jiaming Xu · Bo Xu · Lei Xie In Poster Session 4

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## **Learning Mutational Semantics**

Brian Hie · Ellen Zhong · Bryan Bryson · Bonnie Berger

In Poster Session 4

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## **Zero-Resource Knowledge-Grounded Dialogue Generation**

Linxiao Li · Can Xu · Wei Wu · YUFAN ZHAO · Xueliang Zhao · Chongyang Tao

In Poster Session 4

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## **Representation Learning for Integrating Multi-domain Outcomes to Optimize Individualized Treatment**

Yuan Chen · Donglin Zeng · Tianchen Xu · Yuanjia Wang

In Poster Session 4

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Poster

## **Causal analysis of Covid-19 Spread in Germany**

Atalanti Mastakouri · Bernhard Schölkopf

In Poster Session 4

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Poster

## **Dynamic Fusion of Eye Movement Data and Verbal Narrations in Knowledge-rich Domains**

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Poster

**X-CAL: Explicit Calibration for Survival Analysis**

Mark Goldstein · Xintian Han · Aahlad Puli · Adler Perotte · Rajesh Ranganath

In Poster Session 4

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**Experimental design for MRI by greedy policy search**

Tim Bakker · Herke van Hoof · Max Welling

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #978

Poster

**How Robust are the Estimated Effects of Nonpharmaceutical Interventions against COVID-19?**

Mrinank Sharma · Sören Mindermann · Jan Brauner · Gavin Leech · Anna Stephenson · Tomáš Gavenciak · Jan In Poster Session 4 Kulveit · Yee Whye Teh · Leonid Chindelevitch · Yarin Gal

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #979

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**OrganITE: Optimal transplant donor organ offering using an individual treatment effect**

Jeroen Berrevoets · James Jordon · Ioana Bica · Alexander Gimson · Mihaela van der Schaar

In Poster Session 4

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**When Counterpoint Meets Chinese Folk Melodies**

Nan Jiang · Sheng Jin · Zhiyao Duan · Changshui Zhang

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**BERT Loses Patience: Fast and Robust Inference with Early Exit**

Wangchunshu Zhou · Canwen Xu · Tao Ge · Julian McAuley · Ke Xu · Furu Wei

In Poster Session 4

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**Unsupervised Text Generation by Learning from Search**

Jingjing Li · Zichao Li · Lili Mou · Xin Jiang · Michael R Lyu · Irwin King

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #983

Poster

**Leap-Of-Thought: Teaching Pre-Trained Models to Systematically Reason Over Implicit Knowledge**

Alon Talmor · Oyvind Tafjord · Peter Clark · Yoav Goldberg · Jonathan Berant

In Poster Session 4

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Poster

**A Spectral Energy Distance for Parallel Speech Synthesis**

Alexey Gritsenko · Tim Salimans · Rianne van den Berg · Jasper Snoek · Nal Kalchbrenner

In Poster Session 4

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**Compositional Generalization by Learning Analytical Expressions**

Qian Liu · Shengnan An · Jian-Guang Lou · Bei Chen · Zeqi Lin · Yan Gao · Bin Zhou · Nanning Zheng · Dongmei Zhang

In Poster Session 4

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Poster

**A Measure-Theoretic Approach to Kernel Conditional Mean Embeddings**

Junhyung Park · Krikamol Muandet

In Poster Session 4

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Poster

**Kernel Alignment Risk Estimator: Risk Prediction from Training Data**

Arthur Jacot · Berfin Simsek · Francesco Spadaro · Clement Hongler · Franck Gabriel

In Poster Session 4

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<b>Fourier Sparse Leverage Scores and Approximate Kernel Learning</b>	
Tamas Erdelyi · Cameron Musco · Christopher Musco	In Poster Session 4
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<b>Demystifying Orthogonal Monte Carlo and Beyond</b>	
Han Lin · Haoxian Chen · Krzysztof M Choromanski · Tianyi Zhang · Clement Laroche	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #990	Poster
<b>Unfolding recurrence by Green's functions for optimized reservoir computing</b>	
Sandra Nestler · Christian Keup · David Dahmen · Matthieu Gilson · Holger Rauhut · Moritz Helias	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #991	Poster
<b>A Group-Theoretic Framework for Data Augmentation</b>	
Shuxiao Chen · Edgar Dobriban · Jane Lee	In Poster Session 4
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<b>Understanding Double Descent Requires A Fine-Grained Bias-Variance Decomposition</b>	
Ben Adlam · Jeffrey Pennington	In Poster Session 4
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<b>Triple descent and the two kinds of overfitting: where &amp; why do they appear?</b>	
Stéphane d'Ascoli · Levent Sagun · Giulio Biroli	In Poster Session 4
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<b>The interplay between randomness and structure during learning in RNNs</b>	
Friedrich Schuessler · Francesca Mastrogiovanni · Alexis Dubreuil · Srdjan Ostojic · Omri Barak	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #995	Poster
<b>A random matrix analysis of random Fourier features: beyond the Gaussian kernel, a precise phase transition, and the corresponding double descent</b>	
Zhenyu Liao · Romain Couillet · Michael Mahoney	In Poster Session 4
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<b>When Do Neural Networks Outperform Kernel Methods?</b>	
Behrooz Ghorbani · Song Mei · Theodor Misiakiewicz · Andrea Montanari	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #997	Poster
<b>The Statistical Cost of Robust Kernel Hyperparameter Tuning</b>	
Raphael Meyer · Christopher Musco	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #998	Poster
<b>Asymptotic normality and confidence intervals for derivatives of 2-layers neural network in the random features model</b>	
Yiwei Shen · Pierre C Belloc	In Poster Session 4
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<b>Randomized tests for high-dimensional regression: A more efficient and powerful solution</b>	
Yue Li · Ilmun Kim · Yuting Wei	In Poster Session 4
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**Sample complexity and effective dimension for regression on manifolds**

Andrew McRae · Justin Romberg · Mark Davenport

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1001

Poster

**An analytic theory of shallow networks dynamics for hinge loss classification**

Franco Pellegrini · Giulio Biroli

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1002

Poster

**Mix and Match: An Optimistic Tree-Search Approach for Learning Models from Mixture Distributions**

Matthew Faw · Rajat Sen · Karthikeyan Shanmugam · Constantine Caramanis · Sanjay Shakkottai

In Poster Session 4

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Poster

**One-bit Supervision for Image Classification**

Hengtong Hu · Lingxi Xie · Zewei Du · Richang Hong · Qi Tian

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1004

Poster

**Your Classifier can Secretly Suffice Multi-Source Domain Adaptation**

Naveen Venkat · Jogendra Nath Kundu · Durgesh Singh · Ambareesh Revanur · Venkatesh Babu R

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1005

Poster

**Early-Learning Regularization Prevents Memorization of Noisy Labels**

Sheng Liu · Jonathan Niles-Weed · Narges Razavian · Carlos Fernandez-Granda

In Poster Session 4

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Poster

**Compositional Zero-Shot Learning via Fine-Grained Dense Feature Composition**

Dat Huynh · Ehsan Elhamifar

In Poster Session 4

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Poster

**Universal Domain Adaptation through Self Supervision**

Kuniaki Saito · Donghyun Kim · Stan Sclaroff · Kate Saenko

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1008

Poster

**Domain Adaptation with Conditional Distribution Matching and Generalized Label Shift**

Remi Tachet des Combes · Han Zhao · Yu-Xiang Wang · Geoffrey Gordon

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1009

Poster

**A causal view of compositional zero-shot recognition**

Yuval Atzmon · Felix Kreuk · Uri Shalit · Gal Chechik

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1010

Poster

**CompRes: Self-Supervised Learning by Compressing Representations**

Soroush Abbasi Koohpayegani · Ajinkya Tejankar · Hamed Pirsiavash

In Poster Session 4

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Poster

**Big Self-Supervised Models are Strong Semi-Supervised Learners**

Ting Chen · Simon Kornblith · Kevin Swersky · Mohammad Norouzi · Geoffrey E Hinton

In Poster Session 4

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Poster

**Provably Consistent Partial-Label Learning**

Lei Feng · Jiaqi Lv · Bo Han · Miao Xu · Gang Niu · Xin Geng · Bo An · Masashi Sugiyama

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1013

Poster

## Multifaceted Uncertainty Estimation for Label-Efficient Deep Learning

Weishi Shi · Xujiang Zhao · Feng Chen · Qi Yu

In Poster Session 4

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Poster

## Unsupervised Translation of Programming Languages

Baptiste Roziere · Marie-Anne Lachaux · Lowik Chanussot · Guillaume Lampe

In Poster Session 4

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Poster

## Uncertainty-aware Self-training for Few-shot Text Classification

Subhabrata Mukherjee · Ahmed Awadallah

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1016

Poster

## Discriminative Sounding Objects Localization via Self-supervised Audiovisual Matching

Di Hu · Rui Qian · Minyue Jiang · Xiao Tan · Shilei Wen · Errui Ding · Weiying Lin · Dejing Dou

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1017

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## Teaching a GAN What Not to Learn

Siddarth Asokan · Chandra Seelamantula

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1018

Poster

## A Randomized Algorithm to Reduce the Support of Discrete Measures

Francesco Cosentino · Harald Oberhauser · Alessandro Abate

In Poster Session 4

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## Statistical Efficiency of Thompson Sampling for Combinatorial Semi-Bandits

Pierre Perrault · Etienne Boursier · Michal Valko · Vianney Perchet

In Poster Session 4

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## Follow the Perturbed Leader: Optimism and Fast Parallel Algorithms for Smooth Minimax Games

Arun Suggala · Praneeth Netrapalli

In Poster Session 4

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## Better Full-Matrix Regret via Parameter-Free Online Learning

Ashok Cutkosky

In Poster Session 4

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## Locally-Adaptive Nonparametric Online Learning

Ilja Kuzborskij · Nicolò Cesa-Bianchi

In Poster Session 4

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## Online Learning with Primary and Secondary Losses

Avrim Blum · Han Shao

In Poster Session 4

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Poster

## Online Linear Optimization with Many Hints

Aditya Bhaskara · Ashok Cutkosky · Ravi Kumar · Manish Purohit

In Poster Session 4

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## Exploiting the Surrogate Gap in Online Multiclass Classification

Dirk van der Hoeven

In Poster Session 4

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## **Temporal Variability in Implicit Online Learning**

Nicolò Campolongo · Francesco Orabona

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## **Prediction with Corrupted Expert Advice**

Idan Amir · Idan Attias · Tomer Koren · Yishay Mansour · Roi Livni

In Poster Session 4

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## **A mathematical model for automatic differentiation in machine learning**

Jérôme Bolte · Edouard Pauwels

In Poster Session 4

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## **Online Non-Convex Optimization with Imperfect Feedback**

Amélie Héliou · Matthieu Martin · Panayotis Mertikopoulos · Thibaud Rahier

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1031

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## **Adaptive Importance Sampling for Finite-Sum Optimization and Sampling with Decreasing Step-Sizes**

Ayoub El Hanchi · David Stephens

In Poster Session 4

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## **Differentially-Private Federated Linear Bandits**

Abhimanyu Dubey · Alex 'Sandy' Pentland

In Poster Session 4

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## **Learning Strategy-Aware Linear Classifiers**

Yiling Chen · Yang Liu · Chara Podimata

In Poster Session 4

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## **BRP-NAS: Prediction-based NAS using GCNs**

Lukasz Dudziak · Thomas Chau · Mohamed Abdelfattah · Roysen Lee · Hyeji Kim · Nicholas Lane

In Poster Session 4

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## **Neural Architecture Generator Optimization**

Robin Ru · Pedro Esperança · Fabio Maria Carlucci

In Poster Session 4

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## **Bridging the Gap between Sample-based and One-shot Neural Architecture Search with BONAS**

Han Shi · Renjie Pi · Hang Xu · Zhenguo Li · James Kwok · Tong Zhang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1037

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## **AutoSync: Learning to Synchronize for Data-Parallel Distributed Deep Learning**

Hao Zhang · Yuan Li · Zhijie Deng · Xiaodan Liang · Lawrence Carin · Eric Xing

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1038

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## **Agnostic Learning with Multiple Objectives**

Corinna Cortes · Mehryar Mohri · Javier Gonzalvo · Dmitry Storcheus

In Poster Session 4

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## **Training Stronger Baselines for Learning to Optimize**

Tianlong Chen · Weiyi Zhang · Zhou Jingyang · Shiyu Chang · Sijia Liu · Lisa Amini · Zhangyang Wang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1040 <b>GPU-Accelerated Primal Learning for Extremely Fast Large-Scale Classification</b> John Halloran · David M Rocke	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1041 <b>Group Knowledge Transfer: Federated Learning of Large CNNs at the Edge</b> Chaoyang He · Murali Annavaram · Salman Avestimehr	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1042 <b>Geometric Dataset Distances via Optimal Transport</b> David Alvarez-Melis · Nicolo Fusi	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1043 <b>Efficient Algorithms for Device Placement of DNN Graph Operators</b> Jakub Tarnawski · Amar Phanishayee · Nikhil Devanur · Divya Mahajan · Fanny Nina Paravecino	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1044 <b>Automatically Learning Compact Quality-aware Surrogates for Optimization Problems</b> Kai Wang · Bryan Wilder · Andrew Perrault · Milind Tambe	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1045 <b>Bayesian Optimization for Iterative Learning</b> Vu Nguyen · Sebastian Schulze · Michael A Osborne	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1046 <b>Model Selection for Production System via Automated Online Experiments</b> Zhenwen Dai · Praveen Chandar · Ghazal Fazelnia · Benjamin Carterette · Mounia Lalmas	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1047 <b>Interpretable and Personalized Apprenticeship Scheduling: Learning Interpretable Scheduling Policies from Heterogeneous User Demonstrations</b> Rohan Paleja · Andrew Silva · Letian Chen · Matthew Gombolay	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1048 <b>CryptoNAS: Private Inference on a ReLU Budget</b> Zahra Ghodsi · Akshaj Kumar Veldanda · Brandon Reagen · Siddharth Garg	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1049 <b>Neural Power Units</b> Niklas Heim · Tomas Pevny · Vasek Smidl	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1050 <b>Diversity-Guided Multi-Objective Bayesian Optimization With Batch Evaluations</b> Mina Konakovic Lukovic · Yunsheng Tian · Wojciech Matusik	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1051 <b>High-Dimensional Bayesian Optimization via Nested Riemannian Manifolds</b> Noémie Jaquier · Leonel Rozo	Poster In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1052 <b>Learning Feature Sparse Principal Subspace</b> Lai Tian · Feiping Nie · Rong Wang · Xuelong Li	Poster In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1053

Poster

## **Fast Epigraphical Projection-based Incremental Algorithms for Wasserstein**

### **Distributionally Robust Support Vector Machine**

Jiajin Li · Caihua Chen · Anthony Man-Cho So

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1054

Poster

## **Stochastic Optimization with Laggard Data Pipelines**

Naman Agarwal · Rohan Anil · Tomer Koren · Kunal Talwar · Cyril Zhang

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1055

Poster

## **Black-Box Optimization with Local Generative Surrogates**

Sergey Shirobokov · Vladislav Belavin · Michael Kagan · Andrei Ustyuzhanin · Atilim Gunes Baydin

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1056

Poster

## **Learning Linear Programs from Optimal Decisions**

Yingcong Tan · Daria Terekhov · Andrew Delong

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1057

Poster

## **Acceleration with a Ball Optimization Oracle**

Yair Carmon · Arun Jambulapati · Qijia Jiang · Yujia Jin · Yin Tat Lee · Aaron Sidford · Kevin Tian

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1058

Poster

## **Convex optimization based on global lower second-order models**

Nikita Doikov · Yurii Nesterov

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1059

Poster

## **Walking in the Shadow: A New Perspective on Descent Directions for Constrained Minimization**

Hassan Mortagy · Swati Gupta · Sebastian Pokutta

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1060

Poster

## **Revisiting Frank-Wolfe for Polytopes: Strict Complementarity and Sparsity**

Dan Garber

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1061

Poster

## **Sub-linear Regret Bounds for Bayesian Optimisation in Unknown Search Spaces**

Hung Tran-The · Sunil Gupta · Santu Rana · Huong Ha · Svetha Venkatesh

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1062

Poster

## **An efficient nonconvex reformulation of stagewise convex optimization problems**

Rudy Bunel · Oliver Hinder · Srinadh Bhojanapalli · Krishnamurthy Dvijotham

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1063

Poster

## **Finding Second-Order Stationary Points Efficiently in Smooth Nonconvex Linearly Constrained Optimization Problems**

Songtao Lu · Meisam Razaviyayn · Bo Yang · Kejun Huang · Mingyi Hong

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1064

Poster

## **BoTorch: A Framework for Efficient Monte-Carlo Bayesian Optimization**

Max Balandat · Brian Karrer · Daniel Jiang · Samuel Daulton · Ben Letham · Andrew Wilson · Eytan Bakshy

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1065

Poster

## **First-Order Methods for Large-Scale Market Equilibrium Computation**

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1066

Poster

**Trade-offs and Guarantees of Adversarial Representation Learning for Information Obfuscation**

Han Zhao · Jianfeng Chi · Yuan Tian · Geoffrey Gordon

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1067

Poster

**Explaining Naive Bayes and Other Linear Classifiers with Polynomial Time and Delay**

Joao Marques-Silva · Thomas Gerspacher · Martin Cooper · Alexey Ignatiev · Nina Narodytska

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1068

Poster

**Deep Smoothing of the Implied Volatility Surface**

Damien Ackerer · Natasa Tagasovska · Thibault Vatter

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1069

Poster

**What went wrong and when? Instance-wise feature importance for time-series black-box models**

Sana Tonekaboni · Shalmali Joshi · Kieran Campbell · David Duvenaud · Anna Goldenberg

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1070

Poster

**Learning from Failure: De-biasing Classifier from Biased Classifier**

Junhyun Nam · Hyuntak Cha · Sungsoo Ahn · Jaeho Lee · Jinwoo Shin

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1071

Poster

**Asymmetric Shapley values: incorporating causal knowledge into model-agnostic explainability**

Christopher Frye · Colin Rowat · Ilya Feige

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1072

Poster

**Learning Global Transparent Models consistent with Local Contrastive Explanations**

Tejaswini Pedapati · Avinash Balakrishnan · Karthikeyan Shanmugam · Amit Dhurandhar

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1073

Poster

**Towards Safe Policy Improvement for Non-Stationary MDPs**

Yash Chandak · Scott Jordan · Georgios Theocharous · Martha White · Philip Thomas

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1074

Poster

**Decisions, Counterfactual Explanations and Strategic Behavior**

Stratis Tsiriris · Manuel Gomez Rodriguez

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1075

Poster

**From Predictions to Decisions: Using Lookahead Regularization**

Nir Rosenfeld · Sophie Hilgard · Sai Ravindranath · David Parkes

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1076

Poster

**Model Agnostic Multilevel Explanations**

Karthi Natesan Ramamurthy · Bhanu Vinzamuri · Yunfeng Zhang · Amit Dhurandhar

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1077

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**Achieving Equalized Odds by Resampling Sensitive Attributes**

