SDM17 Accepted Presentations

Paper Title	Author Names
A Deflation Method for Structured Probabilistic PCA	Rajiv Khanna*, UTAustin; Joydeep Ghosh, ; Russell Poldrack, ; Oluwasanmi Koyejo, UIUC
A Dual-tree Algorithm for Fast k-means Clustering with Large k	Ryan Curtin*, Symantec Corporation
A Fast Trust-Region Newton Method for Softmax Logistic Regression	Nayyar Zaidi*, Monash University; Geoff Webb, "Monash University, Australia"
A Graduated Non-Convexity Relaxation for Large Scale Seriation	Xenophon Evangelopoulos*, University of Liverpool; Austin Brockmeier, University of Liverpool; Tingting Mu, University of Manchester; John Goulermas, University of Liverpool
A Method to Accelerate Human in the Loop Clustering	Anni Coden, IBM; Marina Danilevsky*, IBM Research; Daniel Gruhl, IBM; Linda Kato, IBM; Meenakshi Nagarajan, IBM
A Sparse Nonlinear Classifier Design Using AUC Optimization	Vishal Kakkar*, Indian Institute of Science; Shirish Shevade, Indian Institute of Science; S Sundararajan, Microsoft Research India; Dinesh Garg, IIT Gandhinagar
Absenteeism Detection in Social Media	Fang Jin*, Texas Tech University; Feng Chen, "University at Albany, SUNY"; Rupinder Khandp, Virginia Tech; Chang-Tien Lu, "Virginia Tech, USA"; Naren Ramakrishnan, Virginia Tech
Accelerated Attributed Network Embedding	Xiao Huang*, TAMU; Jundong Li, Arizona State University; Xia Hu, TAMU
Active Learning of Classification Models with Label Uncertainty Feedback	Yanbing Xue, University of Pittsburgh; Milos Hauskrecht*, University of Pittsburgh
Active Learning of Functional Networks from Spike Trains	Honglei Liu*, UCSB; Bian Wu, WSU
Active Positive-Definite Matrix Completion	Charalampos Mavroforakis*, Boston University; Dora Erdos, Boston University; Mark Crovella, Boston University; Evimaria Terzi, """BU, USA"""

Adaptive Local Exploration of Large Graphs	Robert Pienta*, Georgia Institute of Technology; Minsuk Kahng, Georgia Institute of Technology; Zhiyuan Lin, Stanford University; Jilles Vreeken, "Max Planck Institute, Germany"; Partha Talukdar, Indian Institute of Science; James Abello, Rutgers University; Ganesh Parameswaran, Yahoo! Inc.; Duen Horng Chau, "Georgia Tech, USA"
ALPINE: Progressive Itemset Mining with Definite Guarantees	QIONG HU*, Rutgers University; Tomasz Imielinski, Rutgers University
An RNN Architecture with Dynamic Temporal Matching for Personalized Predictions of Parkinson's Disease	Chao Che, Dalian University; Cao Xiao*, University of Washington, Seattle; Jian Liang, Tsinghua University; Bo Jin, Dalian University of Technology; Jiayu Zhou, Michigan State University; Fei Wang,
Automatic Frankensteining: Creating Complex Ensembles Autonomously	Martin Wistuba*, University of Hildesheim; Nicolas Schilling, ; Lars Schmidt-Thieme,
Beauty and Brains: Detecting Anomalous Pattern Co-Occurrences	Roel Bertens*, Universiteit Utrecht; Jilles Vreeken, "Max Planck Institute, Germany"; Arno Siebes, "Universiteit Utrecht, Netherlands"
Biclustering: An Application of Dual Topic Models	Daniel Rugeles*, Nanyang Technological Universi; Gao Cong, ; Kaiqi Zhao, ; Manoranjan Dash, ; Shonali Krishnaswamy,
BRAINZOOM: High Resolution Reconstruction from Multi-modal Brain Signals	Xiao Fu*, University of Minnesota; Kejun Huang, ; Otilia Stretcu, ; Hyun Ah Song, Carnegie Mellon University; Evangelos Papalexakis, "UC-Riverside, USA"; Partha Talukdar, Indian Institute of Science; Tom Mitchell, ; Nikos Sidiropoulos, ; Christos Faloutsos, Carnegie Mellon University
BreachRadar: Automatic Detection of Points-of-Compromise	Miguel Araujo*, Carnegie Mellon University; Miguel Almeida, ; Jaime Ferreira, ; Luis Silva, ; Pedro Bizarro,
Clustering with Domain-Specific Usefulness Scores	Yale Chang*, Northeastern University; Junxiang Chen, Northeastern University; Michael Cho, Harvard Medical School; Peter Castaldi, Harvard Medical School; Edwin Silverman, Harvard Medical School; Jennifer Dy, Northeastern University

