Thu Dec 6th

Making Algorithms Trustworthy: What Can Statistical Science Contribute to Transparency, Explanation and Validation?

Thu Dec 6th 08:30 – 09:20 AM @ Rooms 220 CDE
Invited Talk (Breiman Lecture) – In Thu Invited Talk 1
David Spiegelhalter

Coffee Break

Thu Dec 6th 09:20 – 09:45 AM @
Break –

In Thu Track 1 – Session 1

Thu Dec 6th 09:45 – 09:50 AM @ Room 220 CD – Thu Dec 6th 10:40 – 10:45 AM @ Room 220 CD

Learning with SGD and Random Features

Thu Dec 6th 09:45 – 09:50 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Luigi Carratino · Alessandro Rudi · Lorenzo Rosasco
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #127

KONG: Kernels for ordered-neighborhood graphs

Thu Dec 6th 09:50 – 09:55 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Moez Draief · Konstantin Kutzkov · Kevin Scaman · Milan Vojnovic
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #122

Quadrature-based features for kernel approximation

Thu Dec 6th 09:55 – 10:00 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Marina Munkhoeva · Yermek Kapushev · Evgeny Burnaev · Ivan Oseledets
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #130

Statistical and Computational Trade-Offs in Kernel K-Means

Thu Dec 6th 10:00 – 10:05 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Daniele Calandriello · Lorenzo Rosasco
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #129

Integrated accounts of behavioral and neuroimaging data using flexible recurrent neural network models

Thu Dec 6th 10:05 – 10:20 AM @ Room 220 CD
Oral – In Thu Track 1 – Session 1
Amir Dezfouli · Richard Morris · Fabio Ramos · Peter Dayan · Bernard Balleine
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #102

Why Is My Classifier Discriminatory?

Thu Dec 6th 10:20 – 10:25 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Irene Chen · Fredrik Johansson · David Sontag
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #120

Human-in-the-Loop Interpretability Prior

Thu Dec 6th 10:25 – 10:30 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Isaac Lage · Andrew Ross · Samuel J Gershman · Been Kim · Finale Doshi-Velez
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #119

Link Prediction Based on Graph Neural Networks

Thu Dec 6th 10:30 – 10:35 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Muhan Zhang · Yixin Chen
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #121

Realistic Evaluation of Deep Semi-Supervised Learning Algorithms

Thu Dec 6th 10:35 – 10:40 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Avital Oliver · Augustus Odena · Colin A Raffel · Ekin Dogus Cubuk · Ian Goodfellow
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #95

Automatic differentiation in ML: Where we are and where we should be going

Thu Dec 6th 10:40 – 10:45 AM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 1
Bart van Merrienboer · Olivier Breuleux · Arnaud Bergeron · Pascal Lamblin
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #94

In Thu Track 2 – Session 1

Thu Dec 6th 09:45 – 09:50 AM @ Room 220 E – Thu Dec 6th 10:40 – 10:45 AM @ Room 220 E

Graphical model inference: Sequential Monte Carlo meets deterministic approximations

Thu Dec 6th 09:45 – 09:50 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Fredrik Lindsten · Jouni Helske · Matti Vihola
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #51

Boosting Black Box Variational Inference

Thu Dec 6th 09:50 – 09:55 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Francesco Locatello · Gideon Dresdner · Rajiv Khanna · Isabel Valera · Gunnar Raetsch
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #38

Discretely Relaxing Continuous Variables for tractable Variational Inference

Thu Dec 6th 09:55 – 10:00 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Trefor Evans · Prasanth Nair
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #39

Implicit Reparameterization Gradients

Thu Dec 6th 10:00 – 10:05 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Mikhail Figurnov · Shakir Mohamed · Andriy Mnih
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #33

Variational Inference with Tail-adaptive f-Divergence

Thu Dec 6th 10:05 – 10:20 AM @ Room 220 E
Oral – In Thu Track 2 – Session 1
Dilin Wang · Hao Liu · Qiang Liu
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #37

Mirrored Langevin Dynamics

Thu Dec 6th 10:20 – 10:25 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Ya-Ping Hsieh · Ali Kavis · Paul Rolland · Volkan Cevher
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #43

Global Convergence of Langevin Dynamics Based Algorithms for Nonconvex Optimization

Thu Dec 6th 10:25 – 10:30 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Pan Xu · Jinghui Chen · Difan Zou · Quanquan Gu
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #46

Identification and Estimation of Causal Effects from Dependent Data

Thu Dec 6th 10:30 – 10:35 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Eli Sherman · Ilya Shpitser
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #13

Causal Inference via Kernel Deviance Measures

Thu Dec 6th 10:35 – 10:40 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Jovana Mitrovic · Dino Sejdinovic · Yee Whye Teh
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #9

Removing Hidden Confounding by Experimental Grounding

Thu Dec 6th 10:40 – 10:45 AM @ Room 220 E
Spotlight – In Thu Track 2 – Session 1
Nathan Kallus · Aahlad Manas Puli · Uri Shalit
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #2

In Thu Track 3 – Session 1

Thu Dec 6th 09:45 – 09:50 AM @ Room 517 CD – Thu Dec 6th 10:40 – 10:45 AM @ Room 517 CD

Boolean Decision Rules via Column Generation

Thu Dec 6th 09:45 – 09:50 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Sanjeeb Dash · Oktay Gunluk · Dennis Wei
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #79

Fast greedy algorithms for dictionary selection with generalized sparsity constraints

Thu Dec 6th 09:50 – 09:55 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Kaito Fujii · Tasuku Soma
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #78

Distributed k-Clustering for Data with Heavy Noise

Thu Dec 6th 09:55 – 10:00 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Shi Li · Xiangyu Guo
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #73

Do Less, Get More: Streaming Submodular Maximization with Subsampling

Thu Dec 6th 10:00 – 10:05 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Moran Feldman · Amin Karbasi · Ehsan Kazemi
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #75

Optimal Algorithms for Continuous Non-monotone Submodular and DR-Submodular Maximization

Thu Dec 6th 10:05 – 10:20 AM @ Room 517 CD
Oral – In Thu Track 3 – Session 1
Rad Niazadeh · Tim Roughgarden · Joshua Wang
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #76

Overlapping Clustering Models, and One (class) SVM to Bind Them All

Thu Dec 6th 10:20 – 10:25 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Xueyu Mao · Purnamrita Sarkar · Deepayan Chakrabarti
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #114

Removing the Feature Correlation Effect of Multiplicative Noise

Thu Dec 6th 10:25 – 10:30 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Zijun Zhang · Yining Zhang · Zongpeng Li
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #107

Connectionist Temporal Classification with Maximum Entropy Regularization

Thu Dec 6th 10:30 – 10:35 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Hu Liu · Sheng Jin · Changshui Zhang
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #106

Entropy and mutual information in models of deep neural networks

Thu Dec 6th 10:35 – 10:40 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Marylou Gabri? · Andre Manoel · Cl?ment Luneau · jean barbier · Nicolas Macris · Florent Krzakala · Lenka Zdeborov?
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #110

The committee machine: Computational to statistical gaps in learning a two-layers neural network

Thu Dec 6th 10:40 – 10:45 AM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 1
Benjamin Aubin · Antoine Maillard · jean barbier · Florent Krzakala · Nicolas Macris · Lenka Zdeborov?
Poster Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #111

In Thu Poster Session A

Experimental Design for Cost-Aware Learning of Causal Graphs

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #1
Poster – In Thu Poster Session A
Erik Lindgren · Murat Kocaoglu · Alexandros Dimakis · Sriram Vishwanath

Removing Hidden Confounding by Experimental Grounding

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #2
Poster – In Thu Poster Session A
Nathan Kallus · Aahlad Manas Puli · Uri Shalit

Domain Adaptation by Using Causal Inference to Predict Invariant Conditional Distributions

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #3
Poster – In Thu Poster Session A
Sara Magliacane · Thijs van Ommen · Tom Claassen · Stephan Bongers · Philip Versteeg · Joris M Mooij

Structural Causal Bandits: Where to Intervene?

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #4
Poster – In Thu Poster Session A
Sanghack Lee · Elias Bareinboim

Uplift Modeling from Separate Labels

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #5
Poster – In Thu Poster Session A
Ikko Yamane · Florian Yger · Jamal Atif · Masashi Sugiyama

Causal Inference with Noisy and Missing Covariates via Matrix Factorization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #6
Poster – In Thu Poster Session A
Nathan Kallus · Xiaojie Mao · Madeleine Udell

Fast Estimation of Causal Interactions using Wold Processes

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #7
Poster – In Thu Poster Session A
Flavio Figueiredo · Guilherme Resende Borges · Pedro O.S. Vaz de Melo · Renato Assun??o

Learning and Testing Causal Models with Interventions

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #8
Poster – In Thu Poster Session A
Jayadev Acharya · Arnab Bhattacharyya · Constantinos Daskalakis · Saravanan Kandasamy

Causal Inference via Kernel Deviance Measures

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #9
Poster – In Thu Poster Session A
Jovana Mitrovic · Dino Sejdinovic · Yee Whye Teh

Multi-domain Causal Structure Learning in Linear Systems

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #10
Poster – In Thu Poster Session A
AmirEmad Ghassami · Negar Kiyavash · Biwei Huang · Kun Zhang

Causal Inference and Mechanism Clustering of A Mixture of Additive Noise Models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #11
Poster – In Thu Poster Session A
Shoubo Hu · Zhitang Chen · Vahid Partovi Nia · Laiwan CHAN · Yanhui Geng

Direct Estimation of Differences in Causal Graphs

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #12
Poster – In Thu Poster Session A
Yuhao Wang · Chandler Squires · Anastasiya Belyaeva · Caroline Uhler

Identification and Estimation of Causal Effects from Dependent Data

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #13
Poster – In Thu Poster Session A
Eli Sherman · Ilya Shpitser

Multilingual Anchoring: Interactive Topic Modeling and Alignment Across Languages

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #14
Poster – In Thu Poster Session A
Michelle Yuan · Benjamin Van Durme · Jordan Ying

Submodular Field Grammars: Representation, Inference, and Application to Image Parsing

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #15
Poster – In Thu Poster Session A
Abram L Friesen · Pedro Domingos