Yaniv Romano · Stephen Bates · Emmanuel Candes

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1078	Poster
<b>Regularizing Black-box Models for Improved Interpretability</b>	
Gregory Plumb · Maruan Al-Shedivat · Ángel Alexander Cabrera · Adam Perer · Eric Xing · Ameet Talwalkar	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1079	Poster
<b>Glyph: Fast and Accurately Training Deep Neural Networks on Encrypted Data</b>	
Qian Lou · Bo Feng · Geoffrey Charles Fox · Lei Jiang	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1080	Poster
<b>MetaPoison: Practical General-purpose Clean-label Data Poisoning</b>	
W. Ronny Huang · Jonas Geiping · Liam Fowl · Gavin Taylor · Tom Goldstein	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1081	Poster
<b>Understanding Gradient Clipping in Private SGD: A Geometric Perspective</b>	
Xiangyi Chen · Steven Wu · Mingyi Hong	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1082	Poster
<b>Coresets via Bilevel Optimization for Continual Learning and Streaming</b>	
Zalán Borsos · Mojmir Mutny · Andreas Krause	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1083	Poster
<b>Linear Dynamical Systems as a Core Computational Primitive</b>	
Shiva Kaul	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1084	Poster
<b>BanditPAM: Almost Linear Time k-Medoids Clustering via Multi-Armed Bandits</b>	
Mo Tiwari · Martin Zhang · James J Mayclin · Sebastian Thrun · Chris Piech · Ilan Shomorony	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1085	Poster
<b>Sliding Window Algorithms for k-Clustering Problems</b>	
Michele Borassi · Alessandro Epasto · Silvio Lattanzi · Sergei Vassilvitskii · Morteza Zadimoghaddam	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1086	Poster
<b>Fast and Accurate k-means++ via Rejection Sampling</b>	
Vincent Cohen-Addad · Silvio Lattanzi · Ashkan Norouzi-Fard · Christian Sohler · Ola Svensson	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1087	Poster
<b>NeuMiss networks: differentiable programming for supervised learning with missing values.</b>	
Marine Le Morvan · Julie Josse · Thomas Moreau · Erwan Scornet · Gael Varoquaux	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1088	Poster
<b>Debiasing Averaged Stochastic Gradient Descent to handle missing values</b>	
Aude Sportisse · Claire Boyer · Aymeric Dieuleveut · Julie Josse	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1089	Poster
<b>Coresets for Near-Convex Functions</b>	
Murad Tukan · Alaa Maalouf · Dan Feldman	In Poster Session 4
Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1091	Poster
<b>HiPPO: Recurrent Memory with Optimal Polynomial Projections</b>	
Albert Gu · Tri Dao · Stefano Ermon · Atri Rudra · Chris Ré	In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1092

Poster

### **Online MAP Inference of Determinantal Point Processes**

Aditya Bhaskara · Amin Karbasi · Silvio Lattanzi · Morteza Zadimoghaddam

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1093

Poster

### **Joints in Random Forests**

Alvaro Correia · Robert Peharz · Cassio de Campos

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1094

Poster

### **Approximate Cross-Validation for Structured Models**

Soumya Ghosh · Will Stephenson · Stan Nguyen · Sameer Deshpande · Tamara Broderick

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1095

Poster

### **A convex optimization formulation for multivariate regression**

Yunzhang Zhu

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1096

Poster

### **Adaptive Reduced Rank Regression**

Qiong Wu · Felix MF Wong · Yanhua Li · Zhenming Liu · Varun Kanade

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1097

Poster

### **Self-Distillation Amplifies Regularization in Hilbert Space**

Hossein Mobahi · Mehrdad Farajtabar · Peter Bartlett

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1098

Poster

### **Why Do Deep Residual Networks Generalize Better than Deep Feedforward Networks? ---**

#### **A Neural Tangent Kernel Perspective**

Kaixuan Huang · Yuqing Wang · Molei Tao · Tuo Zhao

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1099

Poster

### **Neural Path Features and Neural Path Kernel : Understanding the role of gates in deep learning**

Chandrashekhar Lakshminarayanan · Amit Vikram Singh

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1100

Poster

### **Explicit Regularisation in Gaussian Noise Injections**

Alexander Camuto · Matthew Willetts · Umut Simsekli · Stephen J Roberts · Chris C Holmes

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1101

Poster

### **Rational neural networks**

Nicolas Bouille · Yuji Nakatsukasa · Alex Townsend

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1102

Poster

### **On the Similarity between the Laplace and Neural Tangent Kernels**

Amnon Geifman · Abhay Yadav · Yoni Kasten · Meirav Galun · David Jacobs · Basri Ronen

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1103

Poster

### **Neural Anisotropy Directions**

Guillermo Ortiz-Jimenez · Apostolos Modas · Seyed Moosavi · Pascal Frossard

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1104

Poster

### **Ode to an ODE**

In Poster Session 4

- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1105 Poster  
**Label-Aware Neural Tangent Kernel: Toward Better Generalization and Local Elasticity**  
Shuxiao Chen · Hangfeng He · Weijie Su In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1106 Poster  
**Limits to Depth Efficiencies of Self-Attention**  
Yoav Levine · Noam Wies · Or Sharir · Hofit Bata · Amnon Shashua In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1107 Poster  
**On the linearity of large non-linear models: when and why the tangent kernel is constant**  
Chaoyue Liu · Libin Zhu · Misha Belkin In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1108 Poster  
**Implicit Bias in Deep Linear Classification: Initialization Scale vs Training Accuracy**  
Edward Moroshko · Blake Woodworth · Suriya Gunasekar · Jason Lee · Nati Srebro · Daniel Soudry In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1109 Poster  
**Directional Pruning of Deep Neural Networks**  
Shih-Kang Chao · Zhanyu Wang · Yue Xing · Guang Cheng In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1110 Poster  
**Winning the Lottery with Continuous Sparsification**  
Pedro Savarese · Hugo Silva · Michael Maire In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1111 Poster  
**Analytic Characterization of the Hessian in Shallow ReLU Models: A Tale of Symmetry**  
Yossi Arjevani · Michael Field In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1112 Poster  
**On the universality of deep learning**  
Emmanuel Abbe · Colin Sandon In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1113 Poster  
**Reservoir Computing meets Recurrent Kernels and Structured Transforms**  
Jonathan Dong · Ruben Ohana · Mushegh Rafayelyan · Florent Krzakala In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1114 Poster  
**The Diversified Ensemble Neural Network**  
Shaofeng Zhang · Meng Liu · Junchi Yan In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1115 Poster  
**AdaShare: Learning What To Share For Efficient Deep Multi-Task Learning**  
Ximeng Sun · Rameswar Panda · Rogerio Feris · Kate Saenko In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1116 Poster  
**Spin-Weighted Spherical CNNs**  
Carlos Esteves · Ameesh Makadia · Kostas Daniilidis In Poster Session 4
- Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1117 Poster  
**Autoencoders that don't overfit towards the Identity**

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1118

Poster

### **Modern Hopfield Networks and Attention for Immune Repertoire Classification**

Michael Widrich · Bernhard Schäfl · Milena Pavlović · Hubert Ramsauer · Lukas Gruber · Markus Holzleitner · In Poster Session 4  
Johannes Brandstetter · Geir Kjetil Sandve · Victor Greiff · Sepp Hochreiter · Günter Klambauer

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1119

Poster

### **UCSG-NET- Unsupervised Discovering of Constructive Solid Geometry Tree**

Kacper Kania · Maciej Zieba · Tomasz Kajdanowicz In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1120

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### **UCLID-Net: Single View Reconstruction in Object Space**

Benoit Guillard · Edoardo Remelli · Pascal Fua In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1121

Poster

### **Graph Geometry Interaction Learning**

Shichao Zhu · Shirui Pan · Chuan Zhou · Jia Wu · Yanan Cao · Bin Wang In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1122

Poster

### **Feature Importance Ranking for Deep Learning**

Maksymilian Wojtas · Ke Chen In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1123

Poster

### **Introducing Routing Uncertainty in Capsule Networks**

Fabio De Sousa Ribeiro · Georgios Leontidis · Stef Kollias In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1124

Poster

### **The Pitfalls of Simplicity Bias in Neural Networks**

Harshay Shah · Kaustav Tamuly · Aditi Raghunathan · Prateek Jain · Praneeth Netrapalli In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1125

Poster

### **Primal-Dual Mesh Convolutional Neural Networks**

Francesco Milano · Antonio Loquercio · Antoni Rosinol · Davide Scaramuzza · Luca Carlone In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1126

Poster

### **The Convolution Exponential and Generalized Sylvester Flows**

Emiel Hoogeboom · Victor Garcia Satorras · Jakub Tomczak · Max Welling In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1127

Poster

### **Coherent Hierarchical Multi-Label Classification Networks**

Eleonora Giunchiglia · Thomas Lukasiewicz In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1128

Poster

### **Differentiable Top-k with Optimal Transport**

Yujia Xie · Hanjun Dai · Minshuo Chen · Bo Dai · Tuo Zhao · Hongyuan Zha · Wei Wei · Tomas Pfister In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1129

Poster

### **Proximal Mapping for Deep Regularization**

Mao Li · Yingyi Ma · Xinhua Zhang In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1130

Poster

### **CSER: Communication-efficient SGD with Error Reset**

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1131

Poster

**Practical Low-Rank Communication Compression in Decentralized Deep Learning**

Thijs Vogels · Sai Praneeth Karimireddy · Martin Jaggi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1132

Poster

**A Decentralized Parallel Algorithm for Training Generative Adversarial Nets**

Mingrui Liu · Wei Zhang · Youssef Mroueh · Xiaodong Cui · Jarret Ross · Tianbao Yang · Payel Das

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1133

Poster

**Second Order Optimality in Decentralized Non-Convex Optimization via Perturbed Gradient Tracking**

Isidoros Tziotis · Constantine Caramanis · Aryan Mokhtari

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1134

Poster

**Distributed Newton Can Communicate Less and Resist Byzantine Workers**

Avishek Ghosh · Raj Kumar Maity · Arya Mazumdar

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1135

Poster

**IDEAL: Inexact DEcentralized Accelerated Augmented Lagrangian Method**

Yossi Arjevani · Joan Bruna · Bugra Can · Mert Gurbuzbalaban · Stefanie Jegelka · Hongzhou Lin

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1136

Poster

**Dual-Free Stochastic Decentralized Optimization with Variance Reduction**

Hadrien Hendrikx · Francis Bach · Laurent Massoulié

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1137

Poster

**FedSplit: an algorithmic framework for fast federated optimization**

Reese Pathak · Martin Wainwright

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1138

Poster

**Distributionally Robust Federated Averaging**

Yuyang Deng · Mohammad Mahdi Kamani · Mehrdad Mahdavi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1139

Poster

**Personalized Federated Learning with Moreau Envelopes**

Canh T. Dinh · Nguyen H. Tran · Josh Nguyen

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1140

Poster

**Minibatch vs Local SGD for Heterogeneous Distributed Learning**

Blake Woodworth · Kshitij Patel · Nati Srebro

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1141

Poster

**Minibatch Stochastic Approximate Proximal Point Methods**

Hilal Asi · Karan Chadha · Gary Cheng · John Duchi

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1142

Poster

**Personalized Federated Learning with Theoretical Guarantees: A Model-Agnostic Meta-Learning Approach**

Alireza Fallah · Aryan Mokhtari · Asuman Ozdaglar

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1143

Poster

## A Simple and Efficient Smoothing Method for Faster Optimization and Local Exploration

Kevin Scaman · Ludovic DOS SANTOS · Merwan Barlier · Igor Colin

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1144

Poster

## Distributed Training with Heterogeneous Data: Bridging Median- and Mean-Based Algorithms

Xiangyi Chen · Tiancong Chen · Haoran Sun · Steven Wu · Mingyi Hong

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1145

Poster

## Linearly Converging Error Compensated SGD

Eduard Gorbunov · Dmitry Kovalev · Dmitry Makarenko · Peter Richtarik

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1253

Poster

## The All-or-Nothing Phenomenon in Sparse Tensor PCA

Jonathan Niles-Weed · Ilias Zadik

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1366

Poster

## Closing the Dequantization Gap: PixelCNN as a Single-Layer Flow

Didrik Nielsen · Ole Winther

In Poster Session 4

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1787

Poster

## ImpatientCapsAndRuns: Approximately Optimal Algorithm Configuration from an Infinite Pool

Gellert Weisz · András György · Wei-I Lin · Devon Graham · Kevin Leyton-Brown · Csaba Szepesvari · Brendan Lucier

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1789

Poster

## Normalizing Kalman Filters for Multivariate Time Series Analysis

Emmanuel de Bézenac · Syama Sundar Rangapuram · Konstantinos Benidis · Michael Bohlke-Schneider · Richard Kurle · Lorenzo Stella · Hilaf Hasson · Patrick Gallinari · Tim Januschowski

Wed Dec 09 09:00 AM -- 11:00 AM (PST) @ Poster Session 3 #1811

Poster

## Learning Augmented Energy Minimization via Speed Scaling

Etienne Bamas · Andreas Maggiori · Lars Rohwedder · Ola Svensson

In Poster Session 4

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1147

Poster

## Consistent Structural Relation Learning for Zero-Shot Segmentation

Peike Li · Yunchao Wei · Yi Yang

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1148

Poster

## TSPNet: Hierarchical Feature Learning via Temporal Semantic Pyramid for Sign Language Translation

DONGXU LI · Chenchen Xu · Xin Yu · Kaihao Zhang · Benjamin Swift · Hanna Suominen · Hongdong Li

In Poster Session 5

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## AOT: Appearance Optimal Transport Based Identity Swapping for Forgery Detection

Hao Zhu · Chaoyou Fu · Qianyi Wu · Wayne Wu · Chen Qian · Ran He

In Poster Session 5

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## UnModNet: Learning to Unwrap a Modulo Image for High Dynamic Range Imaging

Chu Zhou · Hang Zhao · Jin Han · Chang Xu · Chao Xu · Tiejun Huang · Boxin Shi

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**Group Contextual Encoding for 3D Point Clouds**

Xu Liu · Chengtao Li · Jian Wang · Jingbo Wang · Boxin Shi · Xiaodong He

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**Generalized Focal Loss: Learning Qualified and Distributed Bounding Boxes for Dense Object Detection**

Xiang Li · Wenhui Wang · Lijun Wu · Shuo Chen · Xiaolin Hu · Jun Li · Jinhui Tang · Jian Yang

In Poster Session 5

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**Dual-Resolution Correspondence Networks**

Xinghui Li · Kai Han · Shuda Li · Victor Prisacariu

In Poster Session 5

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**Displacement-Invariant Matching Cost Learning for Accurate Optical Flow Estimation**

Jianyuan Wang · Yiran Zhong · Yuchao Dai · Kaihao Zhang · Pan Ji · Hongdong Li

In Poster Session 5

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**Modeling Noisy Annotations for Crowd Counting**

Jia Wan · Antoni Chan

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**RSKDD-Net: Random Sample-based Keypoint Detector and Descriptor**

Fan Lu · Guang Chen · Yinlong Liu · Zhongnan Qu · Alois Knoll

In Poster Session 5

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**Distribution Matching for Crowd Counting**

Boyu Wang · Huidong Liu · Dimitris Samaras · Minh Hoai Nguyen

In Poster Session 5

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**Uncertainty-Aware Learning for Zero-Shot Semantic Segmentation**

Ping Hu · Stan Sclaroff · Kate Saenko

In Poster Session 5

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**Every View Counts: Cross-View Consistency in 3D Object Detection with Hybrid-Cylindrical-Spherical Voxelization**

Qi Chen · Lin Sun · Ernest Cheung · Alan Yuille

In Poster Session 5

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**RelationNet++: Bridging Visual Representations for Object Detection via Transformer Decoder**

Cheng Chi · Fangyun Wei · Han Hu

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**Structured Convolutions for Efficient Neural Network Design**

Yash Bhalgat · Yizhe Zhang · Jamie Menjay Lin · Fatih Porikli

In Poster Session 5

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**Node Classification on Graphs with Few-Shot Novel Labels via Meta Transformed Network Embedding**

Lin Lan · Pinghui Wang · Xuefeng Du · Kaikai Song · Jing Tao · Xiaohong Guan

In Poster Session 5

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**MuSCLE: Multi Sweep Compression of LiDAR using Deep Entropy Models**

Sourav Biswas · Jerry Liu · Kelvin Wong · Shenlong Wang · Raquel Urtasun

In Poster Session 5

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**Ultrahyperbolic Representation Learning**

Marc Law · Jos Stam

In Poster Session 5

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**Reparameterizing Mirror Descent as Gradient Descent**

Ehsan Amid · Manfred K. Warmuth

In Poster Session 5

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**Learning to Extrapolate Knowledge: Transductive Few-shot Out-of-Graph Link Prediction**

Jinheon Baek · Dong Bok Lee · Sung Ju Hwang

In Poster Session 5

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**Handling Missing Data with Graph Representation Learning**

Jiaxuan You · Xiaobai Ma · Daisy Ding · Mykel J Kochenderfer · Jure Leskovec

In Poster Session 5

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**Duality-Induced Regularizer for Tensor Factorization Based Knowledge Graph Completion**

Zhanqi Zhang · Jianyu Cai · Jie Wang

In Poster Session 5

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**Spectral Temporal Graph Neural Network for Multivariate Time-series Forecasting**

Defu Cao · Yujing Wang · Juanyong Duan · Ce Zhang · Xia Zhu · Congrui Huang · Yunhai Tong · Bixiong Xu · Jing Bai · Jie Tong · Qi Zhang

In Poster Session 5

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**Timeseries Anomaly Detection using Temporal Hierarchical One-Class Network**

Lifeng Shen · Zuocong Li · James Kwok

In Poster Session 5

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**How Can I Explain This to You? An Empirical Study of Deep Neural Network Explanation Methods**

Jeya Vikranth Jeyakumar · Joseph Noor · Yu-Hsi Cheng · Luis Garcia · Mani Srivastava

In Poster Session 5

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**PEP: Parameter Ensembling by Perturbation**

Alireza Mehrtash · Purang Abolmaesumi · Polina Golland · Tina Kapur · Demian Wassermann · William Wells

In Poster Session 5

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**Wisdom of the Ensemble: Improving Consistency of Deep Learning Models**

Lijing Wang · Dipanjan Ghosh · Maria Gonzalez Diaz · Ahmed Farahat · Mahbubul Alam · Chetan Gupta · Jiangzhuo Chen · Madhav Marathe

In Poster Session 5

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**Unifying Activation- and Timing-based Learning Rules for Spiking Neural Networks**

Jinseok Kim · Kyungsu Kim · Jae-Joon Kim

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**Dirichlet Graph Variational Autoencoder**

Jia Li · Jianwei Yu · Jiajin Li · Honglei Zhang · Kangfei Zhao · Yu Rong · Hong Cheng · Junzhou Huang

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<b>Gradient Boosted Normalizing Flows</b>	
Robert Giaquinto · Arindam Banerjee	In Poster Session 5
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<b>Improved Guarantees for <math>k</math>-means++ and <math>k</math>-means++ Parallel</b>	
Konstantin Makarychev · Aravind Reddy · Liren Shan	In Poster Session 5
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<b>Estimation of Skill Distribution from a Tournament</b>	
Ali Jadbabaie · Anuran Makur · Devavrat Shah	In Poster Session 5
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<b>Transfer Learning via <math>\ell_1</math> Regularization</b>	
Masaaki Takada · Hironori Fujisawa	In Poster Session 5
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Weihao Kong · Raghav Somani · Sham Kakade · Sewoong Oh	In Poster Session 5
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<b>Efficient Projection-free Algorithms for Saddle Point Problems</b>	
Cheng Chen · Luo Luo · Weinan Zhang · Yong Yu	In Poster Session 5
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<b>A Single-Loop Smoothed Gradient Descent-Ascent Algorithm for Nonconvex-Concave Min-Max Problems</b>	
Jiawei Zhang · Peijun Xiao · Ruoyu Sun · Zhiqian Luo	In Poster Session 5
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<b>A Fair Classifier Using Kernel Density Estimation</b>	
Jaewoong Cho · Gyeongjo Hwang · Changho Suh	In Poster Session 5
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<b>List-Decodable Mean Estimation via Iterative Multi-Filtering</b>	
Ilias Diakonikolas · Daniel Kane · Daniel Kongsgaard	In Poster Session 5
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<b>On Learning Ising Models under Huber's Contamination Model</b>	
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Justin Chen · Gregory Valiant · Paul Valiant	In Poster Session 5
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Akifumi Okuno · Hidetoshi Shimodaira	In Poster Session 5
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### ***Optimal Prediction of the Number of Unseen Species with Multiplicity***

Yi Hao · Ping Li

In Poster Session 5

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### ***Probabilistic Active Meta-Learning***

Jean Kaddour · Steindor Saemundsson · Marc Deisenroth

In Poster Session 5

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### ***Meta-Consolidation for Continual Learning***

Joseph K J · Vineeth N Balasubramanian

In Poster Session 5

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### ***Understanding the Role of Training Regimes in Continual Learning***

Seyed Iman Mirzadeh · Mehrdad Farajtabar · Razvan Pascanu · Hassan Ghasemzadeh

In Poster Session 5

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### ***Supermasks in Superposition***

Mitchell Wortsman · Vivek Ramanujan · Rosanne Liu · Ani Kembhavi · Mohammad Rastegari · Jason Yosinski · Ali Farhadi

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### ***Improved Schemes for Episodic Memory-based Lifelong Learning***