Collaborative User Network Embedding for Social Recommender Systems	Chuxu Zhang*, Rutgers University; Lu Yu, king abdullah university of science and technology; Yan Wang, Rutgers University; chirag Shah, Rutgers University; Xiangliang Zhang, "KAUST, Saudi Aribia"
Community-aware Network Sparsification	Aristides Gionis, "Aalto University, Finland"; Polina Rozenshtein*, Aalto University; Nikolaj Tatti, Aalto University; Evimaria Terzi,
Computational Drug Discovery with Dyadic Positive-Unlabeled Learning	Yashu Liu*, Arizona State University; Ping Zhang, IBM Thomas J. Watson Research Center; Pinghua Gong, Umich; Jieping Ye, """UM, USA"""; Fei Wang, ; Shuang Qiu, Umich
Concept Drift Detection with Hierarchical Hypothesis Testing	Shujian Yu, University of Florida; Zubin Abraham*, Robert Bosch LLC
Condensing Temporal Networks using Propagation	Bijaya Adhikari*, Virginia Tech; Yao Zhang, "Virginia Tech, USA"; Aditya Bharadwaj, Virginia Tech; B. Aditya Prakash, "Virginia Tech, USA"
Correlation by Compression	Kailash Budhathoki*, MPI for Informatics; Jilles Vreeken, "Max Planck Institute, Germany"
CSTG: An Effective Framework for Cost-sensitive Sparse Online Learning	Zhong Chen, Xavier University of Louisiana; zhide Fang, LSUHSC; Wei Fan, Baidu; Andrea Edwards, Xavier Univ. of Lousiana; Kun Zhang*, Xavier University of Louisiana
Cumulative Knowledge-based Regression Models for Next-term Grade Prediction	Sara Morsy*, University of Minnesota; George Karypis, University of Minnesota
Deep Learning: A Generic Approach for Extreme Condition Traffic Forecasting	Rose Yu, University of Southern California; Yaguang Li*, U. of Southern California; Cyrus Shahabi, University of Southern California; Ugur Demiryurek, University of Southern California; Yan Liu, "University of Southern California, USA"
Detecting Malicious Behavior in Computer Networks via Cost-Sensitive and Connectivity Constrained Classification	Houping Xiao*, SUNY Buffalo; Jin Gao, "University at Buffalo, USA"; Long Vu, IBM Watson; Deepak Turaga, IBM Watson
Differentially Private Rank Aggregation	Michael Hay*, Colgate University; Liudmila Elagina, ; Gerome Miklau,
Discovering Bursts Revisited: Guaranteed Optimization of the Model Parameters	Nikolaj Tatti*, Aalto University

