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17ᵗʰ INFORMS Workshop on Data Mining & Decision Analytics

October 15, 2022

Time	Session	Location
7:30am-8:30am	**Continental Breakfast**	**Wabash 2|3**
8:30am-9:30am	**Academic Keynote** **Cynthia Rudin, PhD, Duke University** *Understanding How Dimension Reduction Tools Work*	**Wabash 2|3**
9:40am-11:10am	**Parallel Sessions A**	**Wabash 2|3, 120 & 121**
11:10am-11:30am	**Break & Network**	**Wabash 2|3**
11:30am-12:30pm	**Panel Discussion** **Fairness and Interpretability in AI/ML**	**120**
12:30pm-1:30pm	**Lunch**	**Wabash 2|3**
1:30pm-2:30pm	**Industrial Keynote** **Kirk Borne, Chief Science Officer, DataPrime, Inc.** *Forecasting 2.0 - New Ways to See Around Corners*	**Wabash 2|3**
2:30pm-2:50pm	**Break & Network**	**Wabash 2|3**
2:50pm-4:20pm	**Parallel Sessions B**	**Wabash 2|3, 120 & 121**
4:30pm-6:00pm	**Poster Presentation & Network**	**Wabash 2|3**

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17th INFORMS Workshop on Data Mining & Decision Analytics

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Wabash 2|3

Session A - 9:40am-11:10am

Breakout 1 - Applied Paper Competition

Session Chairs: Eyyub Kibis, Nathan Gaw

Survival Kernels: Scalable and Interpretable Deep Kernel Survival Analysis with an Accuracy Guarantee
George H. Chen
Carnegie Mellon University

Planning Bike Lanes with Data: Ridership, Congestion, and Path Selection
Jingwei Zhang
UCLA Anderson School of Management

SMRT: A Structural Model of Latent Ratings and Topics in Text
Desheng Ma
Cornell University

Self-Supervised Contrastive Learning to Predict Alzheimer's Disease Progression with 3D Amyloid-PET
Min Gu Kwak
Georgia Institute of Technology

Non-stationary spatio-temporal point process modeling for high-resolution COVID-19 data
Zheng Dong
Georgia Institute of Technology

Session B: 2:50pm - 4:20pm

Breakout 1 - Theoretical Paper Competition

Session Chairs: Eyyub Kibis, Nathan Gaw

Failure-averse Active Learning for Physics-constrained Systems
Cheolhei Lee
Virginia Tech

Anytime Combinatorial Search for Matrix Sparse Representation
Guihong Wan
Harvard University

Change Detection of Large-Scale Data Streams via an Adaptive Top-r Method
Ruizhi Zhang
University of Georgia

A Deterministic Global Optimization Algorithm for Training Optimal Decision Tree on Large Datasets
Kaixun Hua
University of British Columbia

17ᵗʰ INFORMS Workshop on Data Mining & Decision Analytics

Room 120

Session A - 9:40am-11:10am

Breakout 2 - Emerging Data Analytics in Industrial Applications

Session Chair: Marie Pelagie Elimbi Moudio

Resolving Conflicts in Crowds: An Earnings Forecasts Application

Houping Xiao,

Robinson College of Business

Identifying Similarities in Global Structure and Vulnerability Levels for Different Food Supply Chain Networks
Marie Pelagie Elimbi Moudio,
UC Berkeley

Human Algorithm Aversion: Evidence from Ridesharing Drivers
Yuting Zhu,
National University of Singapore

Leveraging Neural Networks to Modernize Placement Methodology for the U.S. Army Recruiting Command's
Enlisted Recruiting Force
Dr. Kayleigh Cron,
United States Army Recruiting Command (USAREC) G2

Session B: 2:50pm-4:20pm

Breakout 2 - Deep Learning and Anomaly Detection

Session Chair: Young Woong Park

An Expandable Learning-Optimization Framework for Sequentially Dependent Decision-Making
Dogacan Yilmaz,
New Jersey Institute of Technology

Robust Coarsened Exact Matching: A Mixed Linear Integer Program to Optimize Imbalance Measure
Young Woong Park,
Iowa State University

Towards Optimal Variance Reduction in Online Controlled Experiments
Ying Jin,
Stanford University

A Proximal Algorithm for Sampling from Non-smooth Potentials
Jiaming Liang,
Yale University

17th INFORMS Workshop on Data Mining & Decision Analytics

Room 121
Session A - 9:40am-11:10am

Breakout 3 - Advances in Statistical Models and Machine Learning

Session Chair: Guanzhou Wei

Uncorrelated Sparse Autoencoder with Long Short-Term Memory for State-of-Charge Estimations in Lithium-ion Battery Cells

Mayuresh Savargaonkar,

University of Michigan-Dearborn

E-PARSEC: Enhanced PARallel Subgraph Enumeration in CUDA
Samiran Kawtikwar,
University of Illinois Urbana-Champaign

Self-scalable Tanh (Stan): Faster Convergence and Better Generalization in Physics-informed Neural Networks
Raghav Gnanasambandam,
Virginia Tech

Gibbs Phenomenon Suppression in PDE-Based Statistical Spatio-Temporal Models
Guanzhou Wei,
University of Arkansas

Breakout 3 - Emerging Topics in the Advanced Machine Learning Theory

Session Chair: Yan Xu

A Supervised Tensor Dimension Reduction-Based Prognostic Model for Applications with Incomplete Imaging Data
Chengyu Zhou,
NC State University

AVATAR: Adversarial self-superVised domain Adaptation network for TArget domain
Jun Kataoka,
The State University of New York at Binghamton

RGI: Robust GAN-Inversion for Generic Unsupervised Pixel-wise Anomaly Detection and Mask-free Image Inpainting
Shancong Mou,
Georgia Institute of Technology

Building Fair and Accurate Machine Learning Models Through Multiobjective Optimization
Yan Xu,
SAS Institute Inc