Autoconj: Recognizing and Exploiting Conjugacy Without a Domain-Specific Language

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #16
Poster – In Thu Poster Session A
Matthew D. Hoffman · Matthew Johnson · Dustin Tran

Distributionally Robust Graphical Models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #17
Poster – In Thu Poster Session A
Rizal Fathony · Ashkan Rezaei · Mohammad Ali Bashiri · Xinhua Zhang · Brian Ziebart

Flexible and accurate inference and learning for deep generative models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #18
Poster – In Thu Poster Session A
Eszter V?rtes · Maneesh Sahani

Provable Gaussian Embedding with One Observation

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #19
Poster – In Thu Poster Session A
Ming Yu · Zhuoran Yang · Tuo Zhao · Mladen Kolar · Princeton Zhaoran Wang

Learning and Inference in Hilbert Space with Quantum Graphical Models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #20
Poster – In Thu Poster Session A
Siddarth Srinivasan · Carlton Downey · Byron Boots

Multi-value Rule Sets for Interpretable Classification with Feature-Efficient Representations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #21
Poster – In Thu Poster Session A
Tong Wang

Nonparametric Bayesian Lomax delegate racing for survival analysis with competing risks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #22
Poster – In Thu Poster Session A
Quan Zhang · Mingyuan Zhou

Theoretical guarantees for EM under misspecified Gaussian mixture models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #23
Poster – In Thu Poster Session A
Raaz Dwivedi · nh?t H? · Koulik Khamaru · Martin Wainwright · Michael Jordan

Nonparametric learning from Bayesian models with randomized objective functions

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #24
Poster – In Thu Poster Session A
Simon Lyddon · Stephen Walker · Chris C Holmes

Rectangular Bounding Process

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #25
Poster – In Thu Poster Session A
Xuhui Fan · Bin Li · Scott SIsson

A Bayesian Nonparametric View on Count-Min Sketch

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #26
Poster – In Thu Poster Session A
Diana Cai · Michael Mitzenmacher · Ryan Adams

Communication Efficient Parallel Algorithms for Optimization on Manifolds

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #27
Poster – In Thu Poster Session A
Bayan Saparbayeva · Michael Zhang · Lizhen Lin

Lifted Weighted Mini-Bucket

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #28
Poster – In Thu Poster Session A
Nicholas Gallo · Alexander Ihler

Cluster Variational Approximations for Structure Learning of Continuous-Time Bayesian Networks from Incomplete Data

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #29
Poster – In Thu Poster Session A
Dominik Linzner · Heinz Koeppl

Faithful Inversion of Generative Models for Effective Amortized Inference

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #30
Poster – In Thu Poster Session A
Stefan Webb · Adam Golinski · Rob Zinkov · Siddharth Narayanaswamy · Tom Rainforth · Yee Whye Teh · Frank Wood

A Stein variational Newton method

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #31
Poster – In Thu Poster Session A
Gianluca Detommaso · Tiangang Cui · Youssef Marzouk · Alessio Spantini · Robert Scheichl

Reparameterization Gradient for Non-differentiable Models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #32
Poster – In Thu Poster Session A
Wonyeol Lee · Hangyeol Yu · Hongseok Yang

Implicit Reparameterization Gradients

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #33
Poster – In Thu Poster Session A
Mikhail Figurnov · Shakir Mohamed · Andriy Mnih

SLANG: Fast Structured Covariance Approximations for Bayesian Deep Learning with Natural Gradient

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #34
Poster – In Thu Poster Session A
Aaron Mishkin · Frederik Kunstner · Didrik Nielsen · Mark Schmidt · Mohammad Emtiyaz Khan

Wasserstein Variational Inference

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #35
Poster – In Thu Poster Session A
Luca Ambrogioni · Umut G??l? · Ya?mur G??l?t?rk · Max Hinne · Marcel A. J. van Gerven · Eric Maris

Adaptive Path-Integral Autoencoders: Representation Learning and Planning for Dynamical Systems

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #36
Poster – In Thu Poster Session A
Jung-Su Ha · Young-Jin Park · Hyeok-Joo Chae · Soon-Seo Park · Han-Lim Choi

Variational Inference with Tail-adaptive f-Divergence

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #37
Poster – In Thu Poster Session A
Dilin Wang · Hao Liu · Qiang Liu

Boosting Black Box Variational Inference

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #38
Poster – In Thu Poster Session A
Francesco Locatello · Gideon Dresdner · Rajiv Khanna · Isabel Valera · Gunnar Raetsch

Discretely Relaxing Continuous Variables for tractable Variational Inference

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #39
Poster – In Thu Poster Session A
Trefor Evans · Prasanth Nair

Using Large Ensembles of Control Variates for Variational Inference

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #40
Poster – In Thu Poster Session A
Tomas Geffner · Justin Domke

The promises and pitfalls of Stochastic Gradient Langevin Dynamics

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #41
Poster – In Thu Poster Session A
Nicolas Brosse · Alain Durmus · Eric Moulines

Large-Scale Stochastic Sampling from the Probability Simplex

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #42
Poster – In Thu Poster Session A
Jack Baker · Paul Fearnhead · Emily Fox · Christopher Nemeth

Mirrored Langevin Dynamics

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #43
Poster – In Thu Poster Session A
Ya-Ping Hsieh · Ali Kavis · Paul Rolland · Volkan Cevher

Thermostat-assisted continuously-tempered Hamiltonian Monte Carlo for Bayesian learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #44
Poster – In Thu Poster Session A
Rui Luo · Jianhong Wang · Yaodong Yang · Jun WANG · Zhanxing Zhu

Dimensionally Tight Bounds for Second-Order Hamiltonian Monte Carlo

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #45
Poster – In Thu Poster Session A
Oren Mangoubi · Nisheeth Vishnoi

Global Convergence of Langevin Dynamics Based Algorithms for Nonconvex Optimization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #46
Poster – In Thu Poster Session A
Pan Xu · Jinghui Chen · Difan Zou · Quanquan Gu

Meta-Learning MCMC Proposals

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #47
Poster – In Thu Poster Session A
Tongzhou Wang · YI WU · Dave Moore · Stuart Russell

Posterior Concentration for Sparse Deep Learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #48
Poster – In Thu Poster Session A
Veronika Rockova · nicholas polson

Analytic solution and stationary phase approximation for the Bayesian lasso and elastic net

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #49
Poster – In Thu Poster Session A
Tom Michoel

Bayesian Model Selection Approach to Boundary Detection with Non-Local Priors

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #50
Poster – In Thu Poster Session A
Fei Jiang · Guosheng Yin · Francesca Dominici

Graphical model inference: Sequential Monte Carlo meets deterministic approximations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #51
Poster – In Thu Poster Session A
Fredrik Lindsten · Jouni Helske · Matti Vihola

Implicit Probabilistic Integrators for ODEs

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #52
Poster – In Thu Poster Session A
Onur Teymur · Han Cheng Lie · Tim Sullivan · Ben Calderhead

A Bayes-Sard Cubature Method

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #53
Poster – In Thu Poster Session A
Toni Karvonen · Chris J Oates · Simo Sarkka

Deep State Space Models for Time Series Forecasting

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #54
Poster – In Thu Poster Session A
Syama Sundar Rangapuram · Matthias W Seeger · Jan Gasthaus · Lorenzo Stella · Yuyang Wang · Tim Januschowski

BRUNO: A Deep Recurrent Model for Exchangeable Data

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #55
Poster – In Thu Poster Session A
Iryna Korshunova · Jonas Degrave · Ferenc Huszar · Yarin Gal · Arthur Gretton · Joni Dambre

Scaling Gaussian Process Regression with Derivatives

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #56
Poster – In Thu Poster Session A
David Eriksson · Kun Dong · Eric Lee · David Bindel · Andrew Wilson

Algebraic tests of general Gaussian latent tree models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #57
Poster – In Thu Poster Session A
Dennis Leung · Mathias Drton

Differentially Private Bayesian Inference for Exponential Families

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #58
Poster – In Thu Poster Session A
Garrett Bernstein · Daniel Sheldon

Semi-crowdsourced Clustering with Deep Generative Models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #59
Poster – In Thu Poster Session A
Yucen Luo · TIAN TIAN · Jiaxin Shi · Jun Zhu · Bo Zhang

Deep Poisson gamma dynamical systems

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #60
Poster – In Thu Poster Session A
Dandan Guo · Bo Chen · Hao Zhang · Mingyuan Zhou

Deep State Space Models for Unconditional Word Generation

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #61
Poster – In Thu Poster Session A
Florian Schmidt · Thomas Hofmann

Modular Networks: Learning to Decompose Neural Computation

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #62
Poster – In Thu Poster Session A
Louis Kirsch · Julius Kunze · David Barber

Gaussian Process Prior Variational Autoencoders

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #63
Poster – In Thu Poster Session A
Francesco Paolo Casale · Adrian Dalca · Luca Saglietti · Jennifer Listgarten · Nicolo Fusi

Bayesian Semi-supervised Learning with Graph Gaussian Processes

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #64
Poster – In Thu Poster Session A
Yin Cheng Ng · Nicol? Colombo · Ricardo Silva

Inference in Deep Gaussian Processes using Stochastic Gradient Hamiltonian Monte Carlo

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #65
Poster – In Thu Poster Session A
Marton Havasi · Jos? Miguel Hern?ndez-Lobato · Juan Jos? Murillo-Fuentes

Variational Bayesian Monte Carlo

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #66
Poster – In Thu Poster Session A
Luigi Acerbi

Bayesian Alignments of Warped Multi-Output Gaussian Processes

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #67
Poster – In Thu Poster Session A
Markus Kaiser · Clemens Otte · Thomas Runkler · Carl Henrik Ek

Automating Bayesian optimization with Bayesian optimization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #68
Poster – In Thu Poster Session A
Gustavo Malkomes · Roman Garnett

Infinite-Horizon Gaussian Processes

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #69
Poster – In Thu Poster Session A
Arno Solin · James Hensman · Richard E Turner

Learning Gaussian Processes by Minimizing PAC-Bayesian Generalization Bounds

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #70
Poster – In Thu Poster Session A
David Reeb · Andreas Doerr · Sebastian Gerwinn · Barbara Rakitsch