Discovery of Causal Time Intervals	Zhenhui Li*, "Penn State University, USA"; Guanjie Zheng, Penn State; Amal Agarwal, ; Lingzhou Xue,
Efficiently Summarising Event Sequences with Interleaving Complex Sequential Patterns	Apratim Bhattacharyya*, Max Planck Institute for Informatics; Jilles Vreeken, "Max Planck Institute, Germany"
Error Metrics for Learning Reliable Manifolds from Streaming Data	Frank Schoeneman*, University at Buffalo; Suchismit Mahapatra, University at Buffalo; Jaroslaw Zola, University at Buffalo; Nils Napp, University at Buffalo; Varun Chandola, Univeristy at Buffalo
Exploiting Hierarchical Structures for Unsupervised Feature Selection	Suhang Wang*, Arizona State University; Yilin Wang, Arizona State University; Jiliang Tang, Michigan State University; Charu Aggarwal, "IBM T.J. Watson Research Center, USA"; Huan Liu, "Arizona State University, USA"
Exploring Latent Semantic Factors to Find Useful Product Reviews	Subhabrata Mukherjee*, Max Planck Institute; Kashyap Popat, Max Planck Institute; Gerhard Weikum, Max Planck Institute
Finding Low-tension Communities	Esther Galbrun*, Inria; Behzad Golshan, Boston University; Aristides Gionis, "Aalto University, Finland"; Evimaria Terzi, """BU, USA"""
From Theory to Practice: Efficient Active Cost-sensitive Classification with Expected Error Reduction	Yexun Zhang*, Shanghai Jiaotong University; Wenbin Cai, Search Technology Center, Microsoft; Siyuan Zhou, Shanghai Jiaotong University; Ya Zhang, Shanghai Jiaotong University
Generalized Inverse Classification	Michael Lash*, University of Iowa; Qihang Lin, University of Iowa; Nick Street, University of Iowa; Jennifer Robinson, University of Iowa; jeffrey Ohlmann, University of Iowa
Gleaning Wisdom From The Past: Early Detection of Emerging Rumors in Social Media	Liang Wu*, Arizona State University; Jundong Li, Arizona State University; Xia Hu, Texas A&M University; Huan Liu, Arizona State University
Graph-based Semi-supervised Learning for Relational Networks	Leto Peel*, UCLouvain

HBGG: a Hierarchical Bayesian Geographical Model for Group Recommendation	Ziyu Lu*, The University of Hong Kong; Hui Li, The University of Hong Kong; Nikos Mamoulis, The University of Hong Kong; David Cheung, The University of Hong Kong
H-Fuse: Efficient Fusion of Aggregated Historical Data	Zongge Liu*, ; Hyun Ah Song, Carnegie Mellon University; Vladimir Zadorozhny, ; Christos Faloutsos, Carnegie Mellon University; Nikos Sidiropoulos,
HiDDen: Hierarchical Dense Subgraph Detection with Application to Financial Fraud Detection	Si Zhang*, Arizona State University; Dawei Zhou, Arizona State University; Mehmet Yigit Yildirim, Arizona State University; Scott Alcorn, Early Warning LLC; Jingrui He, Arizona State University; Hasan Davulcu, Arizona State University; Hanghang Tong, "Arizona State, USA"
Identifying Deep Contrasting Networks from Time Series Data: Application to Brain Network Analysis	John Boaz Lee*, Worcester Polytechnic Institute; Xiangnan Kong, Worcester Polytechnic Institute ; Yihan Bao, WPI; Constance Moore, University of Massachusetts Medical School
Indexing and Classifying Gigabytes of Time Series under Time Warping	Chang Wei Tan*, Monash University; Geoff Webb, "Monash University, Australia"; Francois Petitjean, Monash University
Learning from Multi-Modality Multi-Resolution Data: an Optimization Approach	Yada Zhu, IBM T.J. Watson Research Center; Jianbo Li, Three Bridges Capital; Jingrui He*, Arizona State University
Learning Hash-Based Features for Incomplete Continuous-Valued Data	Shuai Yuan*, Michigan state university; Pang-Ning Tan, Michigan State University; Kendra Cheruvelil , Michigan State University; Emi Fergus, ; Nick Skaff , ; Patricia Soranno, Michigan State University
Limited-memory Common-directions Method for Distributed Optimization and its Application on Empirical Risk Minimization	Ching-pei Lee*, University of Wisconsin-Madiso; Po-Wei Wang, ; Weizhu Chen, ; Chih-Jen Lin, "National Taiwan University, Taiwan"
Margin Distribution Logistic Machine	Yi Ding*, Nanjing University of Aeronautics and Astronautics; Sheng-Jun Huang, "Nanjing University of Aeronautics and Astronautics, China"; Chen Zu, NUAA; Daoqiang Zhang,