Yunhui Guo · Mingrui Liu · Tianbao Yang · Tajana S Rosing

In Poster Session 5

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### ***Continual Learning with Node-Importance based Adaptive Group Sparse Regularization***

Sangwon Jung · Hongjoon Ahn · Sungmin Cha · Taesup Moon

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### ***GAN Memory with No Forgetting***

Yulai Cong · Miaoyun Zhao · Jianqiao Li · Sijia Wang · Lawrence Carin

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### ***Meta-Learning with Adaptive Hyperparameters***

Sungyong Baik · Myungsuk Choi · Janghoon Choi · Heewon Kim · Kyoung Mu Lee

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### ***Online Structured Meta-learning***

Huaxiu Yao · Yingbo Zhou · Mehrdad Mahdavi · Zhenhui (Jessie) Li · Richard Socher · Caiming Xiong

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### ***Modeling and Optimization Trade-off in Meta-learning***

Katelyn Gao · Ozan Sener

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### ***Structured Prediction for Conditional Meta-Learning***

Ruohan Wang · Yiannis Demiris · Carlo Ciliberto

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### ***Meta-learning from Tasks with Heterogeneous Attribute Spaces***

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**Gradient-EM Bayesian Meta-Learning**

Yayi Zou · Xiaoqi Lu

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**MATE: Plugging in Model Awareness to Task Embedding for Meta Learning**

Xiaohan Chen · Zhangyang Wang · Siyu Tang · Krikamol Muandet

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**Neural Complexity Measures**

Yoonho Lee · Juho Lee · Sung Ju Hwang · Eunho Yang · Seungjin Choi

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**Modular Meta-Learning with Shrinkage**

Yutian Chen · Abe Friesen · Feryal Behbahani · Arnaud Doucet · David Budden · Matthew Hoffman · Nando de Freitas

In Poster Session 5

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**Gradient Surgery for Multi-Task Learning**

Tianhe (Kevin) Yu · Saurabh Kumar · Abhishek Gupta · Sergey Levine · Karol Hausman · Chelsea Finn

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**Organizing recurrent network dynamics by task-computation to enable continual learning**

Lea Duncker · Laura N Driscoll · Krishna V Shenoy · Maneesh Sahani · David Sussillo

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**Finding the Homology of Decision Boundaries with Active Learning**

Weizhi Li · Gautam Dasarathy · Karthi Natesan Ramamurthy · Visar Berisha

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**Exemplar Guided Active Learning**

Jason Hartford · Kevin Leyton-Brown · Hadas Raviv · Dan Padnos · Shahar Lev · Barak Lenz

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**OOD-MAML: Meta-Learning for Few-Shot Out-of-Distribution Detection and Classification**

Taewon Jeong · Heeyoung Kim

In Poster Session 5

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**An Unbiased Risk Estimator for Learning with Augmented Classes**

Yu-Jie Zhang · Peng Zhao · Lanjihong Ma · Zhi-Hua Zhou

In Poster Session 5

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**Semi-Supervised Partial Label Learning via Confidence-Rated Margin Maximization**

Wei Wang · Min-Ling None Zhang

In Poster Session 5

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**Rethinking Importance Weighting for Deep Learning under Distribution Shift**

Tongtong Fang · Nan Lu · Gang Niu · Masashi Sugiyama

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**Robust Correction of Sampling Bias using Cumulative Distribution Functions**

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**Learning from Positive and Unlabeled Data with Arbitrary Positive Shift**

Zayd Hammoudeh · Daniel Lowd

In Poster Session 5

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**FixMatch: Simplifying Semi-Supervised Learning with Consistency and Confidence**

Kihyuk Sohn · David Berthelot · Nicholas Carlini · Zizhao Zhang · Han Zhang · Colin A Raffel · Dogus Cubuk · Alexey Kurakin · Chun-Liang Li

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**A Variational Approach for Learning from Positive and Unlabeled Data**

Hui Chen · Fangqing Liu · Yin Wang · Liyue Zhao · Hao Wu

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**HRN: A Holistic Approach to One Class Learning**

Wenpeng Hu · Mengyu Wang · Qi Qin · Jinwen Ma · Bing Liu

In Poster Session 5

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**Rethinking the Value of Labels for Improving Class-Imbalanced Learning**

Yuzhe Yang · Zhi Xu

In Poster Session 5

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**wav2vec 2.0: A Framework for Self-Supervised Learning of Speech Representations**

Alexei Baevski · Henry Zhou · Abdelrahman Mohamed · Michael Auli

In Poster Session 5

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**Learning from Aggregate Observations**

Yivan Zhang · Nontawat Charoenphakdee · Zhenguo Wu · Masashi Sugiyama

In Poster Session 5

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**Self-training Avoids Using Spurious Features Under Domain Shift**

Yining Chen · Colin Wei · Ananya Kumar · Tengyu Ma

In Poster Session 5

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**Learning Physical Constraints with Neural Projections**

Shuqi Yang · Xingzhe He · Bo Zhu

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**Time-Reversal Symmetric ODE Network**

In Huh · Eunho Yang · Sung Ju Hwang · Jinwoo Shin

In Poster Session 5

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**AI Feynman 2.0: Pareto-optimal symbolic regression exploiting graph modularity**

Silviu-Marian Udrescu · Andrew K Tan · Jiahai Feng · Orisvaldo Neto · Tailin Wu · Max Tegmark

In Poster Session 5

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**Learning Multi-Agent Coordination for Enhancing Target Coverage in Directional Sensor Networks**

Jing Xu · Fangwei Zhong · Yizhou Wang

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**LoopReg: Self-supervised Learning of Implicit Surface Correspondences, Pose and Shape for 3D Human Mesh Registration**

Bharat Lal Bhatnagar · Cristian Sminchisescu · Christian Theobalt · Gerard Pons-Moll

In Poster Session 5

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**Adaptive Learning of Rank-One Models for Efficient Pairwise Sequence Alignment**

Govinda Kamath · Tavor Baharav · Ilan Shomorony

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**Fourier-transform-based attribution priors improve the interpretability and stability of deep learning models for genomics**

Alex Tseng · Avanti Shrikumar · Anshul Kundaje

In Poster Session 5

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**Counterfactual Vision-and-Language Navigation: Unravelling the Unseen**

Amin Parvaneh · Ehsan Abbasnejad · Damien Teney · Javen Qinfeng Shi · Anton van den Hengel

In Poster Session 5

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**Neural FFTs for Universal Texture Image Synthesis**

Morteza Mardani · Guilin Liu · Aysegul Dundar · Shiqiu Liu · Andrew Tao · Bryan Catanzaro

In Poster Session 5

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**CodeCMR: Cross-Modal Retrieval For Function-Level Binary Source Code Matching**

Zeping Yu · Wenxin Zheng · Jiaqi Wang · Qiyi Tang · Sen Nie · Shi Wu

In Poster Session 5

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**Synthesize, Execute and Debug: Learning to Repair for Neural Program Synthesis**

Kavi Gupta · Peter Ebert Christensen · Xinyun Chen · Dawn Song

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**EvolveGraph: Multi-Agent Trajectory Prediction with Dynamic Relational Reasoning**

Jiachen Li · Fan Yang · Masayoshi Tomizuka · Chiho Choi

In Poster Session 5

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**Adaptive Graph Convolutional Recurrent Network for Traffic Forecasting**

LEI BAI · Lina Yao · Can Li · Xianzhi Wang · Can Wang

In Poster Session 5

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**JAX MD: A Framework for Differentiable Physics**

Sam Schoenholz · Dogus Cubuk

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**Multi-agent Trajectory Prediction with Fuzzy Query Attention**

Nitin Kamra · Hao Zhu · Dweep Kumarhai Trivedi · Ming Zhang · Yan Liu

In Poster Session 5

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**Learning Agent Representations for Ice Hockey**

Guiliang Liu · Oliver Schulte · Pascal Poupart · Mike Rudd · Mehrsan Javan

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**Correlation Robust Influence Maximization**

Louis Chen · Divya Padmanabhan · Chee Chin Lim · Karthik Natarajan

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<b>On Adaptive Distance Estimation</b>	
Yeshwanth Cherapanamjeri · Jelani Nelson	In Poster Session 5
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<b>Recovery of sparse linear classifiers from mixture of responses</b>	
Venkata Gandikota · Arya Mazumdar · Soumyabrata Pal	In Poster Session 5
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<b>Robustness of Community Detection to Random Geometric Perturbations</b>	
Sandrine Peche · Vianney Perchet	In Poster Session 5
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<b>Entrywise convergence of iterative methods for eigenproblems</b>	
Vasileios Charisopoulos · Austin Benson · Anil Damle	In Poster Session 5
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<b>Optimal Iterative Sketching Methods with the Subsampled Randomized Hadamard Transform</b>	
Jonathan Lacotte · Sophia Liu · Edgar Dobriban · Mert Pilanci	In Poster Session 5
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<b>Beyond Lazy Training for Over-parameterized Tensor Decomposition</b>	
Xiang Wang · Chenwei Wu · Jason Lee · Tengyu Ma · Rong Ge	In Poster Session 5
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Jingqiu Ding · Sam Hopkins · David Steurer	In Poster Session 5
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<b>Improved guarantees and a multiple-descent curve for Column Subset Selection and the Nystrom method</b>	
Michał Dereżynski · Rajiv Khanna · Michael Mahoney	In Poster Session 5
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<b>Precise expressions for random projections: Low-rank approximation and randomized Newton</b>	
Michał Dereżynski · Feynman Liang · Zhenyu Liao · Michael Mahoney	In Poster Session 5
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Adel ElMahdy · Junhyung Ahn · Changho Suh · Soheil Mohajer	In Poster Session 5
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<b>A Matrix Chernoff Bound for Markov Chains and Its Application to Co-occurrence Matrices</b>	
Jiezhang Qiu · Chi Wang · Ben Liao · Richard Peng · Jie Tang	In Poster Session 5
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<b>Fairness constraints can help exact inference in structured prediction</b>	
Kevin Bello · Jean Honorio	In Poster Session 5

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<b>Exact expressions for double descent and implicit regularization via surrogate random design</b>	
Michal Derezinski · Feynman Liang · Michael Mahoney	In Poster Session 5
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<b>SURF: A Simple, Universal, Robust, Fast Distribution Learning Algorithm</b>	
Yi Hao · Ayush Jain · Alon Orlitsky · Vaishakh R Ravindrakumar	In Poster Session 5
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<b>Uncertainty Aware Semi-Supervised Learning on Graph Data</b>	
Xujiang Zhao · Feng Chen · Shu Hu · Jin-Hee Cho	In Poster Session 5
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<b>Calibrated Reliable Regression using Maximum Mean Discrepancy</b>	
Peng Cui · Wenbo Hu · Jun Zhu	In Poster Session 5
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<b>Energy-based Out-of-distribution Detection</b>	
Weitang Liu · Xiaoyun Wang · John Owens · Sharon Li	In Poster Session 5
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<b>Neural Manifold Ordinary Differential Equations</b>	
Aaron Lou · Derek Lim · Isay Katsman · Leo Huang · Qingxuan Jiang · Ser Nam Lim · Christopher De Sa	In Poster Session 5
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<b>NanoFlow: Scalable Normalizing Flows with Sublinear Parameter Complexity</b>	
Sang-gil Lee · Sungwon Kim · Sungroh Yoon	In Poster Session 5
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<b>Adaptation Properties Allow Identification of Optimized Neural Codes</b>	
Luke Rast · Jan Drugowitsch	In Poster Session 5
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<b>Reverse-engineering recurrent neural network solutions to a hierarchical inference task for mice</b>	
Rylan Schaeffer · Mikail C Khona · Leenoy Meshulam · Brain Laboratory International · Ila Fiete	In Poster Session 5
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<b>Learning to search efficiently for causally near-optimal treatments</b>	
Samuel Håkansson · Viktor Lindblom · Omer Gottesman · Fredrik Johansson	In Poster Session 5
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<b>General Control Functions for Causal Effect Estimation from IVs</b>	
Aahlad Puli · Rajesh Ranganath	In Poster Session 5
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<b>Characterizing Optimal Mixed Policies: Where to Intervene and What to Observe</b>	
Sanghack Lee · Elias Bareinboim	In Poster Session 5
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<b>Active Structure Learning of Causal DAGs via Directed Clique Trees</b>	

Chandler Squires · Sara Magliacane · Kristjan Greenewald · Dmitriy Katz · Murat Kocaoglu · Karthikeyan Shanmugam

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1269

Poster

## **Adaptive Experimental Design with Temporal Interference: A Maximum Likelihood Approach**

Peter W Glynn · Ramesh Johari · Mohammad Rasouli

In Poster Session 5

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Poster

## **Deep Relational Topic Modeling via Graph Poisson Gamma Belief Network**

Chaojie Wang · Hao Zhang · Bo Chen · Dongsheng Wang · Zhengjue Wang · Mingyuan Zhou

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1271

Poster

## **Promoting Stochasticity for Expressive Policies via a Simple and Efficient Regularization Method**

Qi Zhou · Yufei Kuang · Zherui Qiu · Houqiang Li · Jie Wang

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1272

Poster

## **Evaluating and Rewarding Teamwork Using Cooperative Game Abstractions**

Tom Yan · Christian Kroer · Alexander Peysakhovich

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1273

Poster

## **Efficient Distance Approximation for Structured High-Dimensional Distributions via Learning**

Arnab Bhattacharyya · Sutanu Gayen · Kuldeep S Meel · N. V. Vinodchandran

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1274

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## **Unreasonable Effectiveness of Greedy Algorithms in Multi-Armed Bandit with Many Arms**

Mohsen Bayati · Nima Hamidi · Ramesh Johari · Khashayar Khosravi

In Poster Session 5

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## **Batched Coarse Ranking in Multi-Armed Bandits**

Nikolai Karpov · Qin Zhang

In Poster Session 5

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Poster

## **Optimal Algorithms for Stochastic Multi-Armed Bandits with Heavy Tailed Rewards**

Kyungjae Lee · Hongjun Yang · Sungbin Lim · Songhwai Oh

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1277

Poster

## **Bias no more: high-probability data-dependent regret bounds for adversarial bandits and MDPs**

Chung-Wei Lee · Haipeng Luo · Chen-Yu Wei · Mengxiao Zhang

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1278

Poster

## **Stage-wise Conservative Linear Bandits**

Ahmadreza Moradipari · Christos Thrampoulidis · Mahnoosh Alizadeh

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1279

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## **Analysis and Design of Thompson Sampling for Stochastic Partial Monitoring**

Taira Tsuchiya · Junya Honda · Masashi Sugiyama

In Poster Session 5

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Poster

## **Tight First- and Second-Order Regret Bounds for Adversarial Linear Bandits**

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1281

Poster

***Delay and Cooperation in Nonstochastic Linear Bandits***

Shinji Ito · Daisuke Hatano · Hanna Sumita · Kei Takemura · Takuro Fukunaga · Naonori Kakimura · Ken-Ichi Kawarabayashi In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1282

Poster

***An Empirical Process Approach to the Union Bound: Practical Algorithms for Combinatorial and Linear Bandits***

Julian Katz-Samuels · Lalit Jain · zohar karnin · Kevin Jamieson

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1283

Poster

***Simultaneously Learning Stochastic and Adversarial Episodic MDPs with Known Transition***

Tiancheng Jin · Haipeng Luo

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1284

Poster

***Dynamic Regret of Convex and Smooth Functions***

Peng Zhao · Yu-Jie Zhang · Lijun Zhang · Zhi-Hua Zhou

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1285

Poster

***Minimax Regret of Switching-Constrained Online Convex Optimization: No Phase Transition***

Lin Chen · Qian Yu · Hannah Lawrence · Amin Karbasi

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1286

Poster

***Online learning with dynamics: A minimax perspective***

Kush Bhatia · Karthik Sridharan

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1287

Poster

***A Tight Lower Bound and Efficient Reduction for Swap Regret***

Shinji Ito

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1288

Poster

***Making Non-Stochastic Control (Almost) as Easy as Stochastic***

Max Simchowitz

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1289

Poster

***Non-Stochastic Control with Bandit Feedback***

Paula Gradu · John Olof Hallman · Elad Hazan

In Poster Session 5

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Poster

***Learning Implicit Functions for Topology-Varying Dense 3D Shape Correspondence***

Feng Liu · Xiaoming Liu

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1291

Poster

***Fully Convolutional Mesh Autoencoder using Efficient Spatially Varying Kernels***

Yi Zhou · Chenglei Wu · Zimo Li · Chen Cao · Yuting Ye · Jason Saragih · Hao Li · Yaser Sheikh

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1292

Poster

***Geo-PIFu: Geometry and Pixel Aligned Implicit Functions for Single-view Human Reconstruction***

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1293

Poster

**Generative 3D Part Assembly via Dynamic Graph Learning**

jialei huang · Guanqi Zhan · Qingnan Fan · Kaichun Mo · Lin Shao · Baoquan Chen · Leonidas Guibas · Hao Dong

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1294

Poster

**Online Adaptation for Consistent Mesh Reconstruction in the Wild**

Xueteng Li · Sifei Liu · Shalini De Mello · Kihwan Kim · Xiaolong Wang · Ming-Hsuan Yang · Jan Kautz

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1295

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**Learning Deformable Tetrahedral Meshes for 3D Reconstruction**

Jun Gao · Wenzheng Chen · Tommy Xiang · Alec Jacobson · Morgan McGuire · Sanja Fidler

In Poster Session 5

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**Weakly Supervised Deep Functional Maps for Shape Matching**

Abhishek Sharma · Maks Ovsjanikov

In Poster Session 5

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Poster

**Neural Star Domain as Primitive Representation**

Yuki Kawana · Yusuke Mukuta · Tatsuya Harada

In Poster Session 5

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**Robust Multi-Object Matching via Iterative Reweighting of the Graph Connection****Laplacian**

Yunpeng Shi · Shaohan Li · Gilad Lerman

In Poster Session 5

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**Grasp Proposal Networks: An End-to-End Solution for Visual Learning of Robotic Grasps**

Chaozheng Wu · Jian Chen · Qiaoyu Cao · Jianchi Zhang · Yunxin Tai · Lin Sun · Kui Jia

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1300

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**CaSPR: Learning Canonical Spatiotemporal Point Cloud Representations**

Davis Rempe · Tolga Birdal · Yongheng Zhao · Zan Gojcic · Srinath Sridhar · Leonidas Guibas

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1301

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**ShapeFlow: Learnable Deformation Flows Among 3D Shapes**

Max Jiang · Jingwei Huang · Andrea Tagliasacchi · Leonidas Guibas

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1302

Poster

**Neural Mesh Flow: 3D Manifold Mesh Generation via Diffeomorphic Flows**

Kunal Gupta · Manmohan Chandraker

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1303

Poster

**The Origins and Prevalence of Texture Bias in Convolutional Neural Networks**

Katherine L. Hermann · Ting Chen · Simon Kornblith

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1304

Poster

**Texture Interpolation for Probing Visual Perception**

Jonathan Vacher · Aida Davila · Adam Kohn · Ruben Coen-Cagli

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1305

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## **Byzantine Resilient Distributed Multi-Task Learning**

Jiani Li · Waseem Abbas · Xenofon Koutsoukos

In Poster Session 5

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## **FrugalML: How to use ML Prediction APIs more accurately and cheaply**

Lingjiao Chen · Matei Zaharia · James Zou

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1307

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## **Improving Auto-Augment via Augmentation-Wise Weight Sharing**

Keyu Tian · Chen Lin · Ming Sun · Luping Zhou · Junjie Yan · Wanli Ouyang

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1308

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## **ISTA-NAS: Efficient and Consistent Neural Architecture Search by Sparse Coding**

Yibo Yang · Hongyang Li · Shan You · Fei Wang · Chen Qian · Zhouchen Lin

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1309

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## **RandAugment: Practical Automated Data Augmentation with a Reduced Search Space**

Dogus Cubuk · Barret Zoph · Jonathon Shlens · Quoc V Le

In Poster Session 5

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## **Meta-Neighborhoods**

Siyuan Shan · Yang Li · Junier Oliva

In Poster Session 5

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## **A Closer Look at the Training Strategy for Modern Meta-Learning**