Algorithmic Linearly Constrained Gaussian Processes

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #71
Poster – In Thu Poster Session A
Markus Lange-Hegermann

Efficient Projection onto the Perfect Phylogeny Model

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #72
Poster – In Thu Poster Session A
Bei Jia · Surjyendu Ray · Sam Safavi · Jos? Bento

Distributed k-Clustering for Data with Heavy Noise

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #73
Poster – In Thu Poster Session A
Shi Li · Xiangyu Guo

Communication Compression for Decentralized Training

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #74
Poster – In Thu Poster Session A
Hanlin Tang · Shaoduo Gan · Ce Zhang · Tong Zhang · Ji Liu

Do Less, Get More: Streaming Submodular Maximization with Subsampling

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #75
Poster – In Thu Poster Session A
Moran Feldman · Amin Karbasi · Ehsan Kazemi

Optimal Algorithms for Continuous Non-monotone Submodular and DR-Submodular Maximization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #76
Poster – In Thu Poster Session A
Rad Niazadeh · Tim Roughgarden · Joshua Wang

Provable Variational Inference for Constrained Log-Submodular Models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #77
Poster – In Thu Poster Session A
Josip Djolonga · Stefanie Jegelka · Andreas Krause

Fast greedy algorithms for dictionary selection with generalized sparsity constraints

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #78
Poster – In Thu Poster Session A
Kaito Fujii · Tasuku Soma

Boolean Decision Rules via Column Generation

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #79
Poster – In Thu Poster Session A
Sanjeeb Dash · Oktay Gunluk · Dennis Wei

Computing Kantorovich-Wasserstein Distances on d-dimensional histograms using $(d+1)$-partite graphs

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #80
Poster – In Thu Poster Session A
Gennaro Auricchio · Federico Bassetti · Stefano Gualandi · Marco Veneroni

Adaptive Negative Curvature Descent with Applications in Non-convex Optimization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #81
Poster – In Thu Poster Session A
Mingrui Liu · Zhe Li · Xiaoyu Wang · Jinfeng Yi · Tianbao Yang

Implicit Bias of Gradient Descent on Linear Convolutional Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #82
Poster – In Thu Poster Session A
Suriya Gunasekar · Jason Lee · Daniel Soudry · Nati Srebro

Deep Generative Models for Distribution-Preserving Lossy Compression

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #83
Poster – In Thu Poster Session A
Michael Tschannen · Eirikur Agustsson · Mario Lucic

Visual Object Networks: Image Generation with Disentangled 3D Representations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #84
Poster – In Thu Poster Session A
Jun-Yan Zhu · Zhoutong Zhang · Chengkai Zhang · Jiajun Wu · Antonio Torralba · Josh Tenenbaum · Bill Freeman

Nonlocal Neural Networks, Nonlocal Diffusion and Nonlocal Modeling

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #85
Poster – In Thu Poster Session A
Yunzhe Tao · Qi Sun · Qiang Du · Wei Liu

Can We Gain More from Orthogonality Regularizations in Training Deep Networks?

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #86
Poster – In Thu Poster Session A
Nitin Bansal · Xiaohan Chen · Zhangyang Wang

Discrimination-aware Channel Pruning for Deep Neural Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #87
Poster – In Thu Poster Session A
Zhuangwei Zhuang · Mingkui Tan · Bohan Zhuang · Jing Liu · Yong Guo · Qingyao Wu · Junzhou Huang · Jinhui Zhu

Probabilistic Model-Agnostic Meta-Learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #88
Poster – In Thu Poster Session A
Chelsea Finn · Kelvin Xu · Sergey Levine

FastGRNN: A Fast, Accurate, Stable and Tiny Kilobyte Sized Gated Recurrent Neural Network

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #89
Poster – In Thu Poster Session A
Aditya Kusupati · Manish Singh · Kush Bhatia · Ashish Kumar · Prateek Jain · Manik Varma

Understanding Batch Normalization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #90
Poster – In Thu Poster Session A
Nils Bjorck · Carla P Gomes · Bart Selman · Kilian Weinberger

How Many Samples are Needed to Estimate a Convolutional Neural Network?

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #91
Poster – In Thu Poster Session A
Simon Du · Yining Wang · Xiyu Zhai · Sivaraman Balakrishnan · Ruslan Salakhutdinov · Aarti Singh

Robust Detection of Adversarial Attacks by Modeling the Intrinsic Properties of Deep Neural Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #92
Poster – In Thu Poster Session A
Zhihao Zheng · Pengyu Hong

Combinatorial Optimization with Graph Convolutional Networks and Guided Tree Search

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #93
Poster – In Thu Poster Session A
Zhuwen Li · Qifeng Chen · Vladlen Koltun

Automatic differentiation in ML: Where we are and where we should be going

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #94
Poster – In Thu Poster Session A
Bart van Merrienboer · Olivier Breuleux · Arnaud Bergeron · Pascal Lamblin

Realistic Evaluation of Deep Semi-Supervised Learning Algorithms

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #95
Poster – In Thu Poster Session A
Avital Oliver · Augustus Odena · Colin A Raffel · Ekin Dogus Cubuk · Ian Goodfellow

Toddler-Inspired Visual Object Learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #96
Poster – In Thu Poster Session A
Sven Bambach · David Crandall · Linda Smith · Chen Yu

Generalisation in humans and deep neural networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #97
Poster – In Thu Poster Session A
Robert Geirhos · Carlos R. M. Temme · Jonas Rauber · Heiko H. Sch?tt · Matthias Bethge · Felix A. Wichmann

Assessing the Scalability of Biologically-Motivated Deep Learning Algorithms and Architectures

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #98
Poster – In Thu Poster Session A
Sergey Bartunov · Adam Santoro · Blake Richards · Luke Marris · Geoffrey E Hinton · Timothy Lillicrap

Incorporating Context into Language Encoding Models for fMRI

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #99
Poster – In Thu Poster Session A
Shailee Jain · Alexander Huth

Why so gloomy? A Bayesian explanation of human pessimism bias in the multi-armed bandit task

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 210 #100
Poster – In Thu Poster Session A
Dalin Guo · Angela J Yu

Mental Sampling in Multimodal Representations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #101
Poster – In Thu Poster Session A
Jianqiao Zhu · Adam Sanborn · Nick Chater

Integrated accounts of behavioral and neuroimaging data using flexible recurrent neural network models

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #102
Poster – In Thu Poster Session A
Amir Dezfouli · Richard Morris · Fabio Ramos · Peter Dayan · Bernard Balleine

Efficient inference for time-varying behavior during learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #103
Poster – In Thu Poster Session A
Nicholas Roy · Ji Hyun Bak · Athena Akrami · Carlos Brody · Jonathan W Pillow

Multivariate Convolutional Sparse Coding for Electromagnetic Brain Signals

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #104
Poster – In Thu Poster Session A
Tom Dupr? la Tour · Thomas Moreau · Mainak Jas · Alexandre Gramfort

Manifold-tiling Localized Receptive Fields are Optimal in Similarity-preserving Neural Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #105
Poster – In Thu Poster Session A
Anirvan Sengupta · Cengiz Pehlevan · Mariano Tepper · Alexander Genkin · Dmitri Chklovskii

Connectionist Temporal Classification with Maximum Entropy Regularization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #106
Poster – In Thu Poster Session A
Hu Liu · Sheng Jin · Changshui Zhang

Removing the Feature Correlation Effect of Multiplicative Noise

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #107
Poster – In Thu Poster Session A
Zijun Zhang · Yining Zhang · Zongpeng Li

Overfitting or perfect fitting? Risk bounds for classification and regression rules that interpolate

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #108
Poster – In Thu Poster Session A
Mikhail Belkin · Daniel Hsu · Partha Mitra

Smoothed Analysis of Discrete Tensor Decomposition and Assemblies of Neurons

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #109
Poster – In Thu Poster Session A
Nima Anari · Constantinos Daskalakis · Wolfgang Maass · Christos Papadimitriou · Amin Saberi · Santosh Vempala

Entropy and mutual information in models of deep neural networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #110
Poster – In Thu Poster Session A
Marylou Gabri? · Andre Manoel · Cl?ment Luneau · jean barbier · Nicolas Macris · Florent Krzakala · Lenka Zdeborov?

The committee machine: Computational to statistical gaps in learning a two-layers neural network

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #111
Poster – In Thu Poster Session A
Benjamin Aubin · Antoine Maillard · jean barbier · Florent Krzakala · Nicolas Macris · Lenka Zdeborov?

A Unified Framework for Extensive-Form Game Abstraction with Bounds

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #112
Poster – In Thu Poster Session A
Christian Kroer · Tuomas Sandholm

Connecting Optimization and Regularization Paths

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #113
Poster – In Thu Poster Session A
Arun Suggala · Adarsh Prasad · Pradeep Ravikumar

Overlapping Clustering Models, and One (class) SVM to Bind Them All

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #114
Poster – In Thu Poster Session A
Xueyu Mao · Purnamrita Sarkar · Deepayan Chakrabarti

Learning latent variable structured prediction models with Gaussian perturbations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #115
Poster – In Thu Poster Session A
Kevin Bello · Jean Honorio

Self-Supervised Generation of Spatial Audio for 360° Video

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #116
Poster – In Thu Poster Session A
Pedro Morgado · Nuno Nvasconcelos · Timothy Langlois · Oliver Wang

Symbolic Graph Reasoning Meets Convolutions

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #117
Poster – In Thu Poster Session A
Xiaodan Liang · Zhiting Hu · Hao Zhang · Liang Lin · Eric Xing

Towards Deep Conversational Recommendations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #118
Poster – In Thu Poster Session A
Raymond Li · Samira Ebrahimi Kahou · Hannes Schulz · Vincent Michalski · Laurent Charlin · Chris Pal

Human-in-the-Loop Interpretability Prior

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #119
Poster – In Thu Poster Session A
Isaac Lage · Andrew Ross · Samuel J Gershman · Been Kim · Finale Doshi-Velez

Why Is My Classifier Discriminatory?

