

## INFORMS Workshop on Data Science 2017 Program

**Venue: Hilton 343**

**7:00 – 8:00 Breakfast**

**8:00 – 8:05 Opening Remarks**

**8:05 – 8:50 Keynote Speech:**

**Dr. Ramayya Krishnan, Dean, H. John Heinz III College, Carnegie Mellon University**

<b>9:00 – 10:30 (Hilton 344)</b> <b>Session 1A (Data Science Methodology)</b> Session Chair: Gautam Pant	<b>9:00 – 10:30 (Hilton 346)</b> <b>Session 1B (Customer Intelligence)</b> Session Chair: Zhepeng (Lionel) Li
Kristina Bigsby, Jeffrey Ohlmann, Kang Zhao	Zhilei Qiao, Wenqi Shen, Alan Wang, Weiguo Fan
The Turf is Always Greener: Predicting Decommitments in College Football Recruiting Using Social Network Data	Leveraging External Consumer Experience: Exploitation, Exploration and Mobile App Product Performance
Abhijeet Ghoshal, Syam Menon, Sumit Sarkar	Jingyuan Yang
Hiding Sensitive Information Prior to Sharing Distributed Transactional Databases	Buyer Targeting Optimization: A Unified Customer Segmentation Perspective
Junming Yin, Yaoliang Yu	Jingjing Li, Kai Larsen, Ahmed Abbasi
Convex-constrained Sparse Additive Modeling and Its Extensions	Unlocking Our Behavioral Knowledge Inheritance Through Ontology Learning: A Design Framework, An Instantiation, And A Randomized Experiment
Inbal Yahav, Galit Shmueli, Deepa Mani	Konstantin Bauman, Bing Liu, Alexander Tuzhilin
A Tree-based Approach for Addressing Self-Selection in Impact Studies with Big Data (Invited Paper)	Aspect Based Recommendations: Recommending Items with the Most Valuable Aspects Based on User Reviews (Invited Paper)
<b>10:30 – 10:45 Coffee Break</b>	
<b>10:45 – 12:15 (Hilton 344)</b> <b>Session 2A (Healthcare Analytics and Applications)</b> Session Chair: Edward McFowland III	<b>10:45 – 12:15 (Hilton 346)</b> <b>Session 2B (Business Data Science &amp; Application)</b> Session Chair: Junming Yin
Sriram Somanchi, Idris Adjerid, Ralph Gross	Yuan Cheng Shawn Mankad
To Predict or Not to Predict: The Case of Inpatient Admissions to the Emergency Department	Single Stage Prediction with Embedded Topic Modeling of Online Reviews for Mobile App Management
Long Xia, Xuan Zhang, Brandon Fan, Weiguo Fan	Xuan Wei, Daniel Zeng, Junming Yin
Healthcare Fraud Detection at Physician Level Using Open Data	From Multi-Class to Multi-Label: A Bayesian Approach to Annotation Aggregation in Crowdsourcing ( <b>Best Paper Nominee</b> )
Mohammad Morid, Olivia Sheng, Samir Abdelrahman	Bowen Du, Shuo Lei, Wenjun Zhou, Chen Yang, Hui Xiong
Leveraging Similarity and Change Points for Patient Time Series Classification: The Case of Early ICU Mortality Prediction	Carsharing Rental Business Site Selection Leveraging Multi-Source Data
Sriram Somanchi, Edward McFowland III, Daniel Neill	Shaobo Li, Shaonan Tian, Yan Yu
Detecting Anomalous Patterns of Care using Health Insurance Claims	Corporate Bankruptcy Prediction: A Penalized Semiparametric Index Hazard Model Approach

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**12:25 – 13:25 Lunch/ Poster Slam Session**

**13:35 – 14:35 Deans Panel on Data Science**

Moderator: Varghese Jacob, University of Texas, Dallas

Panelists: Paulo Goes, University of Arizona

Varghese Jacob, University of Texas, Dallas

Ramayya Krishnan, Carnegie Mellon University

Bruce Weber, University of Delaware

Qiang Ye, Harbin Institute of Technology

**14:35 – 14:50 Coffee Break**

<b>14:50 – 16:20 (Hilton 344)</b> <b>Session 3A (Network Data Science)</b> Session Chair: Tomer Geva	<b>14:50 – 16:20 (Hilton 346)</b> <b>Session 3B (Business Data Science &amp; Application)</b> Session Chair: John Zhang
Zhepeng Li, Yong Ge, Bai Xue	Yuanyang Liu, Gautam Pant, Olivia Sheng
Forecasting Contagious Social Foci in Two-mode Social Networks ( <b>Best Paper Nominee</b> )	Predicting Human Capital Flow With Inter-firm Network
Xiao Han, Leye Wang, Weiguo Fan	Yu-Kai Lin, Xiao Fang
Utility-based Group Recommendation considering Social Influence	First, Do No Harm: Predictive Analytics for Risks of In-Hospital Adverse Events
Tomer Geva, Inbal Yahav	Qihang Lin, Xi Wang, Kang Zhao
Data-Driven Network Tie Selection for Node-Level Prediction	Reciprocal Recommendation in Online Dating by Binary Matrix Completion with Data-Dependent Regularization ( <b>Best Paper Nominee</b> )
Cosma Shalizi, Edward McFowland III	David Dobolyi, Ahmed Abbasi, Fatemeh Zahedi, Anthony Vance
Controlling for Latent Homophily in Social Networks through Inferring Latent Locations	The Phishing Funnel Model for Predicting User Susceptibility to Phishing Websites

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**16:30 – 17:30 Panel: Publishing Data Science Papers in IS journals: Challenges and Editorial Advice**

Moderator: Olivia Sheng, University of Utah

Panelists: Amit Basu, Southern Methodist University

Foster Provost, New York University

Arun Rai, Georgia State University

Alex Tuzhilin, New York University

**17:30 Reception (Hilton 344)**

**Posters:**

1	Suneel Babu Chatla, Galit Shmueli Confidence Sets for Split Points in Model-based Regression Trees
2	Mauro Damo, Wei Lin, Ronaldo Braga, William Schneider Primary tumor classification of medical images using deep convolutional neural networks
3	Xin Ji, Yi-Lin Tsai, Adam Fleischhacker A Uniqueness-Driven Clustering Algorithm And Its Application To Automated Identification of Local Competition
4	Xinxue Qu, Aslan Lotfi, Zhengrui Jiang Understanding Customers' Product Upgrade Behavior—A Survival Analysis Approach
5	Yu-Wei Lin, Wencui Han, Michael J. Shaw, Yi Yang, Kunpeng Zhang Using Engagement Data in Brand-Oriented Social Media Network to Identify Brand Similarity and Brand-to-Brand Relations
6	Mathias Kraus, Stefan Feuerriegel, Dirk Neumann Effective training of machine learning models for natural language processing based on learning theory
7	Xiaoping Liu, Xiaobai Li Customer Selection and Acquisition Using Statistical Learning
8	Kellas R. Cameron, Nachiketa Sahoo, Nitin Joglekar How Much is the Value of a Genomic Test Information? Evidence from Post Cardiac Stent Care Decisions
9	Hasan Kartal, Xiaobai Li Pareto Principle for Differential Privacy
10	Karthik Babu Nattamai Kannan, Sridhar Narasimhan Big Data Location Analytics for Retail Site Selection and Optimization