MeiKe: Influence-based Communities in Networks	Yao Zhang*, "Virginia Tech, USA"; Bijaya Adhikari, Virginia Tech; Steve T. K. Jan, Virginia Tech; B. Aditya Prakash, "Virginia Tech, USA"
Meta-Path Graphical Lasso for Learning Heterogeneous Connectivities	Yao Zhang*, Fudan University; Yun Xiong, Fudan University; Xinyue Liu, WPI; Xiangnan Kong, Worcester Polytechnic Institute ; Yangyong Zhu, Fudan University
Model-based von Mises-Fisher Co-clustering with a Conscience	Aghiles Salah*, University of Paris Descartes; Mohamed Nadif, University of Paris Descartes
MultiC^2: an Optimization Framework for Learning from Task and Worker Dual Heterogeneity	Yao Zhou*, Arizona State University; Lei Ying, Arizona State University; Jingrui He, Arizona State University
Multi-core K-means	Christian Böhm*, Ludwig-Maximilians-University of Munich; Martin Perdacher, University of Vienna; Claudia Plant, University of Vienna
Multimodal Network Alignment	Huda Nassar*, Purdue University; David Gleich, "Purdue University, USA"
Multi-Region Neural Representation: a novel model for decoding visual stimuli in human brains	Muhammad Yousefnezhad*, Nanjing University of Aeronautics and Astronautics; Daoqiang Zhang,
Multi-Task Multiple Kernel Relationship Learning	Keerthiram Murugesan*, CMU; Jaime Carbonell, CMU
Multivariate Confidence Intervals	Jussi Korpela, Finnish Institute of Occupational Health; Emilia Oikarinen*, Finnish Institute of Occupational Health; Kai Puolamäki, Finnish Institute of Occupational Health; Antti Ukkonen, Finnish Institute of Occupational Health
Near Optimal and Practical Algorithms for Graph Scan Statistics	Jose Cadena*, Virginia Tech; Feng Chen, "University at Albany, SUNY"; Anil Vullikanti, Virginia Tech
Outlier Detection for Text Data	Ramakrishnan Kannan*, Oak Ridge National Laboratory; Hyenkyun Woo, ; Charu Aggarwal, "IBM T.J. Watson Research Center, USA"; Haesun Park, Georgia Tech

Outlier Detection with Autoencoder Ensembles	Jinghui Chen*, University of Virginia; Saket Sathe, IBM T. J. Watson Research Center; Charu Aggarwal, "IBM T.J. Watson Research Center, USA"; Deepak Turaga, IBM Watson
Polyadic Regression and its Application to Chemogenomics	Ioakeim Perros*, Georgia Tech; Fei Wang, ; Ping Zhang, IBM Thomas J. Watson Research Center; Peter Walker, United States Navy; Jyotishman Pathak, Weill Cornell Medicine; Jimeng Sun, "Georgia Tech, USA"
Predict Land Covers with Transition Modeling and Incremental Learning	Xiaowei Jia*, University of Minnesota; ankush Khandelwal, University of Minnesota; Guruprasad Nayak, University of Minnesota; James Gerber, University of Minnesota; Kimberly Carlson, University of Minnesota; Paul West, University of Minnesota; Vipin Kumar, University of Minnesota
Price Recommendation on Vacation Rental Websites	Yang Li, Northwestern Polytechnical University; Suhang Wang, Arizona State University; Tao Yang*, Northwestern Polytechnical University; Quan Pan, Northwestern Polytechnical University; Jiliang Tang, Michigan State University
Private and Right-Protected Big Data Publication: An Analysis	Reinhard Heckel, ; Michail Vlachos*, IBM Research
Pruning Decision Trees via Max-Heap Projection	Zhi Nie*, Arizona State University; Binbin Lin, ; Shuai Huang, University of Washington; Naren Ramakrishnan, Virginia Tech; Wei Fan, Baidu; Jieping Ye, """UM, USA"""
Redundancies in Data and their Effect on the Evaluation of Recommendation Systems: A Case Study on the Amazon Reviews Datasets	Daniel Basaran, LMU Munich; Eirini Ntoutsi, Leibniz Universität Hannover; Arthur Zimek*, University of Southern Denmark
Risk Clearance with Guaranteed Precision	Ryan McBride*, Simon Fraser University; Ke Wang, "Simon Fraser University, Canada"; Viswanadh Nekkanti, ; Wenyuan Li, Chongqing University
Robust Map Matching for Heterogeneous Data via Dominance Decompositions	Martin Seybold*, University of Stuttgart