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #120
Poster – In Thu Poster Session A
Irene Chen · Fredrik Johansson · David Sontag

Link Prediction Based on Graph Neural Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #121
Poster – In Thu Poster Session A
Muhan Zhang · Yixin Chen

KONG: Kernels for ordered-neighborhood graphs

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #122
Poster – In Thu Poster Session A
Moez Draief · Konstantin Kutzkov · Kevin Scaman · Milan Vojnovic

Efficient Stochastic Gradient Hard Thresholding

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #123
Poster – In Thu Poster Session A
Pan Zhou · Xiaotong Yuan · Jiashi Feng

Measures of distortion for machine learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #124
Poster – In Thu Poster Session A
Leena Chennuru Vankadara · Ulrike von Luxburg

Relating Leverage Scores and Density using Regularized Christoffel Functions

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #125
Poster – In Thu Poster Session A
Edouard Pauwels · Francis Bach · Jean-Philippe Vert

Streaming Kernel PCA with $\tilde{O}(\sqrt{n})$ Random Features

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #126
Poster – In Thu Poster Session A
Md Enayat Ullah · Poorya Mianjy · Teodor Vanislavov Marinov · Raman Arora

Learning with SGD and Random Features

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #127
Poster – In Thu Poster Session A
Luigi Carratino · Alessandro Rudi · Lorenzo Rosasco

But How Does It Work in Theory? Linear SVM with Random Features

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #128
Poster – In Thu Poster Session A
Yitong Sun · Anna Gilbert · Ambuj Tewari

Statistical and Computational Trade-Offs in Kernel K-Means

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #129
Poster – In Thu Poster Session A
Daniele Calandriello · Lorenzo Rosasco

Quadrature-based features for kernel approximation

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #130
Poster – In Thu Poster Session A
Marina Munkhoeva · Yermek Kapushev · Evgeny Burnaev · Ivan Oseledets

Processing of missing data by neural networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #131
Poster – In Thu Poster Session A
Marek ?mieja · ?ukasz Struski · Jacek Tabor · Bartosz Zieli?ski · Przemys?aw Spurek

Constructing Deep Neural Networks by Bayesian Network Structure Learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #132
Poster – In Thu Poster Session A
Raanan Y. Rohekar · Shami Nisimov · Yaniv Gurwicz · Guy Koren · Gal Novik

Mallows Models for Top-k Lists

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #133
Poster – In Thu Poster Session A
Flavio Chierichetti · Anirban Dasgupta · Shahrzad Haddadan · Ravi Kumar · Silvio Lattanzi

Cooperative neural networks (CoNN): Exploiting prior independence structure for improved classification

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #134
Poster – In Thu Poster Session A
Harsh Shrivastava · Eugene Bart · Bob Price · Hanjun Dai · Bo Dai · Srinivas Aluru

Maximum-Entropy Fine Grained Classification

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #135
Poster – In Thu Poster Session A
Abhimanyu Dubey · Otkrist Gupta · Ramesh Raskar · Nikhil Naik

Efficient Loss-Based Decoding on Graphs for Extreme Classification

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #136
Poster – In Thu Poster Session A
Itay Evron · Edward Moroshko · Koby Crammer

A no-regret generalization of hierarchical softmax to extreme multi-label classification

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #137
Poster – In Thu Poster Session A
Marek Wydmuch · Kalina Jasinska · Mikhail Kuznetsov · R?bert Busa-Fekete · Krzysztof Dembczynski

Efficient Gradient Computation for Structured Output Learning with Rational and Tropical Losses

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #138
Poster – In Thu Poster Session A
Corinna Cortes · Vitaly Kuznetsov · Mehryar Mohri · Dmitry Storcheus · Scott Yang

Deep Structured Prediction with Nonlinear Output Transformations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #139
Poster – In Thu Poster Session A
Colin Graber · Ofer Meshi · Alexander Schwing

Mapping Images to Scene Graphs with Permutation-Invariant Structured Prediction

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #140
Poster – In Thu Poster Session A
Roei Herzig · Moshiko Raboh · Gal Chechik · Jonathan Berant · Amir Globerson

Large Margin Deep Networks for Classification

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #141
Poster – In Thu Poster Session A
Gamaleldin Elsayed · Dilip Krishnan · Hossein Mobahi · Kevin Regan · Samy Bengio

Semi-supervised Deep Kernel Learning: Regression with Unlabeled Data by Minimizing Predictive Variance

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #142
Poster – In Thu Poster Session A
Neal Jean · Sang Michael Xie · Stefano Ermon

Multitask Boosting for Survival Analysis with Competing Risks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #143
Poster – In Thu Poster Session A
Alexis Bellot · Mihaela van der Schaar

Multi-Layered Gradient Boosting Decision Trees

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #144
Poster – In Thu Poster Session A
Ji Feng · Yang Yu · Zhi-Hua Zhou

Unsupervised Adversarial Invariance

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #145
Poster – In Thu Poster Session A
Ayush Jaiswal · Rex Yue Wu · Wael Abd-Almageed · Prem Natarajan

Learning Deep Disentangled Embeddings With the F-Statistic Loss

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #146
Poster – In Thu Poster Session A
Karl Ridgeway · Michael Mozer

Learning Latent Subspaces in Variational Autoencoders

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #147
Poster – In Thu Poster Session A
Jack Klys · Jake Snell · Richard Zemel

Dual Swap Disentangling

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #148
Poster – In Thu Poster Session A
Zunlei Feng · Xinchao Wang · Chenglong Ke · An-Xiang Zeng · Dacheng Tao · Mingli Song

Joint Autoregressive and Hierarchical Priors for Learned Image Compression

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #149
Poster – In Thu Poster Session A
David Minnen · Johannes Ball? · Johannes Ball? · George D Toderici

Group Equivariant Capsule Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #150
Poster – In Thu Poster Session A
Jan Eric Lenssen · Matthias Fey · Pascal Libuschewski

Learning Disentangled Joint Continuous and Discrete Representations

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #151
Poster – In Thu Poster Session A
Emilien Dupont

Image-to-image translation for cross-domain disentanglement

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #152
Poster – In Thu Poster Session A
Abel Gonzalez-Garcia · Joost van de Weijer · Yoshua Bengio

Cooperative Learning of Audio and Video Models from Self-Supervised Synchronization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #153
Poster – In Thu Poster Session A
Bruno Korbar · Du Tran · Lorenzo Torresani

Non-Adversarial Mapping with VAEs

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #154
Poster – In Thu Poster Session A
Yedid Hoshen

Learning to Teach with Dynamic Loss Functions

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #155
Poster – In Thu Poster Session A
Lijun Wu · Fei Tian · Yingce Xia · Yang Fan · Tao Qin · Lai Jian-Huang · Tie-Yan Liu

Maximizing acquisition functions for Bayesian optimization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #156
Poster – In Thu Poster Session A
James Wilson · Frank Hutter · Marc Deisenroth

MetaReg: Towards Domain Generalization using Meta-Regularization

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #157
Poster – In Thu Poster Session A
Yogesh Balaji · Swami Sankaranarayanan · Rama Chellappa

Transfer Learning with Neural AutoML

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #158
Poster – In Thu Poster Session A
Catherine Wong · Neil Houlsby · Yifeng Lu · Andrea Gesmundo

Hierarchical Reinforcement Learning for Zero-shot Generalization with Subtask Dependencies

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #159
Poster – In Thu Poster Session A
Sungryull Sohn · Junhyuk Oh · Honglak Lee

Lifelong Inverse Reinforcement Learning

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #160
Poster – In Thu Poster Session A
Jorge A Mendez · Shashank Shivkumar · Eric Eaton

Safe Active Learning for Time-Series Modeling with Gaussian Processes

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #161
Poster – In Thu Poster Session A
Christoph Zimmer · Mona Meister · Duy Nguyen-Tuong

Online Structure Learning for Feed-Forward and Recurrent Sum-Product Networks

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #162
Poster – In Thu Poster Session A
Agastya Kalra · Abdullah Rashwan · Wei-Shou Hsu · Pascal Poupart · Prashant Doshi · George Trimponias

Preference Based Adaptation for Learning Objectives

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #163
Poster – In Thu Poster Session A
Yao-Xiang Ding · Zhi-Hua Zhou

Byzantine Stochastic Gradient Descent

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #164
Poster – In Thu Poster Session A
Dan Alistarh · Zeyuan Allen-Zhu · Jerry Li

Contextual bandits with surrogate losses: Margin bounds and efficient algorithms

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #165
Poster – In Thu Poster Session A
Dylan Foster · Akshay Krishnamurthy

Online Learning of Quantum States

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #166
Poster – In Thu Poster Session A
Scott Aaronson · Xinyi Chen · Elad Hazan · Satyen Kale · Ashwin Nayak

Horizon-Independent Minimax Linear Regression

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #167
Poster – In Thu Poster Session A
Alan Malek · Peter Bartlett

Factored Bandits

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #168
Poster – In Thu Poster Session A
Julian Zimmert · Yevgeny Seldin

A Model for Learned Bloom Filters and Optimizing by Sandwiching

Thu Dec 6th 10:45 AM – 12:45 PM @ Room 517 AB #169
Poster – In Thu Poster Session A
Michael Mitzenmacher

Designing Computer Systems for Software 2.0

Thu Dec 6th 02:15 – 03:05 PM @ Rooms 220 CDE
Invited Talk – In Thu Invited Talk 2
Kunle Olukotun

Coffee Break

Thu Dec 6th 03:05 – 03:30 PM @
Break –

In Thu Track 1 – Session 2

Thu Dec 6th 03:30 – 03:35 PM @ Room 220 CD – Thu Dec 6th 04:55 – 05:00 PM @ Room 220 CD

Robust Subspace Approximation in a Stream

Thu Dec 6th 03:30 – 03:35 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Roie Levin · Anish Prasad Sevekari · David Woodruff
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #48

Efficient nonmyopic batch active search

Thu Dec 6th 03:35 – 03:40 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Shali Jiang · Gustavo Malkomes · Matthew Abbott · Benjamin Moseley · Roman Garnett
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #131

Interactive Structure Learning with Structural Query-by-Committee

Thu Dec 6th 03:40 – 03:45 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Christopher Tosh · Sanjoy Dasgupta
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #130

Contour location via entropy reduction leveraging multiple information sources

Thu Dec 6th 03:45 – 03:50 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Alexandre Marques · Remi Lam · Karen Willcox
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #99