JIAJIN CHEN · Xiao-Ming Wu · Yanke Li · Qimai Li · Li-Ming Zhan · Fu-lai Chung

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1312

Poster

## **Transferable Calibration with Lower Bias and Variance in Domain Adaptation**

Ximei Wang · Mingsheng Long · Jianmin Wang · Michael Jordan

In Poster Session 5

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## **Unsupervised Learning of Object Landmarks via Self-Training Correspondence**

Dimitrios Mallis · Enrique Sanchez · Matthew Bell · Georgios Tzimiropoulos

In Poster Session 5

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Poster

## **Autofocused oracles for model-based design**

Clara Fannjiang · Jennifer Listgarten

In Poster Session 5

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## **Hierarchical Neural Architecture Search for Deep Stereo Matching**

Xuelian Cheng · Yiran Zhong · Mehrtash Harandi · Yuchao Dai · Xiaojun Chang · Hongdong Li · Tom Drummond In Poster Session 5  
· Zongyuan Ge

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1316

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## **UWSOD: Toward Fully-Supervised-Level Capacity Weakly Supervised Object Detection**

Yunhang Shen · Rongrong Ji · Zhiwei Chen · Yongjian Wu · Feiyue Huang

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1317

Poster

## **Hierarchical Granularity Transfer Learning**

Shaobo Min · Hongtao Xie · Hantao Yao · Xuran Deng · Zheng-Jun Zha · Yongdong Zhang

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1318

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## **PyGlove: Symbolic Programming for Automated Machine Learning**

Daiyi Peng · Xuanyi Dong · Esteban Real · Mingxing Tan · Yifeng Lu · Gabriel Bender · Hanxiao Liu · Adam Kraft In Poster Session 5  
· Chen Liang · Quoc V Le

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1319

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## **Fast, Accurate, and Simple Models for Tabular Data via Augmented Distillation**

Rasool Fakoor · Jonas Mueller · Nick Erickson · Pratik Chaudhari · Alex Smola

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1321

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## **RNNPool: Efficient Non-linear Pooling for RAM Constrained Inference**

Oindrila Saha · Aditya Kusupati · Harsha Simhadri · Manik Varma · Prateek Jain

In Poster Session 5

Wed Dec 09 09:00 PM -- 11:00 PM (PST) @ Poster Session 4 #1322

Poster

## **TinyTL: Reduce Memory, Not Parameters for Efficient On-Device Learning**

Han Cai · Chuang Gan · Ligeng Zhu · Song Han

In Poster Session 5

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## **Distributed Distillation for On-Device Learning**

Ilai Bistritz · Ariana Mann · Nicholas Bambos

In Poster Session 5

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #104

Poster

## **Unsupervised Sound Separation Using Mixture Invariant Training**

Scott Wisdom · Efthymios Tzinis · Hakan Erdogan · Ron Weiss · Kevin Wilson · John R. Hershey

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #188

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## **Neural Networks with Small Weights and Depth-Separation Barriers**

Gal Vardi · Ohad Shamir

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #298

Poster

## **The Implications of Local Correlation on Learning Some Deep Functions**

Eran Malach · Shai Shalev-Shwartz

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #506

Poster

## **Provably adaptive reinforcement learning in metric spaces**

Tongyi Cao · Akshay Krishnamurthy

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #518

Poster

## **Instance Based Approximations to Profile Maximum Likelihood**

Nima Anari · Moses Charikar · Kiran Shiragur · Aaron Sidford

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #607

Poster

## **Continual Learning of Control Primitives : Skill Discovery via Reset-Games**

Kelvin Xu · Siddharth Verma · Chelsea Finn · Sergey Levine

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1323

Poster

## **Unsupervised Semantic Aggregation and Deformable Template Matching for Semi-Supervised Learning**

Tao Han · Junyu Gao · Yuan Yuan · Qi Wang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1324

Poster

## **Multilabel Classification by Hierarchical Partitioning and Data-dependent Grouping**

Shashanka Ubaru · Sanjeeb Dash · Arya Mazumdar · Oktay Gunluk

In Poster Session 6

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<b>Transductive Information Maximization for Few-Shot Learning</b>	
Malik Boudiaf · Ziko Ziko · Jérôme Rony · Jose Dolz · Pablo Piantanida · Ismail Ben Ayed	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1326	Poster
<b>Meta-Learning Requires Meta-Augmentation</b>	
Janarthanan Rajendran · Alex Irpan · Eric Jang	In Poster Session 6
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<b>Co-Tuning for Transfer Learning</b>	
Kaichao You · Zhi Kou · Mingsheng Long · Jianmin Wang	In Poster Session 6
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<b>What Makes for Good Views for Contrastive Learning?</b>	
Yonglong Tian · Chen Sun · Ben Poole · Dilip Krishnan · Cordelia Schmid · Phillip Isola	In Poster Session 6
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<b>Self-Supervised Relational Reasoning for Representation Learning</b>	
Massimiliano Patacchiola · Amos Storkey	In Poster Session 6
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<b>Not All Unlabeled Data are Equal: Learning to Weight Data in Semi-supervised Learning</b>	
Jason Ren · Raymond Yeh · Alex Schwing	In Poster Session 6
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<b>Distribution Aligning Refinery of Pseudo-label for Imbalanced Semi-supervised Learning</b>	
Jaehyun Kim · Youngbum Hur · Sejun Park · Eunho Yang · Sung Ju Hwang · Jinwoo Shin	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1332	Poster
<b>Supervised Contrastive Learning</b>	
Prannay Khosla · Piotr Teterwak · Chen Wang · Aaron Sarna · Yonglong Tian · Phillip Isola · Aaron Maschinot · Ce Liu · Dilip Krishnan	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1333	Poster
<b>Curriculum Learning by Dynamic Instance Hardness</b>	
Tianyi Zhou · Shengjie Wang · Jeff Bilmes	In Poster Session 6
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<b>SuperLoss: A Generic Loss for Robust Curriculum Learning</b>	
Thibault Castells · Philippe Weinzaepfel · Jerome Revaud	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1335	Poster
<b>Neural Topographic Factor Analysis for fMRI Data</b>	
Eli Sennesh · Zulqarnain Khan · Yiyu Wang · J Benjamin Hutchinson · Ajay Satpute · Jennifer Dy · Jan-Willem van de Meent	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1336	Poster
<b>Self-supervised learning through the eyes of a child</b>	
Emin Orhan · Vaibhav Gupta · Brenden Lake	In Poster Session 6
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<b>Learnability with Indirect Supervision Signals</b>	
Kaifu Wang · Qiang Ning · Dan Roth	In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1338

Poster

### **Learning from Label Proportions: A Mutual Contamination Framework**

Clay Scott · Jianxin Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1339

Poster

### **Learning identifiable and interpretable latent models of high-dimensional neural activity using pi-VAE**

Ding Zhou · Xue-Xin Wei

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1340

Poster

### **Identifying signal and noise structure in neural population activity with Gaussian process factor models**

Stephen Keeley · Mikio Aoi · Yiyi Yu · Spencer Smith · Jonathan Pillow

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1341

Poster

### **Neuronal Gaussian Process Regression**

Johannes Friedrich

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1342

Poster

### **Estimating Fluctuations in Neural Representations of Uncertain Environments**

Sahand Farhoodi · Mark Plitt · Lisa Giocomo · Uri Eden

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1343

Poster

### **Understanding spiking networks through convex optimization**

Allan Mancoo · Sander Keemink · Christian Machens

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1344

Poster

### **Factorized Neural Processes for Neural Processes: K-Shot Prediction of Neural Responses**

Ronald (James) Cotton · Fabian Sinz · Andreas Tolias

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1345

Poster

### **Efficient estimation of neural tuning during naturalistic behavior**

Edoardo Balzani · Kaushik Lakshminarasimhan · Dora Angelaki · Cristina Savin

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1346

Poster

### **A new inference approach for training shallow and deep generalized linear models of noisy interacting neurons**

Gabriel Mahuas · Giulio Isacchini · Olivier Marre · Ulisse Ferrari · Thierry Mora

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1347

Poster

### **Optimal Adaptive Electrode Selection to Maximize Simultaneously Recorded Neuron Yield**

John Choi · Krishan Kumar · Mohammad Khazali · Katie None Wingel · Mahdi Choudhury · Adam Charles · Bijan In Poster Session 6 Pesaran

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1348

Poster

### **Non-reversible Gaussian processes for identifying latent dynamical structure in neural data**

Virginia Rutten · Alberto Bernacchia · Maneesh Sahani · Guillaume Hennequin

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1349

Poster

## **Minimax Dynamics of Optimally Balanced Spiking Networks of Excitatory and Inhibitory Neurons**

Qianyi Li · Cengiz Pehlevan

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1350

Poster

## **Predictive coding in balanced neural networks with noise, chaos and delays**

Jonathan Kadmon · Jonathan Timcheck · Surya Ganguli

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1351

Poster

## **Manifold GPLVMs for discovering non-Euclidean latent structure in neural data**

Kristopher Jensen · Ta-Chu Kao · Marco Tripodi · Guillaume Hennequin

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1352

Poster

## **Online Neural Connectivity Estimation with Noisy Group Testing**

Anne Draelos · John Pearson

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1353

Poster

## **Recurrent Switching Dynamical Systems Models for Multiple Interacting Neural Populations**

Joshua Glaser · Matthew Whiteway · John Cunningham · Liam Paninski · Scott Linderman

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1354

Poster

## **Rescuing neural spike train models from bad MLE**

Diego Arribas · Yuan Zhao · Memming Park

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1355

Poster

## **Flows for simultaneous manifold learning and density estimation**

Johann Brehmer · Kyle Cranmer

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1356

Poster

## **Multimodal Generative Learning Utilizing Jensen-Shannon-Divergence**

Thomas Sutter · Iman Daunhauer · Julia Vogt

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1357

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## **SurVAE Flows: Surjections to Bridge the Gap between VAEs and Flows**

Didrik Nielsen · Priyank Jaini · Emiel Hoogeboom · Ole Winther · Max Welling

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1358

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## **User-Dependent Neural Sequence Models for Continuous-Time Event Data**

Alex Boyd · Robert Bamler · Stephan Mandt · Padhraic Smyth

In Poster Session 6

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## **Adversarially-learned Inference via an Ensemble of Discrete Undirected Graphical Models**

Adarsh Keshav Jeewajee · Leslie Kaelbling

In Poster Session 6

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## **Hierarchical Quantized Autoencoders**

Will Williams · Sam Ringer · Tom Ash · David MacLeod · Jamie Dougherty · John Hughes

In Poster Session 6

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## **Riemannian Continuous Normalizing Flows**

Emile Mathieu · Maximilian Nickel

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1362

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## ***Efficient Learning of Generative Models via Finite-Difference Score Matching***

Tianyu Pang · Kun Xu · Chongxuan LI · Yang Song · Stefano Ermon · Jun Zhu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1363

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## ***Learning Latent Space Energy-Based Prior Model***

Bo Pang · Tian Han · Erik Nijkamp · Song-Chun Zhu · Ying Nian Wu

In Poster Session 6

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## ***Gaussian Process Bandit Optimization of the Thermodynamic Variational Objective***

Vu Nguyen · Vaden Masrani · Rob Brekelmans · Michael A Osborne · Frank Wood

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1365

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## ***VAEM: a Deep Generative Model for Heterogeneous Mixed Type Data***

Chao Ma · Sebastian Tschiatschek · Richard Turner · Jose Miguel Hernández-Lobato · Cheng Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1367

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## ***Stochastic Normalizing Flows***

Hao Wu · Jonas Köhler · Frank Noe

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1368

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## ***Generative Neurosymbolic Machines***

Jindong Jiang · Sungjin Ahn

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1369

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## ***Fast and Flexible Temporal Point Processes with Triangular Maps***

Oleksandr Shchur · Nicholas Gao · Marin Biloš · Stephan Günnemann

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1370

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## ***Deep Rao-Blackwellised Particle Filters for Time Series Forecasting***

Richard Kurle · Syama Sundar Rangapuram · Emmanuel de Bézenac · Stephan Günnemann · Jan Gasthaus In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1371

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## ***Neural Dynamic Policies for End-to-End Sensorimotor Learning***

Shikhar Bahl · Mustafa Mukadam · Abhinav Gupta · Deepak Pathak

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1372

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## ***Critic Regularized Regression***

Ziyu Wang · Alexander Novikov · Konrad Zolna · Josh Merel · Jost Tobias Springenberg · Scott Reed · Bobak Shahriari · Noah Siegel · Caglar Gulcehre · Nicolas Heess · Nando de Freitas In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1373

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## ***Off-Policy Imitation Learning from Observations***

Zhuangdi Zhu · Kaixiang Lin · Bo Dai · Jiayu Zhou

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1374

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## ***Deep Inverse Q-learning with Constraints***

Gabriel Kalweit · Maria Huegle · Moritz Werling · Joschka Boedecker

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1375

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## ***Value-driven Hindsight Modelling***

Arthur Guez · Fabio Viola · Theophane Weber · Lars Buesing · Steven Kapturowski · Doina Precup · David Silver In Poster Session 6 · Nicolas Heess

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## **Effective Diversity in Population Based Reinforcement Learning**

Jack Parker-Holder · Aldo Pacchiano · Krzysztof M Choromanski · Stephen J Roberts

In Poster Session 6

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## **Adversarial Soft Advantage Fitting: Imitation Learning without Policy Optimization**

Paul Barde · Julien Roy · Wonseok Jeon · Joelle Pineau · Chris Pal · Derek Nowrouzezahrai

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1378

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## **Reward Propagation Using Graph Convolutional Networks**

Martin Klissarov · Doina Precup

In Poster Session 6

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## **PlanGAN: Model-based Planning With Sparse Rewards and Multiple Goals**

Henry Charlesworth · Giovanni Montana

In Poster Session 6

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## **Self-Paced Deep Reinforcement Learning**

Pascal Klink · Carlo D'Eramo · Jan Peters · Joni Pajarinen

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1381

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## **Memory Based Trajectory-conditioned Policies for Learning from Sparse Rewards**

Yijie Guo · Jongwook Choi · Marcin Moczulski · Shengyu Feng · Samy Bengio · Mohammad Norouzi · Honglak Lee

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1382

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## **Learning to Utilize Shaping Rewards: A New Approach of Reward Shaping**

Yujing Hu · Weixun Wang · Hangtian Jia · Yixiang Wang · Yingfeng Chen · Jianye Hao · Feng Wu · Changjie Fan

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1383

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## **f-GAIL: Learning f-Divergence for Generative Adversarial Imitation Learning**

Xin Zhang · Yanhua Li · Ziming Zhang · Zhi-Li Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1384

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## **Strictly Batch Imitation Learning by Energy-based Distribution Matching**

Daniel Jarrett · Ioana Bica · Mihaela van der Schaar

In Poster Session 6

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## **Meta-Gradient Reinforcement Learning with an Objective Discovered Online**

Zhongwen Xu · Hado van Hasselt · Matteo Hessel · Junhyuk Oh · Satinder Singh · David Silver

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1386

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## **Inverse Reinforcement Learning from a Gradient-based Learner**

Giorgia Ramponi · Gianluca Drappo · Marcello Restelli

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1387

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## **Regret Bounds without Lipschitz Continuity: Online Learning with Relative-Lipschitz Losses**

Yihan Zhou · Victor Sanches Portella · Mark Schmidt · Nick Harvey

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1388

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## **Stability of Stochastic Gradient Descent on Nonsmooth Convex Losses**

Raef Bassily · Vitaly Feldman · Cristóbal Guzmán · Kunal Talwar

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1389

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## **Biased Stochastic First-Order Methods for Conditional Stochastic Optimization and Applications in Meta Learning**

Yifan Hu · Siqi Zhang · Xin Chen · Niao He

In Poster Session 6

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## **Tight Nonparametric Convergence Rates for Stochastic Gradient Descent under the Noiseless Linear Model**

Raphaël Berthier · Francis Bach · Pierre Gaillard

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1391

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## **Exponential ergodicity of mirror-Langevin diffusions**

Sinwo Chewi · Thibaut Le Gouic · Chen Lu · Tyler Maunu · Philippe Rigollet · Austin J Stromme

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1392

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## **Faster Wasserstein Distance Estimation with the Sinkhorn Divergence**

Lénaïc Chizat · Pierre Roussillon · Flavien Léger · François-Xavier Vialard · Gabriel Peyré

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1393

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## **Exploiting Higher Order Smoothness in Derivative-free Optimization and Continuous Bandits**

Aria Akhavan · Massimiliano Pontil · Alexandre Tsybakov

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1394

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## **The Statistical Complexity of Early-Stopped Mirror Descent**

Tomas Vaskevicius · Varun Kanade · Patrick Rebeschini

In Poster Session 6

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## **Statistical and Topological Properties of Sliced Probability Divergences**

Kimia Nadjahi · Alain Durmus · Lénaïc Chizat · Soheil Kolouri · Shahin Shahrampour · Umut Simsekli

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1396

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## **Sharper Generalization Bounds for Pairwise Learning**

Yunwen Lei · Antoine Ledent · Marius Kloft

In Poster Session 6

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## **Can Implicit Bias Explain Generalization? Stochastic Convex Optimization as a Case Study**

Assaf Dauber · Meir Feder · Tomer Koren · Roi Livni

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1398

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## **Asymptotic Guarantees for Generative Modeling Based on the Smooth Wasserstein Distance**

Ziv Goldfeld · Kristjan Greenewald · Kengo Kato

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1399

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## **Towards Problem-dependent Optimal Learning Rates**

Yunbei Xu · Assaf Zeevi

In Poster Session 6

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## **On Uniform Convergence and Low-Norm Interpolation Learning**

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**Estimating weighted areas under the ROC curve**

Andreas Maurer · Massimiliano Pontil

In Poster Session 6

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**Generalization error in high-dimensional perceptrons: Approaching Bayes error with convex optimization**

Benjamin Aubin · Florent Krzakala · Yue Lu · Lenka Zdeborová

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1403

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**On Second Order Behaviour in Augmented Neural ODEs**

Alex Norcliffe · Cristian Bodnar · Ben Day · Nikola Simidjevski · Pietro Lió

In Poster Session 6

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**Simplifying Hamiltonian and Lagrangian Neural Networks via Explicit Constraints**

Marc Finzi · Alex Wang · Andrew Wilson

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1405

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**Object-Centric Learning with Slot Attention**

Francesco Locatello · Dirk Weissenborn · Thomas Unterthiner · Aravindh Mahendran · Georg Heigold · Jakob Uszkoreit · Alexey Dosovitskiy · Thomas Kipf

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1406

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**Learning to Execute Programs with Instruction Pointer Attention Graph Neural Networks**

David Bieber · Charles Sutton · Hugo Larochelle · Daniel Tarlow

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1407

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**Probabilistic Time Series Forecasting with Shape and Temporal Diversity**

Vincent LE GUEN · Nicolas THOME

In Poster Session 6

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**A shooting formulation of deep learning**

François-Xavier Vialard · Roland Kwitt · Susan Wei · Marc Niethammer

In Poster Session 6

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**Training Linear Finite-State Machines**

Arash Ardakani · Amir Ardakani · Warren Gross

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1410

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**Benchmarking Deep Inverse Models over time, and the Neural-Adjoint method**

Ben Ren · Willie Padilla · Jordan Malof

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1411

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**Learning Continuous System Dynamics from Irregularly-Sampled Partial Observations**

Zijie Huang · Yizhou Sun · Wei Wang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1412

Poster

**Fast Transformers with Clustered Attention**

Apoorv Vyas · Angelos Katharopoulos · François Fleuret

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1413

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**SMYRF - Efficient Attention using Asymmetric Clustering**

Giannis Daras · Nikita Kitaev · Augustus Odena · Alex Dimakis

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1414

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**Sparse and Continuous Attention Mechanisms**

André Martins · António Farinhás · Marcos Treviso · Vlad Niculae · Pedro Aguiar · Mario Figueiredo

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1415

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**Modeling Continuous Stochastic Processes with Dynamic Normalizing Flows**

Ruizhi Deng · Bo Chang · Marcus Brubaker · Greg Mori · Andreas Lehrmann

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1416

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**Denoising Diffusion Probabilistic Models**

Jonathan Ho · Ajay Jain · Pieter Abbeel

In Poster Session 6

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**Untangling tradeoffs between recurrence and self-attention in artificial neural networks**

Giancarlo Kerg · bhargav104 Kanuparthi · Anirudh Goyal ALIAS PARTH GOYAL · Kyle Goyette · Yoshua Bengio In Poster Session 6 · Guillaume Lajoie