Sample-Efficient Reinforcement Learning with Stochastic Ensemble Value Expansion

Thu Dec 6th 03:50 – 04:05 PM @ Room 220 CD
Oral – In Thu Track 1 – Session 2
Jacob Buckman · Danijar Hafner · George Tucker · Eugene Brevdo · Honglak Lee
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #167

Policy-Conditioned Uncertainty Sets for Robust Markov Decision Processes

Thu Dec 6th 04:05 – 04:10 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Andrea Tirinzoni · Marek Petrik · Xiangli Chen · Brian Ziebart
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #168

Learning convex bounds for linear quadratic control policy synthesis

Thu Dec 6th 04:10 – 04:15 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Jack Umenberger · Thomas Sch?n
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #166

Multiple-Step Greedy Policies in Approximate and Online Reinforcement Learning

Thu Dec 6th 04:15 – 04:20 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Yonathan Efroni · Gal Dalal · Bruno Scherrer · Shie Mannor
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #164

Deep Reinforcement Learning in a Handful of Trials using Probabilistic Dynamics Models

Thu Dec 6th 04:20 – 04:25 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Kurtland Chua · Roberto Calandra · Rowan McAllister · Sergey Levine
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #165

Non-delusional Q-learning and value-iteration

Thu Dec 6th 04:25 – 04:40 PM @ Room 220 CD
Oral – In Thu Track 1 – Session 2
Tyler Lu · Dale Schuurmans · Craig Boutilier
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #162

Bilevel learning of the Group Lasso structure

Thu Dec 6th 04:40 – 04:45 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Jordan Frecon · Saverio Salzo · Massimiliano Pontil
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #92

Binary Classification from Positive-Confidence Data

Thu Dec 6th 04:45 – 04:50 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Takashi Ishida · Gang Niu · Masashi Sugiyama
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #97

Fully Understanding The Hashing Trick

Thu Dec 6th 04:50 – 04:55 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Lior Kamma · Casper B. Freksen · Kasper Green Larsen
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #90

Support Recovery for Orthogonal Matching Pursuit: Upper and Lower bounds

Thu Dec 6th 04:55 – 05:00 PM @ Room 220 CD
Spotlight – In Thu Track 1 – Session 2
Raghav Somani · Chirag Gupta · Prateek Jain · Praneeth Netrapalli
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #63

In Thu Track 2 – Session 2

Thu Dec 6th 03:30 – 03:35 PM @ Room 220 E – Thu Dec 6th 04:55 – 05:00 PM @ Room 220 E

Hyperbolic Neural Networks

Thu Dec 6th 03:30 – 03:35 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Octavian Ganea · Gary Becigneul · Thomas Hofmann
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #29

Norm matters: efficient and accurate normalization schemes in deep networks

Thu Dec 6th 03:35 – 03:40 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Elad Hoffer · Ron Banner · Itay Golan · Daniel Soudry
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #27

Constructing Fast Network through Deconstruction of Convolution

Thu Dec 6th 03:40 – 03:45 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Yunho Jeon · Junmo Kim
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #22

A Simple Unified Framework for Detecting Out-of-Distribution Samples and Adversarial Attacks

Thu Dec 6th 03:45 – 03:50 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Kimin Lee · Kibok Lee · Honglak Lee · Jinwoo Shin
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #30

Discovery of Latent 3D Keypoints via End-to-end Geometric Reasoning

Thu Dec 6th 03:50 – 04:05 PM @ Room 220 E
Oral – In Thu Track 2 – Session 2
Supasorn Suwajanakorn · Noah Snavely · Jonathan Tompson · Mohammad Norouzi
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #33

Learning Libraries of Subroutines for Neurally{Guided Bayesian Program Induction

Thu Dec 6th 04:05 – 04:10 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Kevin Ellis · Lucas Morales · Mathias Sabl?-Meyer · Armando Solar-Lezama · Josh Tenenbaum
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #24

Learning Loop Invariants for Program Verification

Thu Dec 6th 04:10 – 04:15 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Xujie Si · Hanjun Dai · Mukund Raghothaman · Mayur Naik · Le Song
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #23

DeepProbLog: Neural Probabilistic Logic Programming

Thu Dec 6th 04:15 – 04:20 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Robin Manhaeve · Sebastijan Dumancic · Angelika Kimmig · Thomas Demeester · Luc De Raedt
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #118

Learning to Infer Graphics Programs from Hand-Drawn Images

Thu Dec 6th 04:20 – 04:25 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Kevin Ellis · Daniel Ritchie · Armando Solar-Lezama · Josh Tenenbaum
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #25

Learning to Reconstruct Shapes from Unseen Classes

Thu Dec 6th 04:25 – 04:40 PM @ Room 220 E
Oral – In Thu Track 2 – Session 2
Xiuming Zhang · Zhoutong Zhang · Chengkai Zhang · Josh Tenenbaum · Bill Freeman · Jiajun Wu
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #34

Improving Neural Program Synthesis with Inferred Execution Traces

Thu Dec 6th 04:40 – 04:45 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Richard Shin · Illia Polosukhin · Dawn Song
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #31

ResNet with one-neuron hidden layers is a Universal Approximator

Thu Dec 6th 04:45 – 04:50 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Hongzhou Lin · Stefanie Jegelka
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #28

Towards Understanding Learning Representations: To What Extent
Do Different Neural Networks Learn the Same Representation

Thu Dec 6th 04:50 – 04:55 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Liwei Wang · Lunjia Hu · Jiayuan Gu · Zhiqiang Hu · Yue Wu · Kun
He · John Hopcroft
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #26

Generalized Cross Entropy Loss for Training Deep Neural
Networks with Noisy Labels

Thu Dec 6th 04:55 – 05:00 PM @ Room 220 E
Spotlight – In Thu Track 2 – Session 2
Zhilu Zhang · Mert Sabuncu
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #101

In Thu Track 3 – Session 2

**Thu Dec 6th 03:30 – 03:35 PM @ Room 517 CD – Thu Dec
6th 04:55 – 05:00 PM @ Room 517 CD**

A Simple Proximal Stochastic Gradient Method for Nonsmooth
Nonconvex Optimization

Thu Dec 6th 03:30 – 03:35 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Zhize Li · Jian Li
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #5

Stochastic Chebyshev Gradient Descent for Spectral Optimization

Thu Dec 6th 03:35 – 03:40 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Insu Han · Haim Avron · Jinwoo Shin
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #6

LAG: Lazily Aggregated Gradient for Communication-Efficient
Distributed Learning

Thu Dec 6th 03:40 – 03:45 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Tianyi Chen · Georgios Giannakis · Tao Sun · Wotao Yin
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #8

Low-rank Interaction with Sparse Additive Effects Model for
Large Data Frames

Thu Dec 6th 03:45 – 03:50 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Genevi?ve Robin · Hoi-To Wai · Julie Josse · Olga Klopp · Eric
Moulines
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #87

Optimal Algorithms for Non-Smooth Distributed Optimization in
Networks

Thu Dec 6th 03:50 – 04:05 PM @ Room 517 CD
Oral – In Thu Track 3 – Session 2
Kevin Scaman · Francis Bach · Sebastien Bubeck · Laurent Mas-
souli? · Yin Tat Lee
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #10

Direct Runge-Kutta Discretization Achieves Acceleration

Thu Dec 6th 04:05 – 04:10 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Jingzhao Zhang · Aryan Mokhtari · Suvrit Sra · Ali Jadbabaie
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #9

Limited Memory Kelley's Method Converges for Composite Convex
and Submodular Objectives

Thu Dec 6th 04:10 – 04:15 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Song Zhou · Swati Gupta · Madeleine Udell
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #16

(Probably) Concave Graph Matching

Thu Dec 6th 04:15 – 04:20 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Haggai Maron · Yaron Lipman
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #12

Graph Oracle Models, Lower Bounds, and Gaps for Parallel
Stochastic Optimization

Thu Dec 6th 04:20 – 04:25 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Blake Woodworth · Jialei Wang · Adam Smith · Brendan McMahan
· Nati Srebro
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #11

Smoothed analysis of the low-rank approach for smooth
semidefinite programs

Thu Dec 6th 04:25 – 04:40 PM @ Room 517 CD
Oral – In Thu Track 3 – Session 2
Thomas Pumir · Samy Jelassi · Nicolas Boumal
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #3

Wasserstein Distributionally Robust Kalman Filtering

Thu Dec 6th 04:40 – 04:45 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Soroosh Shafieezadeh Abadeh · Viet Anh Nguyen · Daniel Kuhn ·
Peyman Mohajerin Esfahani
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #14

Decentralize and Randomize: Faster Algorithm for Wasserstein
Barycenters

Thu Dec 6th 04:45 – 04:50 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Pavel Dvurechenskii · Darina Dvinskikh · Alexander Gasnikov · Ce-
sar Uribe · Angelia Nedich
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #15

Robust Hypothesis Testing Using Wasserstein Uncertainty Sets

Thu Dec 6th 04:50 – 04:55 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
RUI GAO · Liyan Xie · Yao Xie · Huan Xu
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #2

Convergence of Cubic Regularization for Nonconvex Optimization
under KL Property

Thu Dec 6th 04:55 – 05:00 PM @ Room 517 CD
Spotlight – In Thu Track 3 – Session 2
Yi Zhou · Zhe Wang · Yingbin Liang
Poster Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #4

In Thu Poster Session B

Streamlining Variational Inference for Constraint Satisfaction
Problems

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #1
Poster – In Thu Poster Session B
Aditya Grover · Tudor Achim · Stefano Ermon

Robust Hypothesis Testing Using Wasserstein Uncertainty Sets

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #2
Poster – In Thu Poster Session B
RUI GAO · Liyan Xie · Yao Xie · Huan Xu

Smoothed analysis of the low-rank approach for smooth
semidefinite programs

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #3
Poster – In Thu Poster Session B
Thomas Pumir · Samy Jelassi · Nicolas Boumal

Convergence of Cubic Regularization for Nonconvex Optimization
under KL Property

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #4
Poster – In Thu Poster Session B
Yi Zhou · Zhe Wang · Yingbin Liang

A Simple Proximal Stochastic Gradient Method for Nonsmooth Nonconvex Optimization

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #5
Poster – In Thu Poster Session B
Zhize Li · Jian Li

Stochastic Chebyshev Gradient Descent for Spectral Optimization

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #6
Poster – In Thu Poster Session B
Insu Han · Haim Avron · Jinwoo Shin

Proximal SCOPE for Distributed Sparse Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #7
Poster – In Thu Poster Session B
Shenyi Zhao · Gong-Duo Zhang · Ming-Wei Li · Wu-Jun Li

LAG: Lazily Aggregated Gradient for Communication-Efficient Distributed Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #8
Poster – In Thu Poster Session B
Tianyi Chen · Georgios Giannakis · Tao Sun · Wotao Yin

Direct Runge-Kutta Discretization Achieves Acceleration

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #9
Poster – In Thu Poster Session B
Jingzhao Zhang · Aryan Mokhtari · Suvrit Sra · Ali Jadbabaie

Optimal Algorithms for Non-Smooth Distributed Optimization in Networks

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #10
Poster – In Thu Poster Session B
Kevin Scaman · Francis Bach · Sebastien Bubeck · Laurent Massouli? · Yin Tat Lee

Graph Oracle Models, Lower Bounds, and Gaps for Parallel Stochastic Optimization

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #11
Poster – In Thu Poster Session B
Blake Woodworth · Jialei Wang · Adam Smith · Brendan McMahan · Nati Srebro

(Probably) Concave Graph Matching

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #12
Poster – In Thu Poster Session B
Haggai Maron · Yaron Lipman

Solving Non-smooth Constrained Programs with Lower Complexity than $\mathcal{O}(1/\varepsilon)$: A Primal-Dual Homotopy Smoothing Approach

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #13
Poster – In Thu Poster Session B
Xiaohan Wei · Hao Yu · Qing Ling · Michael Neely

Wasserstein Distributionally Robust Kalman Filtering

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #14
Poster – In Thu Poster Session B
Soroosh Shafieezadeh Abadeh · Viet Anh Nguyen · Daniel Kuhn · Peyman Mohajerin Esfahani

Decentralize and Randomize: Faster Algorithm for Wasserstein Barycenters

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #15
Poster – In Thu Poster Session B
Pavel Dvurechenskii · Darina Dvinskikh · Alexander Gasnikov · Cesar Uribe · Angelia Nedich

Limited Memory Kelley's Method Converges for Composite Convex and Submodular Objectives

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #16
Poster – In Thu Poster Session B
Song Zhou · Swati Gupta · Madeleine Udell

Stochastic Spectral and Conjugate Descent Methods

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #17
Poster – In Thu Poster Session B
Dmitry Kovalev · Peter Richtarik · Eduard Gorbunov · Elnur Gasanov

Third-order Smoothness Helps: Faster Stochastic Optimization Algorithms for Finding Local Minima

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #18
Poster – In Thu Poster Session B
Yaodong Yu · Pan Xu · Quanquan Gu

First-order Stochastic Algorithms for Escaping From Saddle Points in Almost Linear Time

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #19
Poster – In Thu Poster Session B
Yi Xu · Jing Rong · Tianbao Yang

Gen-Oja: Simple \& Efficient Algorithm for Streaming Generalized Eigenvector Computation

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #20
Poster – In Thu Poster Session B
Kush Bhatia · Aldo Pacchiano · Nicolas Flammarion · Peter Bartlett · Michael Jordan

Sparse DNNs with Improved Adversarial Robustness

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #21
Poster – In Thu Poster Session B
Yiwen Guo · Chao Zhang · Changshui Zhang · Yurong Chen

Constructing Fast Network through Deconstruction of Convolution

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #22
Poster – In Thu Poster Session B
Yunho Jeon · Junmo Kim

Learning Loop Invariants for Program Verification

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #23
Poster – In Thu Poster Session B
Xujie Si · Hanjun Dai · Mukund Raghothaman · Mayur Naik · Le Song

Learning Libraries of Subroutines for Neurally{Guided Bayesian Program Induction

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #24
Poster – In Thu Poster Session B
Kevin Ellis · Lucas Morales · Mathias Sabl?-Meyer · Armando Solar-Lezama · Josh Tenenbaum

Learning to Infer Graphics Programs from Hand-Drawn Images

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #25
Poster – In Thu Poster Session B
Kevin Ellis · Daniel Ritchie · Armando Solar-Lezama · Josh Tenenbaum

Towards Understanding Learning Representations: To What Extent Do Different Neural Networks Learn the Same Representation

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #26
Poster – In Thu Poster Session B
Liwei Wang · Lunjia Hu · Jiayuan Gu · Zhiqiang Hu · Yue Wu · Kun He · John Hopcroft

Norm matters: efficient and accurate normalization schemes in deep networks

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #27
Poster – In Thu Poster Session B
Elad Hoffer · Ron Banner · Itay Golan · Daniel Soudry

ResNet with one-neuron hidden layers is a Universal Approximator

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #28
Poster – In Thu Poster Session B
Hongzhou Lin · Stefanie Jegelka

Hyperbolic Neural Networks

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #29
Poster – In Thu Poster Session B
Octavian Ganea · Gary Becigneul · Thomas Hofmann

A Simple Unified Framework for Detecting Out-of-Distribution Samples and Adversarial Attacks

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #30
Poster – In Thu Poster Session B
Kimin Lee · Kibok Lee · Honglak Lee · Jinwoo Shin

Improving Neural Program Synthesis with Inferred Execution Traces

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #31
Poster – In Thu Poster Session B
Richard Shin · Illia Polosukhin · Dawn Song

Scaling the Poisson GLM to massive neural datasets through polynomial approximations

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #32
Poster – In Thu Poster Session B
David Zoltowski · Jonathan W Pillow

Discovery of Latent 3D Keypoints via End-to-end Geometric Reasoning

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #33
Poster – In Thu Poster Session B
Supasorn Suwajanakorn · Noah Snavely · Jonathan Tompson · Mohammad Norouzi

Learning to Reconstruct Shapes from Unseen Classes

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #34
Poster – In Thu Poster Session B
Xiuming Zhang · Zhoutong Zhang · Chengkai Zhang · Josh Tenenbaum · Bill Freeman · Jiajun Wu

Using Trusted Data to Train Deep Networks on Labels Corrupted by Severe Noise

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #35
Poster – In Thu Poster Session B
Dan Hendrycks · Mantas Mazeika · Duncan Wilson · Kevin Gimpel

A Reduction for Efficient LDA Topic Reconstruction

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #37
Poster – In Thu Poster Session B
Matteo Almanza · Flavio Chierichetti · Alessandro Panconesi · Andrea Vattani

A Unified View of Piecewise Linear Neural Network Verification

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #38
Poster – In Thu Poster Session B
Rudy Bunel · Ilker Turkaslan · Philip Torr · Pushmeet Kohli · Pawan K Mudigonda

Optimization over Continuous and Multi-dimensional Decisions with Observational Data

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #39
Poster – In Thu Poster Session B
Dimitris Bertsimas · Christopher McCord

The Convergence of Sparsified Gradient Methods

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #40
Poster – In Thu Poster Session B
Dan Alistarh · Torsten Hoefler · Mikael Johansson · Nikola Konstantinov · Sarit Khirirat · Cedric Renggli

Estimating Learnability in the Sublinear Data Regime

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #41
Poster – In Thu Poster Session B
Weihao Kong · Gregory Valiant

Learning convex polytopes with margin

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #42
Poster – In Thu Poster Session B
Lee-Ad Gottlieb · Eran Kaufman · Aryeh Kontorovich · Gabriel Nivasch

Ridge Regression and Provable Deterministic Ridge Leverage Score Sampling

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #43
Poster – In Thu Poster Session B
Shannon McCurdy

GIANT: Globally Improved Approximate Newton Method for Distributed Optimization

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #44
Poster – In Thu Poster Session B
Shusen Wang · Farbod Roosta-Khorasani · Peng Xu · Michael W Mahoney

Wavelet regression and additive models for irregularly spaced data

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #45
Poster – In Thu Poster Session B
Asad Haris · Ali Shojaie · Noah Simon

New Insight into Hybrid Stochastic Gradient Descent: Beyond With-Replacement Sampling and Convexity

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #46
Poster – In Thu Poster Session B
Pan Zhou · Xiaotong Yuan · Jiashi Feng

Sample Efficient Stochastic Gradient Iterative Hard Thresholding Method for Stochastic Sparse Linear Regression with Limited Attribute Observation

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #47
Poster – In Thu Poster Session B
Tomoya Murata · Taiji Suzuki

Robust Subspace Approximation in a Stream

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #48
Poster – In Thu Poster Session B
Roie Levin · Anish Prasad Sevekari · David Woodruff

A Practical Algorithm for Distributed Clustering and Outlier Detection

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #50
Poster – In Thu Poster Session B
Jiecao Chen · Erfan Sadeqi Azer · Qin Zhang

Compact Representation of Uncertainty in Clustering

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #51
Poster – In Thu Poster Session B
Craig Greenberg · Nicholas Monath · Ari Kobren · Patrick Flaherty · Andrew McGregor · Andrew McCallum

Bipartite Stochastic Block Models with Tiny Clusters

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #52
Poster – In Thu Poster Session B
Stefan Neumann

Clustering Redemption{Beyond the Impossibility of Kleinberg's Axioms

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #53
Poster – In Thu Poster Session B
Vincent Cohen-Addad · Varun Kanade · Frederik Mallmann-Trenn

Understanding Regularized Spectral Clustering via Graph Conductance

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #54
Poster – In Thu Poster Session B
Yilin Zhang · Karl Rohe

Query K-means Clustering and the Double Dixie Cup Problem

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #55
Poster – In Thu Poster Session B
I Chien · Chao Pan · Olgica Milenkovic

How to tell when a clustering is (approximately) correct using convex relaxations

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #56
Poster – In Thu Poster Session B
Marina Meila

Derivative Estimation in Random Design

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #57
Poster – In Thu Poster Session B
Yu Liu · Kris De Brabanter

Exploiting Numerical Sparsity for Efficient Learning : Faster Eigenvector Computation and Regression

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #58
Poster – In Thu Poster Session B
Neha Gupta · Aaron Sidford