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1418

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**Neural Controlled Differential Equations for Irregular Time Series**

Patrick Kidger · James Morrill · James Foster · Terry Lyons

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1419

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**Erdos Goes Neural: an Unsupervised Learning Framework for Combinatorial Optimization on Graphs**

Nikolaos Karalias · Andreas Loukas

In Poster Session 6

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**Unsupervised Joint k-node Graph Representations with Compositional Energy-Based Models**

Leonardo Cotta · Carlos H. C. Teixeira · Ananthram Swami · Bruno Ribeiro

In Poster Session 6

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**Pointer Graph Networks**

Petar Veličković · Lars Buesing · Matt Overlan · Razvan Pascanu · Oriol Vinyals · Charles Blundell

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1422

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**Can Graph Neural Networks Count Substructures?**

Zhengdao Chen · Lei Chen · Soledad Villar · Joan Bruna

In Poster Session 6

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**Distance Encoding: Design Provably More Powerful Neural Networks for Graph Representation Learning**

Pan Li · Yanbang Wang · Hongwei Wang · Jure Leskovec

In Poster Session 6

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**Graph Random Neural Networks for Semi-Supervised Learning on Graphs**

Wenzheng Feng · Jie Zhang · Yuxiao Dong · Yu Han · Huanbo Luan · Qian Xu · Qiang Yang · Evgeny Kharlamov In Poster Session 6 · Jie Tang

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1425

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## **Graph Contrastive Learning with Augmentations**

Yuning You · Tianlong Chen · Yongduo Sui · Ting Chen · Zhangyang Wang · Yang Shen

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1426

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## **Scattering GCN: Overcoming Oversmoothness in Graph Convolutional Networks**

Yimeng Min · Frederik Wenkel · Guy Wolf

In Poster Session 6

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## **Graph Stochastic Neural Networks for Semi-supervised Learning**

Haibo Wang · Chuan Zhou · Xin Chen · Jia Wu · Shirui Pan · Jilong Wang

In Poster Session 6

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## **DiffGCN: Graph Convolutional Networks via Differential Operators and Algebraic Multigrid Pooling**

Moshe Eliasof · Eran Treister

In Poster Session 6

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## **SAC: Accelerating and Structuring Self-Attention via Sparse Adaptive Connection**

Xiaoya Li · Yuxian Meng · Mingxin Zhou · Qinghong Han · Fei Wu · Jiwei Li

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1430

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## **Curvature Regularization to Prevent Distortion in Graph Embedding**

Hongbin Pei · Bingzhe Wei · Kevin Chang · Chunxu Zhang · Bo Yang

In Poster Session 6

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## **GCOMB: Learning Budget-constrained Combinatorial Algorithms over Billion-sized Graphs**

Sahil Manchanda · Akash MITTAL · Anuj Dhawan · Sourav Medya · Sayan Ranu · Ambuj K Singh

In Poster Session 6

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## **Subgraph Neural Networks**

Emily Alsentzer · Sam Finlayson · Michelle Li · Marinka Zitnik

In Poster Session 6

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## **PGM-Explainer: Probabilistic Graphical Model Explanations for Graph Neural Networks**

Minh Vu · My T. Thai

In Poster Session 6

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## **Factor Graph Neural Networks**

Zhen Zhang · Fan Wu · Wee Sun Lee

In Poster Session 6

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## **WOR and p's: Sketches for $\ell_p$ -Sampling Without Replacement**

Edith Cohen · Rasmus Pagh · David Woodruff

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## **Statistical Guarantees of Distributed Nearest Neighbor Classification**

Jiexin Duan · Xingye Qiao · Guang Cheng

In Poster Session 6

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## **Robust Persistence Diagrams using Reproducing Kernels**

Siddharth Vishwanath · Kenji Fukumizu · Satoshi Kuriki · Bharath Sriperumbudur

In Poster Session 6

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<b>Regression with reject option and application to kNN</b>	
Ahmed Zaoui · Christophe Denis · Mohamed Hebiri	In Poster Session 6
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<b>A Statistical Mechanics Framework for Task-Agnostic Sample Design in Machine Learning</b>	
Bhavya Kailkhura · Jayaraman Thiagarajan · Qunwei Li · Jize Zhang · Yi Zhou · Timo Bremer	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1440	Poster
<b>Uncertainty Quantification for Inferring Hawkes Networks</b>	
Haoyun Wang · Liyan Xie · Alex Cuozzo · Simon Mak · Yao Xie	In Poster Session 6
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<b>Fourier Features Let Networks Learn High Frequency Functions in Low Dimensional Domains</b>	
Matthew Tancik · Pratul Srinivasan · Ben Mildenhall · Sara Fridovich-Keil · Nithin Raghavan · Utkarsh Singhal · Ravi Ramamoorthi · Jon Barron · Ren Ng	In Poster Session 6
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<b>SE(3)-Transformers: 3D Roto-Translation Equivariant Attention Networks</b>	
Fabian Fuchs · Daniel E Worrall · Volker Fischer · Max Welling	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1443	Poster
<b>A Stochastic Path Integral Differential EstimatoR Expectation Maximization Algorithm</b>	
Gersende Fort · Eric Moulines · Hoi-To Wai	In Poster Session 6
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<b>Beyond Perturbations: Learning Guarantees with Arbitrary Adversarial Test Examples</b>	
Shafi Goldwasser · Adam Tauman Kalai · Yael Kalai · Omar Montasser	In Poster Session 6
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<b>Confidence sequences for sampling without replacement</b>	
Ian Waudby-Smith · Aaditya Ramdas	In Poster Session 6
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<b>Truthful Data Acquisition via Peer Prediction</b>	
Yiling Chen · Yiheng Shen · Shuran Zheng	In Poster Session 6
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<b>Axioms for Learning from Pairwise Comparisons</b>	
Ritesh Noothigattu · Dominik Peters · Ariel Procaccia	In Poster Session 6
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<b>Testing Determinantal Point Processes</b>	
Khashayar Gatmiry · Maryam Aliakbarpour · Stefanie Jegelka	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1449	Poster
<b>Coded Sequential Matrix Multiplication For Straggler Mitigation</b>	
Nikhil Krishnan Muralee Krishnan · Erfan Hosseini · Ashish Khisti	In Poster Session 6
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**Functional Regularization for Representation Learning: A Unified Theoretical Perspective**

Siddhant Garg · Yingyu Liang

In Poster Session 6

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**Adaptive Sampling for Stochastic Risk-Averse Learning**

Sebastian Curi · Kfir Y. Levy · Stefanie Jegelka · Andreas Krause

In Poster Session 6

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**High-Dimensional Sparse Linear Bandits**

Botao Hao · Tor Lattimore · Mengdi Wang

In Poster Session 6

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**Adversarial Bandits with Corruptions**

lin yang · Mohammad Hajiesmaili · Mohammad Sadegh Talebi · John C. S. Lui · Wing Shing Wong

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1454

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**On Regret with Multiple Best Arms**

Yinglun Zhu · Robert Nowak

In Poster Session 6

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**Model Selection in Contextual Stochastic Bandit Problems**

Aldo Pacchiano · My Phan · Yasin Abbasi Yadkori · Anup Rao · Julian Zimmert · Tor Lattimore · Csaba Szepesvari

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1456

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**An Asymptotically Optimal Primal-Dual Incremental Algorithm for Contextual Linear Bandits**

Andrea Tirinzoni · Matteo Pirotta · Marcello Restelli · Alessandro Lazaric

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1457

Poster

**Adapting to Misspecification in Contextual Bandits**

Dylan Foster · Claudio Gentile · Mehryar Mohri · Julian Zimmert

In Poster Session 6

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**Leveraging Predictions in Smoothed Online Convex Optimization via Gradient-based Algorithms**

Yingying Li · Na Li

In Poster Session 6

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Poster

**Bandit Linear Control**

Asaf Cassel · Tomer Koren

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1460

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**Robust-Adaptive Control of Linear Systems: beyond Quadratic Costs**

Edouard Leurent · Odalric-Ambrym Maillard · Denis Efimov

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1461

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**On the Convergence of Smooth Regularized Approximate Value Iteration Schemes**

Elena Smirnova · Elvis Dohmatob

In Poster Session 6

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Poster

**Pontryagin Differentiable Programming: An End-to-End Learning and Control Framework**

Wanxin Jin · Zhaoran Wang · Zhuoran Yang · Shaoshuai Mou

In Poster Session 6

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<b>Leverage the Average: an Analysis of KL Regularization in Reinforcement Learning</b>	
Nino Vieillard · Tadashi Kozuno · Bruno Scherrer · Olivier Pietquin · Remi Munos · Matthieu Geist	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1464	Poster
<b>Implicit Distributional Reinforcement Learning</b>	
Yuguang Yue · Zhendong Wang · Mingyuan Zhou	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1465	Poster
<b>Small Nash Equilibrium Certificates in Very Large Games</b>	
Brian Zhang · Tuomas Sandholm	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1466	Poster
<b>Contextual Games: Multi-Agent Learning with Side Information</b>	
Pier Giuseppe Sessa · Ilija Bogunovic · Andreas Krause · Maryam Kamgarpour	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1467	Poster
<b>Recursive Inference for Variational Autoencoders</b>	
Minyoung Kim · Vladimir Pavlovic	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1468	Poster
<b>Bayesian Pseudocoresets</b>	
Dionysis Manousakas · Zuheng Xu · Cecilia Mascolo · Trevor Campbell	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1469	Poster
<b>Variational Bayesian Monte Carlo with Noisy Likelihoods</b>	
Luigi Acerbi	In Poster Session 6
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<b>Bayesian Probabilistic Numerical Integration with Tree-Based Models</b>	
Harrison Zhu · Xing Liu · Ruya Kang · Zhichao Shen · Seth Flaxman · Francois-Xavier Briol	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1471	Poster
<b>Beyond the Mean-Field: Structured Deep Gaussian Processes Improve the Predictive Uncertainties</b>	
Jakob Lindinger · David Reeb · Christoph Lippert · Barbara Rakitsch	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1472	Poster
<b>Fast Matrix Square Roots with Applications to Gaussian Processes and Bayesian Optimization</b>	
Geoff Pleiss · Martin Jankowiak · David Eriksson · Anil Damle · Jacob Gardner	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1473	Poster
<b>Analytical Probability Distributions and Exact Expectation-Maximization for Deep Generative Networks</b>	
Randall Balestrieri · Sebastien PARIS · Richard Baraniuk	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1474	Poster
<b>Decentralized Langevin Dynamics for Bayesian Learning</b>	
Anjaly Parayil · He Bai · Jemin George · Prudhvi Gurram	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1475	Poster

## **Hamiltonian Monte Carlo using an adjoint-differentiated Laplace approximation: Bayesian inference for latent Gaussian models and beyond**

Charles Margossian · Aki Vehtari · Daniel Simpson · Raj Agrawal

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1476

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## **Decision-Making with Auto-Encoding Variational Bayes**

Romain Lopez · Pierre Boyreau · Nir Yosef · Michael Jordan · Jeff Regier

In Poster Session 6

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Poster

## **Robust, Accurate Stochastic Optimization for Variational Inference**

Akash Kumar Dhaka · Alejandro Catalina · Michael Andersen · Måns Magnusson · Jonathan Huggins · Aki Vehtari

In Poster Session 6

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## **Advances in Black-Box VI: Normalizing Flows, Importance Weighting, and Optimization**

Abhinav Agrawal · Dan Sheldon · Justin Domke

In Poster Session 6

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## **Efficient Low Rank Gaussian Variational Inference for Neural Networks**

Marcin Tomczak · Siddharth Swaroop · Richard Turner

In Poster Session 6

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## **Liberty or Depth: Deep Bayesian Neural Nets Do Not Need Complex Weight Posterior Approximations**

Sebastian Farquhar · Lewis Smith · Yarin Gal

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1481

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## **Markovian Score Climbing: Variational Inference with $KL(p||q)$**

Christian Naesseth · Fredrik Lindsten · David Blei

In Poster Session 6

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Poster

## **Projected Stein Variational Gradient Descent**

Peng Chen · Omar Ghattas

In Poster Session 6

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## **Lipschitz Bounds and Provably Robust Training by Laplacian Smoothing**

Vishaal Krishnan · Abed AlRahman Al Makdah · Fabio Pasqualetti

In Poster Session 6

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## **SnapBoost: A Heterogeneous Boosting Machine**

Thomas Parnell · Andreea Anghel · Małgorzata Łazuka · Nikolas Ioannou · Sebastian Kurella · Peshal Agarwal · In Poster Session 6  
Nikolaos Papandreou · Haris Pozidis

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1485

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## **The Wasserstein Proximal Gradient Algorithm**

Adil Salim · Anna Korba · Giulia Luise

In Poster Session 6

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## **Unbalanced Sobolev Descent**

Youssef Mroueh · Mattia Rigotti

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1487

Poster

## **Steering Distortions to Preserve Classes and Neighbors in Supervised Dimensionality Reduction**

Benoit Colange · Jaakko Peltonen · Michael Aupetit · Denys Dutykh · Sylvain Lépinat

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1488

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## **Multiparameter Persistence Image for Topological Machine Learning**

Mathieu Carrière · Andrew Blumberg

In Poster Session 6

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## **Learning with Differentiable Perturbed Optimizers**

Quentin Berthet · Mathieu Blondel · Olivier Teboul · Marco Cuturi · Jean-Philippe Vert · Francis Bach

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1490

Poster

## **Learning with Optimized Random Features: Exponential Speedup by Quantum Machine**

### **Learning without Sparsity and Low-Rank Assumptions**

Hayata Yamasaki · Sathyawageeswar Subramanian · Sho Sonoda · Masato Koashi

In Poster Session 6

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## **Learning outside the Black-Box: The pursuit of interpretable models**

Jonathan Crabbe · Yao Zhang · William Zame · Mihaela van der Schaar

In Poster Session 6

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## **Variance Reduction via Accelerated Dual Averaging for Finite-Sum Optimization**

Chaobing Song · Yong Jiang · Yi Ma

In Poster Session 6

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## **Random Reshuffling is Not Always Better**

Christopher De Sa

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1494

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## **Optimistic Dual Extrapolation for Coherent Non-monotone Variational Inequalities**

Chaobing Song · Zhengyuan Zhou · Yichao Zhou · Yong Jiang · Yi Ma

In Poster Session 6

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## **Convergence of Meta-Learning with Task-Specific Adaptation over Partial Parameters**

Kaiyi Ji · Jason Lee · Yingbin Liang · H. Vincent Poor

In Poster Session 6

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## **Online Sinkhorn: Optimal Transport distances from sample streams**

Arthur Mensch · Gabriel Peyré

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1497

Poster

## **A Non-Asymptotic Analysis for Stein Variational Gradient Descent**

Anna Korba · Adil Salim · Michael Arbel · Giulia Luise · Arthur Gretton

In Poster Session 6

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Poster

## **SVGD as a kernelized Wasserstein gradient flow of the chi-squared divergence**

Sinno Chewi · Thibaut Le Gouic · Chen Lu · Tyler Maunu · Philippe Rigollet

In Poster Session 6

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## **Lifelong Policy Gradient Learning of Factored Policies for Faster Training Without Forgetting**

Jorge Mendez · Boyu Wang · Eric Eaton

In Poster Session 6

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<b>The NetHack Learning Environment</b> Heinrich Küttler · Nantas Nardelli · Alexander Miller · Roberta Raileanu · Marco Selvatici · Edward Grefenstette · In Poster Session 6 Tim Rocktäschel	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1501	Poster
<b>Discovering Reinforcement Learning Algorithms</b> Junhyuk Oh · Matteo Hessel · Wojciech Czarnecki · Zhongwen Xu · Hado van Hasselt · Satinder Singh · David Silver	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1502	Poster
<b>Latent World Models For Intrinsically Motivated Exploration</b> Aleksandr Ermolov · Nicu Sebe	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1503	Poster
<b>Promoting Coordination through Policy Regularization in Multi-Agent Deep Reinforcement Learning</b> Julien Roy · Paul Barde · Félix Harvey · Derek Nowrouzezahrai · Chris Pal	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1504	Poster
<b>Shared Experience Actor-Critic for Multi-Agent Reinforcement Learning</b> Filippos Christianos · Lukas Schäfer · Stefano Albrecht	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1505	Poster
<b>Learning to Incentivize Other Learning Agents</b> Jiachen Yang · Ang Li · Mehrdad Farajtabar · Peter Sunehag · Edward Hughes · Hongyuan Zha	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1506	Poster
<b>Calibration of Shared Equilibria in General Sum Partially Observable Markov Games</b> Nelson Vadori · Sumitra Ganesh · Prashant Reddy · Manuela Veloso	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1507	Poster
<b>A game-theoretic analysis of networked system control for common-pool resource management using multi-agent reinforcement learning</b> Arnu Pretorius · Scott Cameron · Elan van Biljon · Thomas Makkink · Shahil Mawjee · Jeremy du Plessis · Jonathan Shock · Alex Laterre · Karim Beguir	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1508	Poster
<b>Learning to Play No-Press Diplomacy with Best Response Policy Iteration</b> Thomas Anthony · Tom Eccles · Andrea Tacchetti · János Kramár · Ian Gemp · Thomas Hudson · Nicolas Porcel · Marc Lanctot · Julien Perolat · Richard Everett · Satinder Singh · Thore Graepel · Yoram Bachrach	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1509	Poster
<b>A Boolean Task Algebra for Reinforcement Learning</b> Geraud Nangue Tasse · Steven James · Benjamin Rosman	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1510	Poster
<b>Knowledge Transfer in Multi-Task Deep Reinforcement Learning for Continuous Control</b> Zhiyuan Xu · Kun Wu · Zhengping Che · Jian Tang · Jieping Ye	In Poster Session 6
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<b>Munchausen Reinforcement Learning</b>	

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1512

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**Information-theoretic Task Selection for Meta-Reinforcement Learning**

Ricardo Luna Gutierrez · Matteo Leonetti

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1513

Poster

**Automatic Curriculum Learning through Value Disagreement**

Yunzhi Zhang · Pieter Abbeel · Lerrel Pinto

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1514

Poster

**Combining Deep Reinforcement Learning and Search for Imperfect-Information Games**

Noam Brown · Anton Bakhtin · Adam Lerer · Qucheng Gong

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1515

Poster

**Matrix Completion with Quantified Uncertainty through Low Rank Gaussian Copula**

Yuxuan Zhao · Madeleine Udell

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1516

Poster

**Learning to Prove Theorems by Learning to Generate Theorems**

Mingze Wang · Jia Deng

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1517

Poster

**CHIP: A Hawkes Process Model for Continuous-time Networks with Scalable and Consistent Estimation**

Makan Arastui · Subhadeep Paul · Kevin Xu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1518

Poster

**Probabilistic Inference with Algebraic Constraints: Theoretical Limits and Practical Approximations**

Zhe Zeng · Paolo Morettin · Fanqi Yan · Antonio Vergari · Guy Van den Broeck

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1519

Poster

**Reasoning about Uncertainties in Discrete-Time Dynamical Systems using Polynomial Forms.**

Sriram Sankaranarayanan · Yi Chou · Eric Goubault · Sylvie Putot

In Poster Session 6

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Poster

**Taming Discrete Integration via the Boon of Dimensionality**

Jeffrey Dudek · Dror Fried · Kuldeep S Meel

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1521

Poster

**Belief Propagation Neural Networks**

Jonathan Kuck · Shuvam Chakraborty · Hao Tang · Rachel Luo · Jiaming Song · Ashish Sabharwal · Stefano Ermon

In Poster Session 6

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**Scalable Belief Propagation via Relaxed Scheduling**