Boosted Sparse and Low-Rank Tensor Regression

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #59
Poster – In Thu Poster Session B
Lifang He · Kun Chen · Wanwan Xu · Jiayu Zhou · Fei Wang

An Efficient Pruning Algorithm for Robust Isotonic Regression

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #60
Poster – In Thu Poster Session B
Cong Han Lim

A convex program for bilinear inversion of sparse vectors

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #61
Poster – In Thu Poster Session B
Alireza Aghasi · Ali Ahmed · Paul Hand · Babhru Joshi

Efficient Convex Completion of Coupled Tensors using Coupled Nuclear Norms

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #62
Poster – In Thu Poster Session B
Kishan Wimalawarne · Hiroshi Mamitsuka

Support Recovery for Orthogonal Matching Pursuit: Upper and Lower bounds

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #63
Poster – In Thu Poster Session B
Raghav Somani · Chirag Gupta · Prateek Jain · Praneeth Netrapalli

Learning without the Phase: Regularized PhaseMax Achieves Optimal Sample Complexity

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #64
Poster – In Thu Poster Session B
Fariborz Salehi · Ehsan Abbasi · Babak Hassibi

On Controllable Sparse Alternatives to Softmax

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #65
Poster – In Thu Poster Session B
Anirban Laha · Saneem Ahmed Chemmengath · Priyanka Agrawal · Mitesh Khapra · Karthik Sankaranarayanan · Harish Ramaswamy

Sparse PCA from Sparse Linear Regression

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #66
Poster – In Thu Poster Session B
Guy Bresler · Sung Min Park · Madalina Persu

Efficient Anomaly Detection via Matrix Sketching

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #67
Poster – In Thu Poster Session B
Vatsal Sharan · Parikshit Gopalan · Udi Wieder

Dimensionality Reduction for Stationary Time Series via Stochastic Nonconvex Optimization

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #69
Poster – In Thu Poster Session B
Minshuo Chen · Lin Yang · Mengdi Wang · Tuo Zhao

Contrastive Learning from Pairwise Measurements

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #70
Poster – In Thu Poster Session B
Yi Chen · Zhuoran Yang · Yuchen Xie · Princeton Zhaoran Wang

Deep Functional Dictionaries: Learning Consistent Semantic Structures on 3D Models from Functions

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #71
Poster – In Thu Poster Session B
Minhyuk Sung · Hao Su · Ronald Yu · Leonidas J Guibas

Large Scale computation of Means and Clusters for Persistence Diagrams using Optimal Transport

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #72
Poster – In Thu Poster Session B
Theo Lacombe · Marco Cuturi · Steve OUDOT

Representation Learning of Compositional Data

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #73
Poster – In Thu Poster Session B
Marta Avalos · Richard Nock · Cheng Soon Ong · Julien Rouar · Ke Sun

How To Make the Gradients Small Stochastically: Even Faster Convex and Nonconvex SGD

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #74
Poster – In Thu Poster Session B
Zeyuan Allen-Zhu

Statistical Optimality of Stochastic Gradient Descent on Hard Learning Problems through Multiple Passes

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #75
Poster – In Thu Poster Session B
Loucas Pillaud-Vivien · Alessandro Rudi · Francis Bach

Optimal Subsampling with Influence Functions

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #76
Poster – In Thu Poster Session B
Daniel Ting · Eric Brochu

Metric on Nonlinear Dynamical Systems with Perron-Frobenius Operators

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #77
Poster – In Thu Poster Session B
Isao Ishikawa · Keisuke Fujii · Masahiro Ikeda · Yuka Hashimoto · Yoshinobu Kawahara

Random Feature Stein Discrepancies

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #78
Poster – In Thu Poster Session B
Jonathan Huggins · Lester Mackey

Informative Features for Model Comparison

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #79
Poster – In Thu Poster Session B
Wittawat Jitkrittum · Heishiro Kanagawa · Patsorn Sangkloy ·
James Hays · Bernhard Sch?lkopf · Arthur Gretton

On Fast Leverage Score Sampling and Optimal Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #80
Poster – In Thu Poster Session B
Alessandro Rudi · Daniele Calandriello · Luigi Carratino · Lorenzo
Rosasco

**Persistence Fisher Kernel: A Riemannian Manifold Kernel for
Persistence Diagrams**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #81
Poster – In Thu Poster Session B
Tam Le · Makoto Yamada

**Learning Bounds for Greedy Approximation with Explicit Feature
Maps from Multiple Kernels**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #82
Poster – In Thu Poster Session B
Shahin Shahrampour · Vahid Tarokh

**RetGK: Graph Kernels based on Return Probabilities of Random
Walks**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #83
Poster – In Thu Poster Session B
Zhen Zhang · Mianzhi Wang · Yijian Xiang · Yan Huang · Arye
Nehorai

Nonparametric Density Estimation under Adversarial Losses

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #84
Poster – In Thu Poster Session B
Shashank Singh · Ananya Uppal · Boyue Li · Chun-Liang Li · Manzil
Zaheer · Barnabas Poczos

**Deep Homogeneous Mixture Models: Representation, Separation,
and Approximation**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #85
Poster – In Thu Poster Session B
Priyank Jaini · Pascal Poupart · Yaoliang Yu

Gaussian Process Conditional Density Estimation

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #86
Poster – In Thu Poster Session B
Vincent Dutordoir · Hugh Salimbeni · James Hensman · Marc Deisen-
roth

**Low-rank Interaction with Sparse Additive Effects Model for
Large Data Frames**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #87
Poster – In Thu Poster Session B
Genevi?ve Robin · Hoi-To Wai · Julie Josse · Olga Klopp · Eric
Moulines

Mixture Matrix Completion

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #88
Poster – In Thu Poster Session B
Daniel Pimentel-Alarcon

**Multivariate Time Series Imputation with Generative
Adversarial Networks**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #89
Poster – In Thu Poster Session B
Yonghong Luo · Xiangrui Cai · Ying ZHANG · Jun Xu · Yuan xiaojie

Fully Understanding The Hashing Trick

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #90
Poster – In Thu Poster Session B
Lior Kamma · Casper B. Freksen · Kasper Green Larsen

Learning semantic similarity in a continuous space

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #91
Poster – In Thu Poster Session B
Michel Deudon

Bilevel learning of the Group Lasso structure

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #92
Poster – In Thu Poster Session B
Jordan Frecon · Saverio Salzo · Massimiliano Pontil

Bayesian Structure Learning by Recursive Bootstrap

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #93
Poster – In Thu Poster Session B
Raanan Y. Rohekar · Yaniv Gurwicz · Shami Nisimov · Guy Koren
· Gal Novik

**Learning from Group Comparisons: Exploiting Higher Order
Interactions**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #94
Poster – In Thu Poster Session B
Yao Li · Minhao Cheng · Kevin Fujii · Fushing Hsieh · Cho-Jui Hsieh

A Structured Prediction Approach for Label Ranking

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #95
Poster – In Thu Poster Session B
Anna Korba · Alexandre Garcia · Florence d'Alch?-Buc

**The Sample Complexity of Semi-Supervised Learning with
Nonparametric Mixture Models**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #96
Poster – In Thu Poster Session B
Chen Dan · Liu Leqi · Bryon Aragam · Pradeep Ravikumar · Eric
Xing

Binary Classification from Positive-Confidence Data

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #97
Poster – In Thu Poster Session B
Takashi Ishida · Gang Niu · Masashi Sugiyama

Learning SMaLL Predictors

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #98
Poster – In Thu Poster Session B
Vikas Garg · Ofer Dekel · Lin Xiao

**Contour location via entropy reduction leveraging multiple
information sources**

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #99
Poster – In Thu Poster Session B
Alexandre Marques · Remi Lam · Karen Willcox

Multi-Class Learning: From Theory to Algorithm

Thu Dec 6th 05:00 – 07:00 PM @ Room 210 #100
Poster – In Thu Poster Session B
Jian Li · Yong Liu · Rong Yin · Hua Zhang · Lizhong Ding · Weiping
Wang

**Generalized Cross Entropy Loss for Training Deep Neural
Networks with Noisy Labels**

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #101
Poster – In Thu Poster Session B
Zhilu Zhang · Mert Sabuncu

A Smoother Way to Train Structured Prediction Models

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #102
Poster – In Thu Poster Session B
Venkata Krishna Pillutla · Vincent Roulet · Sham Kakade · Zaid Harchaoui

Constrained Graph Variational Autoencoders for Molecule Design

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #103
Poster – In Thu Poster Session B
Qi Liu · Miltiadis Allamanis · Marc Brockschmidt · Alexander Gaunt

Learning Beam Search Policies via Imitation Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #104
Poster – In Thu Poster Session B
Renato Negrinho · Matthew Gormley · Geoffrey Gordon

Loss Functions for Multiset Prediction

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #105
Poster – In Thu Poster Session B
Sean Welleck · Zixin Yao · Yu Gai · Jialin Mao · Zheng Zhang · Kyunghyun Cho

Learning Confidence Sets using Support Vector Machines

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #106
Poster – In Thu Poster Session B
Wenbo Wang · Xingye Qiao

Fast Similarity Search via Optimal Sparse Lifting

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #107
Poster – In Thu Poster Session B
Wenye Li · Jingwei Mao · Yin Zhang · Shuguang Cui

The Sparse Manifold Transform

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #108
Poster – In Thu Poster Session B
Yubei Chen · Dylan Paiton · Bruno Olshausen

When do random forests fail?