Vitalii Aksenov · Dan Alistarh · Janne H. Korhonen

In Poster Session 6

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Poster

**Probabilistic Circuits for Variational Inference in Discrete Graphical Models**

Andy Shih · Stefano Ermon

In Poster Session 6

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<b>Towards Scalable Bayesian Learning of Causal DAGs</b>	In Poster Session 6
Jussi Viinikka · Antti Hyttinen · Johan Pensar · Mikko Koivisto	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1525	Poster
<b>A Novel Approach for Constrained Optimization in Graphical Models</b>	In Poster Session 6
Sara Rouhani · Tahrima Rahman · Vibhav Gogate	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1526	Poster
<b>DAGs with No Fears: A Closer Look at Continuous Optimization for Learning Bayesian Networks</b>	In Poster Session 6
Dennis Wei · Tian Gao · Yue Yu	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1527	Poster
<b>Factor Graph Grammars</b>	In Poster Session 6
David Chiang · Darcey Riley	
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<b>Efficient Learning of Discrete Graphical Models</b>	In Poster Session 6
Marc Vuffray · Sidhant Misra · Andrey Lokhov	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1529	Poster
<b>Online Bayesian Goal Inference for Boundedly Rational Planning Agents</b>	In Poster Session 6
Tan Zhi-Xuan · Jordyn Mann · Tom Silver · Josh Tenenbaum · Vikash Mansinghka	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1530	Poster
<b>Greedy inference with structure-exploiting lazy maps</b>	In Poster Session 6
Michael Brennan · Daniele Bigoni · Olivier Zahm · Alessio Spantini · Youssef Marzouk	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1531	Poster
<b>Biologically Inspired Mechanisms for Adversarial Robustness</b>	In Poster Session 6
Manish Reddy Vuyyuru · Andrzej Banburski · Nishka Pant · Tomaso Poggio	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1532	Poster
<b>Bayes Consistency vs. H-Consistency: The Interplay between Surrogate Loss Functions and the Scoring Function Class</b>	In Poster Session 6
Mingyan Zhang · Shivani Agarwal	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1533	Poster
<b>Training Normalizing Flows with the Information Bottleneck for Competitive Generative Classification</b>	In Poster Session 6
Lynton Ardizzone · Radek Mackowiak · Carsten Rother · Ullrich Köthe	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1534	Poster
<b>Meta-Learning Stationary Stochastic Process Prediction with Convolutional Neural Processes</b>	In Poster Session 6
Andrew Foong · Wessel Bruinsma · Jonathan Gordon · Yann Dubois · James Requeima · Richard Turner	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1535	Poster
<b>A Unified View of Label Shift Estimation</b>	In Poster Session 6
Saurabh Garg · Yifan Wu · Sivaraman Balakrishnan · Zachary Lipton	

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1536

Poster

## **Calibrating Deep Neural Networks using Focal Loss**

Jishnu Mukhoti · Viveka Kulharia · Amartya Sanyal · Stuart Golodetz · Philip Torr · Puneet Dokania

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1537

Poster

## **Distribution-free binary classification: prediction sets, confidence intervals and calibration**

Chirag Gupta · Aleksandr Podkopaev · Aaditya Ramdas

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1538

Poster

## **Log-Likelihood Ratio Minimizing Flows: Towards Robust and Quantifiable Neural Distribution Alignment**

Ben Usman · Avneesh Sud · Nick Dufour · Kate Saenko

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1539

Poster

## **Your GAN is Secretly an Energy-based Model and You Should Use Discriminator Driven Latent Sampling**

Tong Che · Ruixiang ZHANG · Jascha Sohl-Dickstein · Hugo Larochelle · Liam Paull · Yuan Cao · Yoshua Bengio In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1540

Poster

## **Exchangeable Neural ODE for Set Modeling**

Yang Li · Haidong Yi · Chris Bender · Siyuan Shan · Junier Oliva

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1541

Poster

## **Understanding Anomaly Detection with Deep Invertible Networks through Hierarchies of Distributions and Features**

Robin Schirrmeister · Yuxuan Zhou · Tonio Ball · Dan Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1542

Poster

## **Further Analysis of Outlier Detection with Deep Generative Models**

Ziyu Wang · Bin Dai · David P Wipf · Jun Zhu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1543

Poster

## **Sample Complexity of Uniform Convergence for Multicalibration**

Eliran Shabat · Lee Cohen · Yishay Mansour

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1544

Poster

## **Certifiably Adversarially Robust Detection of Out-of-Distribution Data**

Julian Bitterwolf · Alexander Meinke · Matthias Hein

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1545

Poster

## **Can I Trust My Fairness Metric? Assessing Fairness with Unlabeled Data and Bayesian Inference**

Disi Ji · Padhraic Smyth · Mark Steyvers

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1546

Poster

## **Towards Maximizing the Representation Gap between In-Domain & Out-of-Distribution Examples**

Jay Nandy · Wynne Hsu · Mong Li Lee

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1547

Poster

## **Reducing Adversarially Robust Learning to Non-Robust PAC Learning**

Omar Montasser · Steve Hanneke · Nati Srebro

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1548

Poster

## **Tensor Completion Made Practical**

Allen Liu · Ankur Moitra

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1549

Poster

## **Online Matrix Completion with Side Information**

Mark Herbster · Stephen Pasteris · Lisa Tse

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1550

Poster

## **Truncated Linear Regression in High Dimensions**

Constantinos Daskalakis · Dhruv Rohatgi · Emmanouil Zampetakis

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1551

Poster

## **Finer Metagenomic Reconstruction via Biodiversity Optimization**

Simon Foucart · David Koslicki

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1552

Poster

## **Implicit Regularization in Deep Learning May Not Be Explainable by Norms**

Noam Razin · Nadav Cohen

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1553

Poster

## **On the Tightness of Semidefinite Relaxations for Certifying Robustness to Adversarial Examples**

Richard Y Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1554

Poster

## **Towards a Better Global Loss Landscape of GANs**

Ruoyu Sun · Tiantian Fang · Alex Schwing

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1555

Poster

## **Implicit Regularization and Convergence for Weight Normalization**

Xiaoxia (Shirley) Wu · Edgar Dobriban · Tongzheng Ren · Shanshan Wu · Zhiyuan Li · Suriya Gunasekar ·  
Rachel Ward · Qiang Liu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1556

Poster

## **Most ReLU Networks Suffer from $\ell^2$ Adversarial Perturbations**

Amit Daniely · Hadas Shacham

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1557

Poster

## **Geometric Exploration for Online Control**

Orestis Plevrakis · Elad Hazan

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1558

Poster

## **The Smoothed Possibility of Social Choice**

Lirong Xia

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1559

Poster

## **Optimally Deceiving a Learning Leader in Stackelberg Games**

Georgios Birmpas · Jiarui Gan · Alexandros Hollender · Francisco Marmolejo · Ninad Rajgopal · Alexandros Voudouris

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1560	Poster
<b>Explainable Voting</b> Dominik Peters · Ariel Procaccia · Alexandros Psomas · Zixin Zhou	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1561	Poster
<b>Optimization and Generalization of Shallow Neural Networks with Quadratic Activation Functions</b> Stefano Sarao Mannelli · Eric Vanden-Eijnden · Lenka Zdeborová	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1562	Poster
<b>Overfitting Can Be Harmless for Basis Pursuit, But Only to a Degree</b> Peizhong Ju · Xiaojun Lin · Jia Liu	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1563	Poster
<b>A Benchmark for Systematic Generalization in Grounded Language Understanding</b> Laura Ruis · Jacob Andreas · Marco Baroni · Diane Bouchacourt · Brenden Lake	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1564	Poster
<b>Direct Feedback Alignment Scales to Modern Deep Learning Tasks and Architectures</b> Julien Launay · Iacopo Poli · François Boniface · Florent Krzakala	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1565	Poster
<b>Kernelized information bottleneck leads to biologically plausible 3-factor Hebbian learning in deep networks</b> Roman Pogodin · Peter E Latham	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1566	Poster
<b>Meta-Learning through Hebbian Plasticity in Random Networks</b> Elias Najarro · Sebastian Risi	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1567	Poster
<b>Stable and expressive recurrent vision models</b> Drew Linsley · Alekh Karkada Ashok · Lakshmi Narasimhan Govindarajan · Rex Liu · Thomas Serre	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1568	Poster
<b>Identifying Learning Rules From Neural Network Observables</b> Aran Nayebi · Sanjana Srivastava · Surya Ganguli · Daniel Yamins	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1569	Poster
<b>Deep active inference agents using Monte-Carlo methods</b> Zafeirios Fountas · Noor Sajid · Pedro Mediano · Karl Friston	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1570	Poster
<b>Learning Compositional Rules via Neural Program Synthesis</b> Maxwell Nye · Armando Solar-Lezama · Josh Tenenbaum · Brenden Lake	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1571	Poster
<b>A Local Temporal Difference Code for Distributional Reinforcement Learning</b> Pablo Tano · Peter Dayan · Alexandre Pouget	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1572	Poster
<b>Inferring learning rules from animal decision-making</b>	

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1573

Poster

**A Biologically Plausible Neural Network for Slow Feature Analysis**

David Lipshutz · Charles Windolf · Siavash Golkar · Dmitri Chklovskii

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1574

Poster

**R-learning in actor-critic model offers a biologically relevant mechanism for sequential decision-making**

Sergey Shubaev · Sarah Starosta · Duda Kvitsiani · Adam Kepcs · Alexei Koulakov

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1575

Poster

**Deep Graph Pose: a semi-supervised deep graphical model for improved animal pose tracking**

Anqi Wu · Kelly Buchanan · Matthew Whiteway · Michael Schartner · Guido Meijer · Jean-Paul Noel · Erica Rodriguez · Claire Everett · Amy Norovich · Evan Schaffer · Neeli Mishra · C. Daniel Salzman · Dora Angelaki · Andrés Bendesky · The International Brain Laboratory · The International Brain Laboratory · John Cunningham · Liam Paninski

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1576

Poster

**Characterizing emergent representations in a space of candidate learning rules for deep networks**

Yinan Cao · Christopher Summerfield · Andrew Saxe

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1577

Poster

**A simple normative network approximates local non-Hebbian learning in the cortex**

Siavash Golkar · David Lipshutz · Yanis Bahroun · Anirvan Sengupta · Dmitri Chklovskii

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1578

Poster

**A meta-learning approach to (re)discover plasticity rules that carve a desired function into a neural network**

Basile Confavreux · Friedemann Zenke · Everton Agnes · Timothy Lillicrap · Tim Vogels

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1579

Poster

**Detection as Regression: Certified Object Detection with Median Smoothing**

Ping-yeh Chiang · Michael Curry · Ahmed Abdelkader · Aounon Kumar · John Dickerson · Tom Goldstein

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1580

Poster

**Certifying Confidence via Randomized Smoothing**

Aounon Kumar · Alexander Levine · Soheil Feizi · Tom Goldstein

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1581

Poster

**Reliable Graph Neural Networks via Robust Aggregation**

Simon Geisler · Daniel Zügner · Stephan Günnemann

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1582

Poster

**PLlay: Efficient Topological Layer based on Persistent Landscapes**

Kwangho Kim · Jisu Kim · Manzil Zaheer · Joon Kim · Frederic Chazal · Larry Wasserman

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1583

Poster

**Network Diffusions via Neural Mean-Field Dynamics**

shushan He · Hongyuan Zha · Xiaojing Ye

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1584

Poster

## **Learning the Geometry of Wave-Based Imaging**

Konik Kothari · Maarten de Hoop · Ivan Dokmanić

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1585

Poster

## **Neuron Shapley: Discovering the Responsible Neurons**

Amirata Ghorbani · James Zou

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1586

Poster

## **Certified Robustness of Graph Convolution Networks for Graph Classification under Topological Attacks**

Hongwei Jin · Zhan Shi · Ashish Peruri · Xinhua Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1587

Poster

## **Sharp Representation Theorems for ReLU Networks with Precise Dependence on Depth**

Guy Bresler · Dheeraj Nagaraj

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1588

Poster

## **Temporal Spike Sequence Learning via Backpropagation for Deep Spiking Neural Networks**

Wenrui Zhang · Peng Li

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1589

Poster

## **Likelihood Regret: An Out-of-Distribution Detection Score For Variational Auto-encoder**

Zhisheng Xiao · Qing Yan · Yali Amit

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1590

Poster

## **Sample-Efficient Optimization in the Latent Space of Deep Generative Models via Weighted Retraining**

Austin Tripp · Erik Daxberger · Jose Miguel Hernández-Lobato

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1591

Poster

## **Discovering Symbolic Models from Deep Learning with Inductive Biases**

Miles Cranmer · Alvaro Sanchez Gonzalez · Peter Battaglia · Rui Xu · Kyle Cranmer · David Spergel · Shirley Ho In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1592

Poster

## **Compositional Explanations of Neurons**

Jesse Mu · Jacob Andreas

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1593

Poster

## **Automatic Perturbation Analysis for Scalable Certified Robustness and Beyond**

Kaidi Xu · Zhouxing Shi · Huan Zhang · Yihan Wang · Kai-Wei Chang · Minlie Huang · Bhavya Kailkhura · Xue Lin · Cho-Jui Hsieh In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1594

Poster

## **Over-parameterized Adversarial Training: An Analysis Overcoming the Curse of Dimensionality**

Yi Zhang · Orestis Plevrakis · Simon Du · Xingguo Li · Zhao Song · Sanjeev Arora

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1595

Poster

## **Telescoping Density-Ratio Estimation**

Benjamin Rhodes · Kai Xu · Michael Gutmann

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1596

Poster

## **On Testing of Samplers**

Kuldeep S Meel · Yash Pralhad Pote · Sourav Chakraborty

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1597

Poster

## **Path Sample-Analytic Gradient Estimators for Stochastic Binary Networks**

Alexander Shekhovtsov · Viktor Yanush · Boris Flach

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1598

Poster

## **Deep Direct Likelihood Knockoffs**

Mukund Sudarshan · Wesley Tansey · Rajesh Ranganath

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1599

Poster

## **Generalised Bayesian Filtering via Sequential Monte Carlo**

Ayman Boustati · Ö. Deniz Akyildiz · Theo Damoulas · Adam Johansen

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1600

Poster

## **Feature Shift Detection: Localizing Which Features Have Shifted via Conditional Distribution Tests**

Sean Kulinski · Saurabh Bagchi · David Inouye

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1601

Poster

## **Bayesian Optimization of Risk Measures**

Sait Cakmak · Raul Astudillo · Peter Frazier · Enlu Zhou

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1602

Poster

## **Differentiable Expected Hypervolume Improvement for Parallel Multi-Objective Bayesian Optimization**

Sam Daulton · Max Balandat · Eytan Bakshy

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1603

Poster

## **Variance reduction for Random Coordinate Descent-Langevin Monte Carlo**

ZHIYAN DING · Qin Li

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1604

Poster

## **A Contour Stochastic Gradient Langevin Dynamics Algorithm for Simulations of Multi-modal Distributions**

Wei Deng · Guang Lin · Faming Liang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1605

Poster

## **Sequential Bayesian Experimental Design with Variable Cost Structure**

Sue Zheng · David Hayden · Jason Pacheco · John Fisher III

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1606

Poster

## **Asymptotically Optimal Exact Minibatch Metropolis-Hastings**

Ruqi Zhang · A. Feder Cooper · Christopher De Sa

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1607

Poster

## **Primal Dual Interpretation of the Proximal Stochastic Gradient Langevin Algorithm**

Adil Salim · Peter Richtarik

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1608

Poster

## **Replica-Exchange Nos'l'e-Hoover Dynamics for Bayesian Learning on Large Datasets**

Rui Luo · Qiang Zhang · Yaodong Yang · Jun Wang

In Poster Session 6

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<b>Stein Self-Repulsive Dynamics: Benefits From Past Samples</b>	
Mao Ye · Tongzheng Ren · Qiang Liu	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1610	Poster
<b>Neural Bridge Sampling for Evaluating Safety-Critical Autonomous Systems</b>	
Aman Sinha · Matthew O'Kelly · Russ Tedrake · John Duchi	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1611	Poster
<b>Sparse Spectrum Warped Input Measures for Nonstationary Kernel Learning</b>	
Anthony Tompkins · Rafael Oliveira · Fabio Ramos	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1612	Poster
<b>Bootstrapping neural processes</b>	
Juho Lee · Yoonho Lee · Jungtaek Kim · Eunho Yang · Sung Ju Hwang · Yee Whye Teh	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1613	Poster
<b>Sparse Learning with CART</b>	
Jason Klusowski	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1614	Poster
<b>Smooth And Consistent Probabilistic Regression Trees</b>	
Sami Alkhouri · Emilie Devijver · Marianne Clausel · Myriam Tami · Eric Gaussier · georges Oppenheim	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1615	Poster
<b>Simple and Principled Uncertainty Estimation with Deterministic Deep Learning via Distance Awareness</b>	
Jeremiah Liu · Zi Lin · Shreyas Padhy · Dustin Tran · Tania Bedrax Weiss · Balaji Lakshminarayanan	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1616	Poster
<b>Bayesian Deep Ensembles via the Neural Tangent Kernel</b>	
Bobby He · Balaji Lakshminarayanan · Yee Whye Teh	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1617	Poster
<b>Predictive inference is free with the jackknife+-after-bootstrap</b>	
Byol Kim · Chen Xu · Rina Barber	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1618	Poster
<b>Hyperparameter Ensembles for Robustness and Uncertainty Quantification</b>	
Florian Wenzel · Jasper Snoek · Dustin Tran · Rodolphe Jenatton	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1619	Poster
<b>Depth Uncertainty in Neural Networks</b>	
Javier Antoran · James Allingham · Jose Miguel Hernández-Lobato	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1620	Poster
<b>A Bayesian Perspective on Training Speed and Model Selection</b>	
Clare Lyle · Lisa Schut · Robin Ru · Yarin Gal · Mark van der Wilk	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1621	Poster
<b>Learning under Model Misspecification: Applications to Variational and Ensemble methods</b>	

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1622	Poster
<b>Counterfactual Predictions under Runtime Confounding</b>	
Amanda Coston · Edward Kennedy · Alexandra Chouldechova	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1623	Poster
<b>Matérn Gaussian Processes on Riemannian Manifolds</b>	
Viacheslav Borovitskiy · Alexander Terenin · Peter Mostowsky · Marc Deisenroth	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1624	Poster
<b>Stationary Activations for Uncertainty Calibration in Deep Learning</b>	
Lassi Meronen · Christabella Irwanto · Arno Solin	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1625	Poster
<b>Task-Agnostic Amortized Inference of Gaussian Process Hyperparameters</b>	
Sulin Liu · Xingyuan Sun · Peter J Ramadge · Ryan Adams	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1626	Poster
<b>On the Expressiveness of Approximate Inference in Bayesian Neural Networks</b>	
Andrew Foong · David Burt · Yingzhen Li · Richard Turner	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1627	Poster
<b>The Strong Screening Rule for SLOPE</b>	
Johan Larsson · Małgorzata Bogdan · Jonas Wallin	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1628	Poster
<b>Co-exposure Maximization in Online Social Networks</b>	
Sijing Tu · Cigdem Aslay · Aris Gionis	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1629	Poster
<b>Fast Convergence of Langevin Dynamics on Manifold: Geodesics meet Log-Sobolev</b>	
Xiao Wang · Qi Lei · Ioannis Panageas	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1630	Poster
<b>Memory-Efficient Learning of Stable Linear Dynamical Systems for Prediction and Control</b>	
Giorgos Mamakoukas · Orest Xherija · Todd Murphrey	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1631	Poster
<b>MinMax Methods for Optimal Transport and Beyond: Regularization, Approximation and Numerics</b>	
Luca De Gennaro Aquino · Stephan Eckstein	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1632	Poster
<b>Semialgebraic Optimization for Lipschitz Constants of ReLU Networks</b>	
Tong Chen · Jean Lasserre · Victor Magron · Edouard Pauwels	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1633	Poster
<b>Parabolic Approximation Line Search for DNNs</b>	
Maximus Mutschler · Andreas Zell	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1634	Poster

**Batch normalization provably avoids ranks collapse for randomly initialised deep networks**

Hadi Daneshmand · Daneshmand · Jonas Kohler · Francis Bach · Thomas Hofmann · Aurelien Lucchi

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1635

Poster

**Breaking Reversibility Accelerates Langevin Dynamics for Non-Convex Optimization**

Xuefeng GAO · Mert Gurbuzbalaban · Lingjiong Zhu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1636

Poster

**Tackling the Objective Inconsistency Problem in Heterogeneous Federated Optimization**

Jianyu Wang · Qinghua Liu · Hao Liang · Gauri Joshi · H. Vincent Poor

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1637

Poster

**Conic Descent and its Application to Memory-efficient Optimization over Positive Semidefinite Matrices**

John Duchi · Oliver Hinder · Andrew Naber · Yinyu Ye

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1638

Poster

**A mean-field analysis of two-player zero-sum games**

Carles Domingo-Enrich · Samy Jelassi · Arthur Mensch · Grant Rotskoff · Joan Bruna