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #109
Poster – In Thu Poster Session B
Cheng Tang · Damien Garreau · Ulrike von Luxburg

Diverse Ensemble Evolution: Curriculum Data-Model Marriage

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #110
Poster – In Thu Poster Session B
Tianyi Zhou · Shengjie Wang · Jeff Bilmes

The Pessimistic Limits and Possibilities of Margin-based Losses in Semi-supervised Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #111
Poster – In Thu Poster Session B
Jesse Krijthe · Marco Loog

Semi-Supervised Learning with Declaratively Specified Entropy Constraints

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #112
Poster – In Thu Poster Session B
Haitian Sun · William Cohen · Lidong Bing

Learning to Multitask

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #113
Poster – In Thu Poster Session B
Yu Zhang · Ying Wei · Qiang Yang

CatBoost: unbiased boosting with categorical features

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #114
Poster – In Thu Poster Session B
Liudmila Prokhorenkova · Gleb Gusev · Aleksandr Vorobev · Anna Veronika Dorogush · Andrey Gulin

Supervised autoencoders: Improving generalization performance with unsupervised regularizers

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #115
Poster – In Thu Poster Session B
Lei Le · Andrew Patterson · Martha White

Representation Learning for Treatment Effect Estimation from Observational Data

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #116
Poster – In Thu Poster Session B
Liuyi Yao · Sheng Li · Yaliang Li · Mengdi Huai · Jing Gao · Aidong Zhang

SimplE Embedding for Link Prediction in Knowledge Graphs

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #117
Poster – In Thu Poster Session B
Seyed Mehran Kazemi · David Poole

DeepProbLog: Neural Probabilistic Logic Programming

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #118
Poster – In Thu Poster Session B
Robin Manhaeve · Sebastijan Dumancic · Angelika Kimmig · Thomas Demeester · Luc De Raedt

Watch Your Step: Learning Node Embeddings via Graph Attention

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #119
Poster – In Thu Poster Session B
Sami Abu-El-Haija · Bryan Perozzi · Rami Al-Rfou · Alexander Alemi

Invariant Representations without Adversarial Training

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #120
Poster – In Thu Poster Session B
Daniel Moyer · Shuyang Gao · Rob Brekelmans · Aram Galstyan · Greg Ver Steeg

Domain-Invariant Projection Learning for Zero-Shot Recognition

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #121
Poster – In Thu Poster Session B
An Zhao · Mingyu Ding · Jiechao Guan · Zhiwu Lu · Tao Xiang · Ji-Rong Wen

Unsupervised Learning of View-invariant Action Representations

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #122
Poster – In Thu Poster Session B
Junnan Li · Yongkang Wong · Qi Zhao · Mohan Kankanhalli

Neural Architecture Optimization

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #123
Poster – In Thu Poster Session B
Renqian Luo · Fei Tian · Tao Qin · Enhong Chen · Tie-Yan Liu

Scalable Hyperparameter Transfer Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #124
Poster – In Thu Poster Session B
Valerio Perrone · Rodolphe Jenatton · Matthias W Seeger · Cedric Archambeau

Learning To Learn Around A Common Mean

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #125
Poster – In Thu Poster Session B
Giulia Denevi · Carlo Ciliberto · Dimitris Stamos · Massimiliano Pontil

Hybrid-MST: A Hybrid Active Sampling Strategy for Pairwise Preference Aggregation

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #126
Poster – In Thu Poster Session B
JING LI · Rafal Mantiuk · Junle Wang · Suiyi Ling · Patrick Le Callet

Algorithmic Assurance: An Active Approach to Algorithmic Testing using Bayesian Optimisation

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #127
Poster – In Thu Poster Session B
Shivapratap Gopakumar · Sunil Gupta · Santu Rana · Vu Nguyen · Svetha Venkatesh

Understanding the Role of Adaptivity in Machine Teaching: The Case of Version Space Learners

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #128
Poster – In Thu Poster Session B
Yuxin Chen · Adish Singla · Oisin Mac Aodha · Pietro Perona · Yisong Yue

Active Learning for Non-Parametric Regression Using Purely Random Trees

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #129
Poster – In Thu Poster Session B
Jack Goetz · Ambuj Tewari · Paul Zimmerman

Interactive Structure Learning with Structural Query-by-Committee

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #130
Poster – In Thu Poster Session B
Christopher Tosh · Sanjoy Dasgupta

Efficient nonmyopic batch active search

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #131
Poster – In Thu Poster Session B
Shali Jiang · Gustavo Malkomes · Matthew Abbott · Benjamin Moseley · Roman Garnett

Uncertainty Sampling is Preconditioned Stochastic Gradient Descent on Zero-One Loss

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #132
Poster – In Thu Poster Session B
Stephen Mussmann · Percy Liang

Online Adaptive Methods, Universality and Acceleration

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #133
Poster – In Thu Poster Session B
Yehuda Kfir Levy · Alp Yurtsever · Volkan Cevher

Online Improper Learning with an Approximation Oracle

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #134
Poster – In Thu Poster Session B
Elad Hazan · Wei Hu · Yuanzhi Li · zhiyuan li

Online Structured Laplace Approximations for Overcoming Catastrophic Forgetting

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #135
Poster – In Thu Poster Session B
Hippolyt Ritter · Aleksandar Botev · David Barber

Approximating Real-Time Recurrent Learning with Random Kronecker Factors

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #136
Poster – In Thu Poster Session B
Asier Mujika · Florian Meier · Angelika Steger

Online Reciprocal Recommendation with Theoretical Performance Guarantees

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #137
Poster – In Thu Poster Session B
Claudio Gentile · Nikos Parotsidis · Fabio Vitale

Generalized Inverse Optimization through Online Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #138
Poster – In Thu Poster Session B
Chaosheng Dong · Yiran Chen · Bo Zeng

Adaptive Online Learning in Dynamic Environments

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #139
Poster – In Thu Poster Session B
Lijun Zhang · Shiyin Lu · Zhi-Hua Zhou

Online convex optimization for cumulative constraints

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #140
Poster – In Thu Poster Session B
Jianjun Yuan · Andrew Lamperski

Efficient online algorithms for fast-rate regret bounds under sparsity

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #141
Poster – In Thu Poster Session B
Pierre Gaillard · Olivier Wintenberger

Regret Bounds for Online Portfolio Selection with a Cardinality Constraint

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #142
Poster – In Thu Poster Session B
Shinji Ito · Daisuke Hatano · Sumita Hanna · Akihiro Yabe · Takuro Fukunaga · Naonori Kakimura · Ken-Ichi Kawarabayashi

Policy Regret in Repeated Games

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #144
Poster – In Thu Poster Session B
Raman Arora · Michael Dinitz · Teodor Vanislavov Marinov · Mehryar Mohri

Query Complexity of Bayesian Private Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #145
Poster – In Thu Poster Session B
Kuang Xu

The Limits of Post-Selection Generalization

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #146
Poster – In Thu Poster Session B
Jonathan Ullman · Adam Smith · Kobbi Nissim · Uri Stemmer · Thomas Steinke

Sequential Test for the Lowest Mean: From Thompson to Murphy Sampling

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #147
Poster – In Thu Poster Session B
Emilie Kaufmann · Wouter Koolen · Aur?lien Garivier

Contextual Combinatorial Multi-armed Bandits with Volatile Arms and Submodular Reward

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #148
Poster – In Thu Poster Session B
Lixing Chen · Jie Xu · Zhuo Lu

TopRank: A practical algorithm for online stochastic ranking

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #149
Poster – In Thu Poster Session B
Tor Lattimore · Branislav Kveton · Shuai Li · Csaba Szepesvari

A Bandit Approach to Sequential Experimental Design with False Discovery Control

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #150
Poster – In Thu Poster Session B
Kevin Jamieson · Lalit Jain

Adaptation to Easy Data in Prediction with Limited Advice

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #151
Poster – In Thu Poster Session B
Tobias Thune · Yevgeny Seldin

Differentially Private Contextual Linear Bandits

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #152
Poster – In Thu Poster Session B
Roshan Shariff · Or Sheffet

Community Exploration: From Offline Optimization to Online Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #153
Poster – In Thu Poster Session B
Xiaowei Chen · Weiran Huang · Wei Chen · John C. S. Lui

Adaptive Learning with Unknown Information Flows

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #154
Poster – In Thu Poster Session B
Yonatan Gur · Ahmadreza Momeni

Multi-armed Bandits with Compensation

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #155
Poster – In Thu Poster Session B
Siwei Wang · Longbo Huang

Bandit Learning with Implicit Feedback

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #156
Poster – In Thu Poster Session B
Yi Qi · Qingyun Wu · Hongning Wang · Jie Tang · Maosong Sun

Optimistic optimization of a Brownian

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #157
Poster – In Thu Poster Session B
Jean-Bastien Grill · Michal Valko · Remi Munos

Bandit Learning with Positive Externalities

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #158
Poster – In Thu Poster Session B
Virag Shah · Jose Blanchet · Ramesh Johari

An Information-Theoretic Analysis for Thompson Sampling with Many Actions

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #159
Poster – In Thu Poster Session B
Shi Dong · Benjamin Van Roy

Distributed Multi-Player Bandits - a Game of Thrones Approach

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #160
Poster – In Thu Poster Session B
Ilai Bistritz · Amir Leshem

PG-TS: Improved Thompson Sampling for Logistic Contextual Bandits

2

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #161
Poster – In Thu Poster Session B
Bianca Dumitrascu · Karen Feng · Barbara Engelhardt

Non-delusional Q-learning and value-iteration

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #162
Poster – In Thu Poster Session B
Tyler Lu · Dale Schuurmans · Craig Boutilier

Differentiable MPC for End-to-end Planning and Control

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #163
Poster – In Thu Poster Session B
Brandon Amos · Ivan Jimenez · Jacob I Sacks · Byron Boots · J. Zico Kolter

Multiple-Step Greedy Policies in Approximate and Online Reinforcement Learning

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #164
Poster – In Thu Poster Session B
Yonathan Efroni · Gal Dalal · Bruno Scherrer · Shie Mannor

Deep Reinforcement Learning in a Handful of Trials using Probabilistic Dynamics Models

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #165
Poster – In Thu Poster Session B
Kurtland Chua · Roberto Calandra · Rowan McAllister · Sergey Levine

Learning convex bounds for linear quadratic control policy synthesis

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #166
Poster – In Thu Poster Session B
Jack Umenberger · Thomas Sch?n

Sample-Efficient Reinforcement Learning with Stochastic Ensemble Value Expansion

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #167
Poster – In Thu Poster Session B
Jacob Buckman · Danijar Hafner · George Tucker · Eugene Brevdo · Honglak Lee

Policy-Conditioned Uncertainty Sets for Robust Markov Decision Processes

Thu Dec 6th 05:00 – 07:00 PM @ Room 517 AB #168
Poster – In Thu Poster Session B
Andrea Tirinzoni · Marek Petrik · Xiangli Chen · Brian Ziebart