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1639

Poster

**Robust Federated Learning: The Case of Affine Distribution Shifts**

Amirhossein Reisizadeh · Farzan Farnia · Ramtin Pedarsani · Ali Jadbabaie

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1640

Poster

**Learning compositional functions via multiplicative weight updates**

Jeremy Bernstein · Jiawei Zhao · Markus Meister · Ming-Yu Liu · Anima Anandkumar · Yisong Yue

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1641

Poster

**Stochastic Optimization for Performative Prediction**

Celestine Mendl-Dünner · Juan Perdomo · Tijana Zrnic · Moritz Hardt

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1642

Poster

**Conformal Symplectic and Relativistic Optimization**

Guilherme Franca · Jeremias Sulam · Daniel Robinson · Rene Vidal

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1643

Poster

**On Power Laws in Deep Ensembles**

Ekaterina Lobacheva · Nadezhda Chirkova · Maxim Kodryan · Dmitry Vetrov

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1644

Poster

**Residual Distillation: Towards Portable Deep Neural Networks without Shortcuts**

Guilin Li · Junlei Zhang · Yunhe Wang · Chuanjian Liu · Matthias Tan · Yunfeng Lin · Wei Zhang · Jiashi Feng · Tong Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1645

Poster

**Bayesian Deep Learning and a Probabilistic Perspective of Generalization**

Andrew Wilson · Pavel Izmailov

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1646

Poster

**Self-Distillation as Instance-Specific Label Smoothing**

Zhilu Zhang · Mert Sabuncu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1647 <b>On the training dynamics of deep networks with <math>L_2</math> regularization</b> Aitor Lewkowycz · Guy Gur-Ari	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1648 <b>Reconciling Modern Deep Learning with Traditional Optimization Analyses: The Intrinsic Learning Rate</b> Zhiyuan Li · Kaifeng Lyu · Sanjeev Arora	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1649 <b>Batch Normalization Biases Residual Blocks Towards the Identity Function in Deep Networks</b> Soham De · Sam Smith	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1650 <b>Numerically Solving Parametric Families of High-Dimensional Kolmogorov Partial Differential Equations via Deep Learning</b> Julius Berner · Markus Dablander · Philipp Grohs	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1651 <b>Bad Global Minima Exist and SGD Can Reach Them</b> Shengchao Liu · Dimitrios Papailiopoulos · Dimitris Achlioptas	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1652 <b>The Surprising Simplicity of the Early-Time Learning Dynamics of Neural Networks</b> Wei Hu · Lechao Xiao · Ben Adlam · Jeffrey Pennington	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1653 <b>Ensemble Distillation for Robust Model Fusion in Federated Learning</b> Tao Lin · Lingjing Kong · Sebastian Stich · Martin Jaggi	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1654 <b>On Warm-Starting Neural Network Training</b> Jordan Ash · Ryan Adams	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1655 <b>Predicting Training Time Without Training</b> Luca Zancato · Alessandro Achille · Avinash Ravichandran · RAHUL Bhotika · Stefano Soatto	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1656 <b>Directional convergence and alignment in deep learning</b> Ziwei Ji · Matus Telgarsky	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1657 <b>Black-Box Ripper: Copying black-box models using generative evolutionary algorithms</b> Antonio Barbalau · Adrian Cosma · Radu Tudor Ionescu · Marius Popescu	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1658 <b>Consistent feature selection for analytic deep neural networks</b> Vu Dinh · Lam Ho	Poster In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1659	Poster

## **Fast Adversarial Robustness Certification of Nearest Prototype Classifiers for Arbitrary Seminorms**

Sascha Saralajew · Lars Holdijk · Thomas Villmann

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1660

Poster

### **Sampling from a $k$ -DPP without looking at all items**

Daniele Calandriello · Michal Derezhinski · Michal Valko

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1661

Poster

### **Optimal Learning from Verified Training Data**

Nicholas Bishop · Long Tran-Thanh · Enrico Gerding

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1662

Poster

### **Empirical Likelihood for Contextual Bandits**

Nikos Karampatziakis · John Langford · Paul Mineiro

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1663

Poster

### **Sufficient dimension reduction for classification using principal optimal transport direction**

Cheng Meng · Jun Yu · Jingyi Zhang · Ping Ma · Wenzuan Zhong

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1664

Poster

### **The Advantage of Conditional Meta-Learning for Biased Regularization and Fine Tuning**

Giulia Denevi · Massimiliano Pontil · Carlo Ciliberto

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1665

Poster

### **On the Role of Sparsity and DAG Constraints for Learning Linear DAGs**

Ignavier Ng · AmirEmad Ghassami · Kun Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1666

Poster

### **Listening to Sounds of Silence for Speech Denoising**

Henry Xu · Rundi Wu · Yuko Ishiwaka · Carl Vondrick · Changxi Zheng

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1667

Poster

### **A Convolutional Auto-Encoder for Haplotype Assembly and Viral Quasispecies Reconstruction**

Ziqi Ke · Haris Vikalo

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1668

Poster

### **Geometric All-way Boolean Tensor Decomposition**

Changlin Wan · Wennan Chang · Tong Zhao · Sha Cao · Chi Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1669

Poster

### **A novel variational form of the Schatten- $p$ quasi-norm**

Paris Giampouras · Rene Vidal · Athanasios Rontogiannis · Benjamin Haeffele

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1670

Poster

### **Distributionally Robust Parametric Maximum Likelihood Estimation**

Viet Anh Nguyen · Xuhui Zhang · Jose Blanchet · Angelos Georghiou

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1671

Poster

### **Adaptive Probing Policies for Shortest Path Routing**

Aditya Bhaskara · Sreenivas Gollapudi · Kostas Kollias · Kamesh Munagala

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1672

Poster

### **Optimal Approximation - Smoothness Tradeoffs for Soft-Max Functions**

Alessandro Epasto · Mohammad Mahdian · Vahab Mirrokni · Emmanouil Zampetakis

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1673

Poster

### **Content Provider Dynamics and Coordination in Recommendation Ecosystems**

Omer Ben-Porat · Itay Rosenberg · Moshe Tennenholz

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1674

Poster

### **Non-parametric Models for Non-negative Functions**

Ulysse Marteau-Ferey · Francis Bach · Alessandro Rudi

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1675

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### **Program Synthesis with Pragmatic Communication**

Yewen Pu · Kevin Ellis · Marta Kryven · Josh Tenenbaum · Armando Solar-Lezama

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1676

Poster

### **Detecting Interactions from Neural Networks via Topological Analysis**

Zirui Liu · Qingquan Song · Kaixiong Zhou · Ting-Hsiang Wang · Ying Shan · Xia Hu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1677

Poster

### **Learning efficient task-dependent representations with synaptic plasticity**

Colin Bredenberg · Eero Simoncelli · Cristina Savin

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1678

Poster

### **Modeling Shared responses in Neuroimaging Studies through MultiView ICA**

Hugo Richard · Luigi Gresele · Aapo Hyvärinen · Bertrand Thirion · Alexandre Gramfort · Pierre Ablin

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1679

Poster

### **Patch2Self: Denoising Diffusion MRI with Self-Supervised Learning**

Shreyas Fadnavis · Joshua Batson · Eleftherios Garyfallidis

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1680

Poster

### **Uncovering the Topology of Time-Varying fMRI Data using Cubical Persistence**

Bastian Rieck · Tristan Yates · Christian Bock · Karsten Borgwardt · Guy Wolf · Nicholas Turk-Browne · Smita Krishnaswamy

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1681

Poster

### **Interpretable multi-timescale models for predicting fMRI responses to continuous natural speech**

Shailee Jain · Vy Vo · Shivangi Mahto · Amanda LeBel · Javier Turek · Alexander Huth

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1682

Poster

### **Learning abstract structure for drawing by efficient motor program induction**

Lucas Tian · Kevin Ellis · Marta Kryven · Josh Tenenbaum

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1683

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### **Mutual exclusivity as a challenge for deep neural networks**

Kanishk Gandhi · Brenden Lake

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1684

Poster

### **Gibbs Sampling with People**

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1685

Poster

**Learning sparse codes from compressed representations with biologically plausible local wiring constraints**

Kion Fallah · Adam A Willats · Ninghao Liu · Christopher Rozell

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1686

Poster

**Shared Space Transfer Learning for analyzing multi-site fMRI data**

Tony Yousefnezhad · Alessandro Selvitella · Daoqiang Zhang · Andrew Greenshaw · Russell Greiner

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1687

Poster

**Modeling Task Effects on Meaning Representation in the Brain via Zero-Shot MEG Prediction**

Mariya Toneva · Otilia Stretcu · Barnabas Poczos · Leila Wehbe · Tom Mitchell

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1688

Poster

**System Identification with Biophysical Constraints: A Circuit Model of the Inner Retina**

Cornelius Schröder · David Klindt · Sarah Strauss · Katrin Franke · Matthias Bethge · Thomas Euler · Philipp Berens

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1689

Poster

**An Unsupervised Information-Theoretic Perceptual Quality Metric**

Sangnie Bhardwaj · Ian Fischer · Johannes Ballé · Troy Chinen

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1690

Poster

**Beyond accuracy: quantifying trial-by-trial behaviour of CNNs and humans by measuring error consistency**

Robert Geirhos · Kristof Meding · Felix A. Wichmann

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1691

Poster

**CoMIR: Contrastive Multimodal Image Representation for Registration**

Nicolas Pielawski · Elisabeth Wetzer · Johan Öfverstedt · Jiahao Lu · Carolina Wählby · Joakim Lindblad · Natasa Sladoje

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1692

Poster

**CrossTransformers: spatially-aware few-shot transfer**

Carl Doersch · Ankush Gupta · Andrew Zisserman

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1693

Poster

**Contrastive learning of global and local features for medical image segmentation with limited annotations**

Krishna Chaitanya · Ertunc Erdil · Neerav Karani · Ender Konukoglu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1694

Poster

**3D Self-Supervised Methods for Medical Imaging**

Aiham Taleb · Winfried Loetzsch · Noel Danz · Julius Severin · Thomas Gaertner · Benjamin Bergner · Christoph Lippert

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1695

Poster

**Unsupervised Learning of Dense Visual Representations**

Pedro O. Pinheiro · Amjad Almahairi · Ryan Benmalek · Florian Golemo · Aaron Courville

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1696	Poster
<b>Demystifying Contrastive Self-Supervised Learning: Invariances, Augmentations and Dataset Biases</b>	
Senthil Purushwalkam · Abhinav Gupta	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1697	Poster
<b>Bootstrap Your Own Latent - A New Approach to Self-Supervised Learning</b>	
Jean-Bastien Grill · Florian Strub · Florent Altché · Corentin Tallec · Pierre Richemond · Elena Buchatskaya · CarlIn Poster Session 6 Doersch · Bernardo Avila Pires · Daniel Guo · Mohammad Gheshlaghi Azar · Bilal Piot · koray kavukcuoglu · Remi Munos · Michal Valko	
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1698	Poster
<b>Unsupervised Learning of Visual Features by Contrasting Cluster Assignments</b>	
Mathilde Caron · Ishan Misra · Julien Mairal · Priya Goyal · Piotr Bojanowski · Armand Joulin	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1699	Poster
<b>LoCo: Local Contrastive Representation Learning</b>	
Yuwen Xiong · Mengye Ren · Raquel Urtasun	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1700	Poster
<b>Self-Adaptively Learning to Demoiré from Focused and Defocused Image Pairs</b>	
Lin Liu · Shanxin Yuan · Jianzhuang Liu · Liping Bao · Gregory Slabaugh · Qi Tian	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1701	Poster
<b>Noise2Same: Optimizing A Self-Supervised Bound for Image Denoising</b>	
Yaochen Xie · Zhengyang Wang · Shuiwang Ji	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1702	Poster
<b>Domain Generalization for Medical Imaging Classification with Linear-Dependency Regularization</b>	
Haoliang Li · Yufei Wang · Renjie Wan · Shiqi Wang · Tie-Qiang Li · Alex Kot	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1703	Poster
<b>Differentiable Augmentation for Data-Efficient GAN Training</b>	
Shengyu Zhao · Zhijian Liu · Ji Lin · Jun-Yan Zhu · Song Han	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1704	Poster
<b>Comprehensive Attention Self-Distillation for Weakly-Supervised Object Detection</b>	
Zeyi Huang · Yang Zou · B. V. K. Vijaya Kumar · Dong Huang	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1705	Poster
<b>ContraGAN: Contrastive Learning for Conditional Image Generation</b>	
Minguk Kang · Jaesik Park	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1706	Poster
<b>Inverting Gradients - How easy is it to break privacy in federated learning?</b>	
Jonas Geiping · Hartmut Bauermeister · Hannah Dröge · Michael Moeller	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1707	Poster
<b>Principal Neighbourhood Aggregation for Graph Nets</b>	
Gabriele Corso · Luca Cavalleri · Dominique Beaini · Pietro Liò · Petar Veličković	In Poster Session 6
Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1708	Poster

## **Learning Graph Structure With A Finite-State Automaton Layer**

Daniel D. Johnson · Hugo Larochelle · Daniel Tarlow

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1709

Poster

## **Graph Cross Networks with Vertex Infomax Pooling**

Maosen Li · Siheng Chen · Ya Zhang · Ivor Tsang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1710

Poster

## **How hard is to distinguish graphs with graph neural networks?**

Andreas Loukas

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1711

Poster

## **Weisfeiler and Leman go sparse: Towards scalable higher-order graph embeddings**

Christopher Morris · Gaurav Rattan · Petra Mutzel

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1712

Poster

## **COPT: Coordinated Optimal Transport on Graphs**

Yihe Dong · Will Sawin

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1713

Poster

## **Building powerful and equivariant graph neural networks with structural message-passing**

Clément Vignac · Andreas Loukas · Pascal Frossard

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1714

Poster

## **Rethinking pooling in graph neural networks**

Diego Mesquita · Amauri Souza · Samuel Kaski

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1715

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## **Random Walk Graph Neural Networks**

Giannis Nikolentzos · Michalis Vazirgiannis

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1716

Poster

## **Path Integral Based Convolution and Pooling for Graph Neural Networks**

Zheng Ma · Junyu Xuan · Yu Guang Wang · Ming Li · Pietro Liò

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1717

Poster

## **Iterative Deep Graph Learning for Graph Neural Networks: Better and Robust Node Embeddings**

Yu Chen · Lingfei Wu · Mohammed Zaki

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1718

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## **Towards Deeper Graph Neural Networks with Differentiable Group Normalization**

Kaixiong Zhou · Xiao Huang · Yuening Li · Daochen Zha · Rui Chen · Xia Hu

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1719

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## **Graphon Neural Networks and the Transferability of Graph Neural Networks**

Luana Ruiz · Luiz Chamon · Alejandro Ribeiro

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1720

Poster

## **Convergence and Stability of Graph Convolutional Networks on Large Random Graphs**

Nicolas Keriven · Alberto Bietti · Samuel Vaïter

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1721

Poster

## **GNNGuard: Defending Graph Neural Networks against Adversarial Attacks**

Xiang Zhang · Marinka Zitnik

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1722

Poster

## **Parameterized Explainer for Graph Neural Network**

Dongsheng Luo · Wei Cheng · Dongkuan Xu · Wenchao Yu · Bo Zong · Haifeng Chen · Xiang Zhang

In Poster Session 6

Thu Dec 10 09:00 AM -- 11:00 AM (PST) @ Poster Session 5 #1831

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## **Confounding-Robust Policy Evaluation in Infinite-Horizon Reinforcement Learning**

Nathan Kallus · Angela Zhou

In Poster Session 6

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1251

Poster

## **Linear-Sample Learning of Low-Rank Distributions**

Ayush Jain · Alon Orlitsky

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1320

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## **Glance and Focus: a Dynamic Approach to Reducing Spatial Redundancy in Image Classification**

Yulin Wang · Kangchen Lv · Rui Huang · Shiji Song · Le Yang · Gao Huang

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1724

Poster

## **Multi-label classification: do Hamming loss and subset accuracy really conflict with each other?**

Guoqiang Wu · Jun Zhu

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1725

Poster

## **Generalization Bound of Gradient Descent for Non-Convex Metric Learning**

MINGZHI DONG · Xiaochen Yang · Rui Zhu · Yujiang Wang · Jing-Hao Xue

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1726

Poster

## **On the Optimal Weighted $\ell_2$ Regularization in Overparameterized Linear Regression**

Denny Wu · Ji Xu

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1727

Poster

## **Learning to Approximate a Bregman Divergence**

Ali Siahkamari · XIDE XIA · Venkatesh Saligrama · David Castaño · Brian Kulis

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1728

Poster

## **Spectra of the Conjugate Kernel and Neural Tangent Kernel for linear-width neural networks**

Zhou Fan · Zhichao Wang

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1729

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## **Deep learning versus kernel learning: an empirical study of loss landscape geometry and the time evolution of the Neural Tangent Kernel**

Stanislav Fort · Gintare Karolina Dziugaite · Mansheej Paul · Sepideh Kharaghani · Dan Roy · Surya Ganguli

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1730

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## **Learning to solve TV regularised problems with unrolled algorithms**

Hamza Cherkaoui · Jeremias Sulam · Thomas Moreau

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1731

Poster

## **Projection Efficient Subgradient Method and Optimal Nonsmooth Frank-Wolfe Method**

Kiran Thekumpampil · Prateek Jain · Praneeth Netrapalli · Sewoong Oh

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1732

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## **Neural Networks Learning and Memorization with (almost) no Over-Parameterization**

Amit Daniely

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1733

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## **From Boltzmann Machines to Neural Networks and Back Again**

Surbhi Goel · Adam Klivans · Frederic Koehler

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1734

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## **Learning Some Popular Gaussian Graphical Models without Condition Number Bounds**

Jonathan Kelner · Frederic Koehler · Raghu Meka · Ankur Moitra

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1735

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## **Fixed-Support Wasserstein Barycenters: Computational Hardness and Fast Algorithm**

Darren Lin · Nhat Ho · Xi Chen · Marco Cuturi · Michael Jordan

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1736

Poster

## **Projection Robust Wasserstein Distance and Riemannian Optimization**

Darren Lin · Chenyou Fan · Nhat Ho · Marco Cuturi · Michael Jordan

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1737

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## **Theoretical Insights Into Multiclass Classification: A High-dimensional Asymptotic View**

Christos Thrampoulidis · oymak Oymak · Mahdi Soltanolkotabi

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1738

Poster

## **Minimax Bounds for Generalized Linear Models**

Kuan-Yun Lee · Thomas Courtade

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1739

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## **Generalization bound of globally optimal non-convex neural network training:**

### **Transportation map estimation by infinite dimensional Langevin dynamics**

Taiji Suzuki

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1740

Poster

## **Deep reconstruction of strange attractors from time series**

William Gilpin

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1741

Poster

## **STEER : Simple Temporal Regularization For Neural ODE**

Arnab Ghosh · Harkirat Behl · Emilien Dupont · Philip Torr · Vinay Namboodiri

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1742

Poster

## **Learning Manifold Implicitly via Explicit Heat-Kernel Learning**

Yufan Zhou · Changyou Chen · Jinhui Xu

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1743

Poster

## **Better Set Representations For Relational Reasoning**

Qian Huang · Horace He · Abhay Singh · Yan Zhang · Ser Nam Lim · Austin Benson

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1744

Poster

## **Intra Order-preserving Functions for Calibration of Multi-Class Neural Networks**

Amir Rahimi · Amirreza Shaban · Ching-An Cheng · Richard I Hartley · Byron Boots

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1745

Poster

## **Model Inversion Networks for Model-Based Optimization**

Aviral Kumar · Sergey Levine

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1746

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## **Variational Amodal Object Completion**

Huan Ling · David Acuna · Karsten Kreis · Seung Wook Kim · Sanja Fidler

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1747

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## **Low Distortion Block-Resampling with Spatially Stochastic Networks**

Sarah Hong · Martin Arjovsky · Darryl Barnhart · Ian Thompson

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1748

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## **Understanding Deep Architecture with Reasoning Layer**

Xinshi Chen · Yufei Zhang · Christoph Reisinger · Le Song

In Poster Session 7

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Poster

## **AdaTune: Adaptive Tensor Program Compilation Made Efficient**

Menghao Li · Minjia Zhang · Chi Wang · Mingqin Li

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1750

Poster

## **CircleGAN: Generative Adversarial Learning across Spherical Circles**

Woohyeon Shim · Minsu Cho

In Poster Session 7

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Poster

## **SoftFlow: Probabilistic Framework for Normalizing Flow on Manifolds**

Hyeongju Kim · Hyeonseung Lee · Woo Hyun Kang · Joun Yeop Lee · Nam Soo Kim

In Poster Session 7

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Poster

## **Improved Techniques for Training Score-Based Generative Models**

Yang Song · Stefano Ermon

In Poster Session 7

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Poster

## **UDH: Universal Deep Hiding for Steganography, Watermarking, and Light Field**

### **Messaging**

Chaoning Zhang · Philipp Benz · Adil Karjauv · Geng Sun · In So Kweon

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1754

Poster

## **Deep Archimedean Copulas**

Chun Kai Ling · Fei Fang · J. Zico Kolter

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1755

Poster

## **Constraining Variational Inference with Geometric Jensen-Shannon Divergence**

Jacob Deasy · Nikola Simidjievski · Pietro Lió

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1756

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## **CO-Optimal Transport**

Titouan Vayer · Ievgen Redko · Rémi Flamary · Nicolas Courty

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1757 <b>OTLDA: A Geometry-aware Optimal Transport Approach for Topic Modeling</b> Viet Huynh · He Zhao · Dinh Phung	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1758 <b>Robust Recursive Partitioning for Heterogeneous Treatment Effects with Uncertainty Quantification</b> Hyun-Suk Lee · Yao Zhang · William Zame · Cong Shen · Jang-Won Lee · Mihaela van der Schaar	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1759 <b>Computing Valid p-value for Optimal Changepoint by Selective Inference using Dynamic Programming</b> Vo Nguyen Le Duy · Hiroki Toda · Ryota Sugiyama · Ichiro Takeuchi	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1760 <b>Improved Variational Bayesian Phylogenetic Inference with Normalizing Flows</b> Cheng Zhang	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1761 <b>HM-ANN: Efficient Billion-Point Nearest Neighbor Search on Heterogeneous Memory</b> Jie Ren · Minjia Zhang · Dong Li	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1762 <b>Noise-Contrastive Estimation for Multivariate Point Processes</b> Hongyuan Mei · Tom Wan · Jason Eisner	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1763 <b>Adaptive Learned Bloom Filter (Ada-BF): Efficient Utilization of the Classifier with Application to Real-Time Information Filtering on the Web</b> Zhenwei Dai · ANSHUMALI Shrivastava	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1764 <b>Nimble: Lightweight and Parallel GPU Task Scheduling for Deep Learning</b> Woosuk Kwon · Gyeong-In Yu · Eunji Jeong · Byung-Gon Chun	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1765 <b>Baxter Permutation Process</b> Masahiro Nakano · Akisato Kimura · Takeshi Yamada · Naonori Ueda	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1766 <b>A mathematical theory of cooperative communication</b> Pei Wang · Junqi Wang · Pushpi Parannamana · Patrick Shafto	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1767 <b>All your loss are belong to Bayes</b> Christian Walder · Richard Nock	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1768 <b>The Potts-Ising model for discrete multivariate data</b> Zahra Razaee · Arash Amini	Poster In Poster Session 7
Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1769	Poster

**Bidirectional Convolutional Poisson Gamma Dynamical Systems**

wenchao chen · Chaojie Wang · Bo Chen · Yicheng Liu · Hao Zhang · Mingyuan Zhou

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1770

Poster

**Variational Bayesian Unlearning**

Quoc Phong Nguyen · Bryan Kian Hsiang Low · Patrick Jaillet

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1771

Poster

**Theory-Inspired Path-Regularized Differential Network Architecture Search**

Pan Zhou · Caiming Xiong · Richard Socher · Steven Hoi

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1772

Poster

**Cream of the Crop: Distilling Prioritized Paths For One-Shot Neural Architecture Search**

Houwen Peng · Hao Du · Hongyuan Yu · Qi Li · Jing Liao · Jianlong Fu

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1773

Poster

**Differentiable Neural Architecture Search in Equivalent Space with Exploration****Enhancement**

Miao Zhang · Huiqi Li · Shirui Pan · Xiaojun Chang · Zongyuan Ge · Steven Su

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1774

Poster

**AutoBSS: An Efficient Algorithm for Block Stacking Style Search**

Yikang Zhang · Jian Zhang · Zhao Zhong

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1775

Poster

**Semi-Supervised Neural Architecture Search**

Renqian Luo · Xu Tan · Rui Wang · Tao Qin · Enhong Chen · Tie-Yan Liu

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1776

Poster

**Does Unsupervised Architecture Representation Learning Help Neural Architecture Search?**

Shen Yan · Yu Zheng · Wei Ao · Xiao Zeng · Mi Zhang

In Poster Session 7

Thu Dec 10 09:00 PM -- 11:00 PM (PST) @ Poster Session 6 #1777

Poster

**A Study on Encodings for Neural Architecture Search**

Colin White · Willie Neiswanger · Sam Nolen · Yash Savani

In Poster Session 7

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**Evolving Normalization-Activation Layers**

Hanxiao Liu · Andy Brock · Karen Simonyan · Quoc V Le

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**Interstellar: Searching Recurrent Architecture for Knowledge Graph Embedding**

Yongqi Zhang · Quanming Yao · Lei Chen

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**Auto Learning Attention**

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**Transferable Graph Optimizers for ML Compilers**

yanqiz Zhou · Sudip Roy · Amirali Abdolrashidi · Daniel Wong · Peter Ma · Qiumin Xu · Hanxiao Liu · Phitchaya Phothilimtha · Shen Wang · Anna Goldie · Azalia Mirhoseini · James Laudon In Poster Session 7

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Guangyao Zhou

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Simone Rossi · Sébastien Marmin · Maurizio Filippone

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Neng Wan · Dapeng Li · NAIRA HOVAKIMYAN

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## **Flexible mean field variational inference using mixtures of non-overlapping exponential families**

Jeffrey Spence

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## **On the Ergodicity, Bias and Asymptotic Normality of Randomized Midpoint Sampling Method**

Ye He · Krishnakumar Balasubramanian · Murat Erdogdu

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## **Improving Online Rent-or-Buy Algorithms with Sequential Decision Making and ML Predictions**

Shom Banerjee

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## **Community detection using fast low-cardinality semidefinite programming<sup>[P]</sup>**

Po-Wei Wang · J. Zico Kolter

In Poster Session 7

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## **Online Optimization with Memory and Competitive Control**

Guanya Shi · Yiheng Lin · Soon-Jo Chung · Yisong Yue · Adam Wierman

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## **Simple and Fast Algorithm for Binary Integer and Online Linear Programming**

Xiaocheng Li · Chunlin Sun · Yinyu Ye

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## **A Single Recipe for Online Submodular Maximization with Adversarial or Stochastic Constraints**

Omid Sadeghi · Prasanna Raut · Maryam Fazel

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Jinlong Lei · Peng Yi · Yiguang Hong · Jie Chen · Guodong Shi

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## **Thunder: a Fast Coordinate Selection Solver for Sparse Learning**

Shaogang Ren · Weijie Zhao · Ping Li

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<b>Deterministic Approximation for Submodular Maximization over a Matroid in Nearly Linear Time</b>	
Kai Han · zongmai Cao · Shuang Cui · Benwei Wu	In Poster Session 7
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**Part-dependent Label Noise: Towards Instance-dependent Label Noise**

Xiaobo Xia · Tongliang Liu · Bo Han · Nannan Wang · Mingming Gong · Haifeng Liu · Gang Niu · Dacheng Tao · In Poster Session 7  
Masashi Sugiyama

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**Digraph Inception Convolutional Networks**

Zekun Tong · Yuxuan Liang · Changsheng Sun · Xinkle Li · David Rosenblum · Andrew Lim

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**What Neural Networks Memorize and Why: Discovering the Long Tail via Influence Estimation**

Vitaly Feldman · Chiyuan Zhang

In Poster Session 7

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**Self-Adaptive Training: beyond Empirical Risk Minimization**

Lang Huang · Chao Zhang · Hongyang Zhang

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**Debugging Tests for Model Explanations**

Julius Adebayo · Michael Muelly · Ilaria Liccardi · Been Kim

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**Point process models for sequence detection in high-dimensional neural spike trains**

Alex Williams · Anthony Degleris · Yixin Wang · Scott Linderman

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**Lamina-specific neuronal properties promote robust, stable signal propagation in feedforward networks**

Dongqi Han · Erik De Schutter · SungHo Hong

In Poster Session 7

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**Reconstructing Perceptive Images from Brain Activity by Shape-Semantic GAN**

Tao Fang · Yu Qi · Gang Pan

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**High-contrast “gaudy” images improve the training of deep neural network models of visual cortex**

Benjamin Cowley · Jonathan Pillow

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**Weakly-Supervised Reinforcement Learning for Controllable Behavior**

Lisa Lee · Benjamin Eysenbach · Russ Salakhutdinov · Shixiang (Shane) Gu · Chelsea Finn

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**Predictive Information Accelerates Learning in RL**

Kuang-Huei Lee · Ian Fischer · Anthony Liu · Yijie Guo · Honglak Lee · John Canny · Sergio Guadarrama

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**The route to chaos in routing games: When is price of anarchy too optimistic?**

Thiparat Chotibut · Fryderyk Falniowski · Michał Misiurewicz · Georgios Piliouras

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**Graph Meta Learning via Local Subgraphs**

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**Graph Information Bottleneck**

Tailin Wu · Hongyu Ren · Pan Li · Jure Leskovec

In Poster Session 7

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**Towards Scale-Invariant Graph-related Problem Solving by Iterative Homogeneous GNNs**

Hao Tang · Zhao Huang · Jiayuan Gu · Bao-Liang Lu · Hao Su

In Poster Session 7

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**Tree! I am no Tree! I am a low dimensional Hyperbolic Embedding**

Rishi Sonthalia · Anna Gilbert

In Poster Session 7

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**Scalable Graph Neural Networks via Bidirectional Propagation**

Ming Chen · Zhewei Wei · Bolin Ding · Yaliang Li · Ye Yuan · Xiaoyong Du · Ji-Rong Wen

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**Neural Message Passing for Multi-Relational Ordered and Recursive Hypergraphs**

Naganand Yadati

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**A graph similarity for deep learning**

Seongmin Ok

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**Implicit Graph Neural Networks**

Fangda Gu · Heng Chang · Wenwu Zhu · Somayeh Sojoudi · Laurent El Ghaoui

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**Self-supervised Auxiliary Learning with Meta-paths for Heterogeneous Graphs**

Dasol Hwang · Jinyoung Park · Sunyoung Kwon · KyungMin Kim · Jung-Woo Ha · Hyunwoo J Kim

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**Disentangling Human Error from Ground Truth in Segmentation of Medical Images**

Le Zhang · Ryu Tanno · Moucheng Xu · Chen Jin · Joseph Jacob · Olga Cicarrelli · Frederik Barkhof · Daniel Alexander

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**Graph Policy Network for Transferable Active Learning on Graphs**

Shengding Hu · Zheng Xiong · Meng Qu · Eric Yuan · Marc-Alexandre Côté · Zhiyuan Liu · Jian Tang

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**Open Graph Benchmark: Datasets for Machine Learning on Graphs**

Weihua Hu · Matthias Fey · Marinka Zitnik · Yuxiao Dong · Hongyu Ren · Bowen Liu · Michele Catasta · Jure Leskovec

In Poster Session 7

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**Factorizable Graph Convolutional Networks**

Yiding Yang · Zunlei Feng · Mingli Song · Xinchao Wang

In Poster Session 7

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## **Graduated Assignment for Joint Multi-Graph Matching and Clustering with Application to Unsupervised Graph Matching Network Learning**

Runzhong Wang · Junchi Yan · Xiaokang Yang

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### **Natural Graph Networks**

Pim de Haan · Taco Cohen · Max Welling

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### **Optimization and Generalization Analysis of Transduction through Gradient Boosting and Application to Multi-scale Graph Neural Networks**

Kenta Oono · Taiji Suzuki

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### **Ridge Rider: Finding Diverse Solutions by Following Eigenvectors of the Hessian**

Jack Parker-Holder · Luke Metz · Cinjon Resnick · Hengyuan Hu · Adam Lerer · Alistair Letcher · Alexander Peysakhovich · Aldo Pacchiano · Jakob Foerster

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### **Sinkhorn Natural Gradient for Generative Models**

Zebang Shen · Zhenfu Wang · Alejandro Ribeiro · Hamed Hassani

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### **Nonconvex Sparse Graph Learning under Laplacian Constrained Graphical Model**

Jiaxi Ying · José Vinícius de Miranda Cardoso · Daniel Palomar

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### **How many samples is a good initial point worth in Low-rank Matrix Recovery?**

Jialun Zhang · Richard Y Zhang

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### **Effective Dimension Adaptive Sketching Methods for Faster Regularized Least-Squares Optimization**

Jonathan Lacotte · Mert Pilancı

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### **Faster Randomized Infeasible Interior Point Methods for Tall/Wide Linear Programs**

Agniva Chowdhury · Palma London · Haim Avron · Petros Drineas

In Poster Session 7

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### **Debiasing Distributed Second Order Optimization with Surrogate Sketching and Scaled Regularization**

Michał Dereżynski · Burak Bartan · Mert Pilancı · Michael Mahoney

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### **Tight last-iterate convergence rates for no-regret learning in multi-player games**

Noah Golowich · Sarath Pattathil · Constantinos Daskalakis

In Poster Session 7

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### **A General Large Neighborhood Search Framework for Solving Integer Linear Programs**

Jialin Song · ANANTHA Ianka · Yisong Yue · Bistra Dilkina

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**Sinkhorn Barycenter via Functional Gradient Descent**

Zebang Shen · Zhenfu Wang · Alejandro Ribeiro · Hamed Hassani

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**Improved Analysis of Clipping Algorithms for Non-convex Optimization**

Bohang Zhang · Jikai Jin · Cong Fang · Liwei Wang

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**A Continuous-Time Mirror Descent Approach to Sparse Phase Retrieval**

Fan Wu · Patrick Rebeschini

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**Federated Accelerated Stochastic Gradient Descent**

Honglin Yuan · Tengyu Ma

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**AdaBelief Optimizer: Adapting Stepsizes by the Belief in Observed Gradients**

Juntang Zhuang · Tommy Tang · Yifan Ding · Sekhar C Tatikonda · Nicha Dvornek · Xenophon Papademetris · James Duncan

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**SGD with shuffling: optimal rates without component convexity and large epoch requirements**

Kwangjun Ahn · Chulhee Yun · Suvrit Sra

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**No-Regret Learning and Mixed Nash Equilibria: They Do Not Mix**

Manolis Vlatakis-Gkaragkounis · Lampros Flokas · Thanasis Lianeas · Panayotis Mertikopoulos · Georgios Piliouras

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**Generalized Leverage Score Sampling for Neural Networks**

Jason Lee · Ruqi Shen · Zhao Song · Mengdi Wang · zheng Yu

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**Passport-aware Normalization for Deep Model Protection**

Jie Zhang · Dongdong Chen · Jing Liao · Weiming Zhang · Gang Hua · Nenghai Yu

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**Model Rubik's Cube: Twisting Resolution, Depth and Width for TinyNets**

Kai Han · Yunhe Wang · QiuLin Zhang · Wei Zhang · Chunjing XU · Tong Zhang

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**Neural Networks Fail to Learn Periodic Functions and How to Fix It**

Liu Ziyin · Tilman Hartwig · Masahito Ueda

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**Finite Versus Infinite Neural Networks: an Empirical Study**

Jaehoon Lee · Sam Schoenholz · Jeffrey Pennington · Ben Adlam · Lechao Xiao · Roman Novak · Jascha Sohl-Dickstein

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## **Understanding Approximate Fisher Information for Fast Convergence of Natural Gradient Descent in Wide Neural Networks**

Ryo Karakida · Kazuki Osawa

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### **Collegial Ensembles**

Etai Littwin · Ben Myara · Sima Sabah · Joshua Susskind · Shuangfei Zhai · Oren Golan

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### **Accelerating Training of Transformer-Based Language Models with Progressive Layer Dropping**

Minjia Zhang · Yuxiong He

In Poster Session 7

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### **Top-k Training of GANs: Improving GAN Performance by Throwing Away Bad Samples**

Samarth Sinha · Zhengli Zhao · Anirudh Goyal ALIAS PARTH GOYAL · Colin A Raffel · Augustus Odena

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### **Towards Theoretically Understanding Why Sgd Generalizes Better Than Adam in Deep Learning**

Pan Zhou · Jiashi Feng · Chao Ma · Caiming Xiong · Steven Hoi · Weinan E

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### **A Generalized Neural Tangent Kernel Analysis for Two-layer Neural Networks**

Zixiang Chen · Yuan Cao · Quanquan Gu · Tong Zhang

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### **Delta-STN: Efficient Bilevel Optimization for Neural Networks using Structured Response Jacobians**

Juhan Bae · Roger Grosse

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### **Coresets for Robust Training of Deep Neural Networks against Noisy Labels**

Baharan Mirzasoleiman · Kaidi Cao · Jure Leskovec

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### **Learning Deep Attribution Priors Based On Prior Knowledge**

Ethan Weinberger · Joe Janizek · Su-In Lee

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### **Estimating Training Data Influence by Tracing Gradient Descent**

Garima Pruthi · Frederick Liu · Satyen Kale · Mukund Sundararajan

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### **Escaping Saddle-Point Faster under Interpolation-like Conditions**

Abhishek Roy · Krishnakumar Balasubramanian · Saeed Ghadimi · Prasant Mohapatra

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### **Learning Loss for Test-Time Augmentation**

Ildoo Kim · Younghoon Kim · Sungwoong Kim

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## **Towards Crowdsourced Training of Large Neural Networks using Decentralized Mixture-of-Experts**

Max Ryabinin · Anton Gusev

In Poster Session 7

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## **MMA Regularization: Decorrelating Weights of Neural Networks by Maximizing the Minimal Angles**

Zhennan Wang · Canqun Xiang · Wenbin Zou · Chen Xu

In Poster Session 7

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## **The Dilemma of TriHard Loss and an Element-Weighted TriHard Loss for Person Re-Identification**

Yihao Lv · Youzhi Gu · Liu Xinggao

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## **Is normalization indispensable for training deep neural network?**

Jie Shao · Kai Hu · Changhu Wang · Xiangyang Xue · Bhiksha Raj

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## **SCOP: Scientific Control for Reliable Neural Network Pruning**

Yehui Tang · Yunhe Wang · Yixing Xu · Dacheng Tao · Chunjing XU · Chao Xu · Chang Xu

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## **Train-by-Reconnect: Decoupling Locations of Weights from Their Values**

Yushi Qiu · Reiji Suda

In Poster Session 7

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## **Deep Metric Learning with Spherical Embedding**

Dingyi Zhang · Yingming Li · Zhongfei Zhang

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## **Kernel Based Progressive Distillation for Adder Neural Networks**

Xixing Xu · Chang Xu · Xinghao Chen · Wei Zhang · Chunjing XU · Yunhe Wang

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## **Top-KAST: Top-K Always Sparse Training**

Sid Jayakumar · Razvan Pascanu · Jack Rae · Simon Osindero · Erich Elsen

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## **Task-Oriented Feature Distillation**

Linfeng Zhang · Yukang Shi · Zuoqiang Shi · Kaisheng Ma · Chenglong Bao

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## **Rotated Binary Neural Network**

Mingbao Lin · Rongrong Ji · Zihan Xu · Baochang Zhang · Yan Wang · Yongjian Wu · Feiyue Huang · Chia-Wen Lin

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## **Agree to Disagree: Adaptive Ensemble Knowledge Distillation in Gradient Space**

Shangchen Du · Shan You · Xiaojie Li · Jianlong Wu · Fei Wang · Chen Qian · Changshui Zhang

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## **Sparse Weight Activation Training**

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**Recurrent Quantum Neural Networks**

Johannes Bausch

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**Efficient Variational Inference for Sparse Deep Learning with Theoretical Guarantee**

Jincheng Bai · Qifan Song · Guang Cheng

In Poster Session 7