ROFLMAO: Robust Oblique Forests with Linear MAtrix Operations	Tyler Tomita*, Johns Hopkins University; Mauro Maggioni, Johns Hopkins University; Joshua Vogelstein, Johns Hopkins University
Selection of Negative Samples for One-class Matrix Factorization	Hsiang-Fu Yu*, University of Texas at Austin; Mikhail Bilenko, Microsoft; Chih-Jen Lin, "National Taiwan University, Taiwan"
Sensitivity of Community Structure to Network Uncertainty	Marc Mitri, Ecole Polytechnique; Fragkiskos Malliaros*, UC San Diego; Michalis Vazirgiannis, Ecole Polytechnique
Signed Network Embedding in Social Media	Suhang Wang*, Arizona State University; Jiliang Tang, Michigan State University; Charu Aggarwal, "IBM T.J. Watson Research Center, USA"; Huan Liu, "Arizona State University, USA"
Sparse Graphical Modeling via Stochastic Complexity	Kohei Miyaguchi*, The University of Tokyo ; Shin Matsushima, The University of Tokyo; Kenji Yamanishi, The University of Tokyo
Specious Rules: An Efficient and Effective Unifying Method for Removing Misleading and Uninformative Patterns in Association Rule Mining	Wilhelmiina Hämäläinen*, Aalto University; Geoff Webb, "Monash University, Australia"
Statistical Learning Theory Approach for Data Classification with l-Diversity	Koray Mancuhan*, Purdue University; Chris Clifton, Purdue University
Subnetwork Mining with Spatial and Temporal Smoothness	Xuan-Hong Dang*, University of California Santa Barbara; Hongyuan You, UCSB; Ambuj Singh, UC Santa Barbara; Scott Grafton, UCSB
Supervised Feature Selection for Multi-class Data	Lin Chen*, Arizona State University; Jiliang Tang, Michigan State University; Baoxin Li, Arizona State University
Targeted Matrix Completion	Natali Ruchansky*, University of Southern Califor; Evimaria Terzi, """BU, USA"""; Mark Crovella, Boston University
t-BNE: Tensor-based Brain Network Embedding	Bokai Cao*, University of Illinois Chicago; Lifang He, ; Xiaokai Wei, ; Mengqi Xing, ; Philip Yu, University of Illinois Chicago; Heide Klumpp, ; Alex Leow,
The Power of Certainty: A Dirichlet-Multinomial Model for Belief Propagation	Dhivya Eswaran*, Carnegie Mellon University; Stephan Günnemann, Technical University of Munich; Christos Faloutsos, Carnegie Mellon University

Time-Aware Subscription Prediction Model for User Acquisition in Digital News Media	Heidar Davoudi*, York University; Morteza Zihayat, York University; Aijun An, York University
Toward Personalized Relational Learning	Jundong Li*, Arizona State University; Liang Wu, Arizona State University; Osmar Zaiane, University of Alberta; Huan Liu, Arizona State University
Toward Ranking in Heterogeneous Networks with Side Information	Abhinav Mishra, Stony Brook University; Leman Akoglu*, Carnegie Mellon University
Uncovering Group Level Insights with Accordant Clustering	Amit Dhurandhar*, IBM TJ Watson Research; Margareta Ackerman, San Jose State University; Xiang Wang, Google
Uncovering the Spatiotemporal Patterns of Collective Social Activity	Martin Jankowiak*, New York University CUSP; Manuel Gomez-Rodriguez, Max Planck Institute for Software Systems
Unified and Contrasting Graphical Lasso for Brain Network Discovery	Xinyue Liu*, WPI; Xiangnan Kong, Worcester Polytechnic Institute ; Ann Ragin, Northwestern University
Uplift Modeling with Multiple Treatments and General Response Types	Yan Zhao*, MIT; Xiao Fang, MIT; David Simchi-Levi, MIT
User-guided Cross-domain Sentiment Classification	Arun Reddy Nelakurthi*, Arizona State University; Hanghang Tong, "Arizona State, USA"; Ross Maciejewski, ; Nadya Bliss, Arizona State University; Jingrui He, Arizona State University
Using a Random Forest to Inspire a Neural Network and Improving on It	Suhang Wang*, Arizona State University; Charu Aggarwal, "IBM T.J. Watson Research Center, USA"; Huan Liu, "Arizona State University, USA"
VolTime: Unsupervised Anomaly Detection on Users' Online Activity Volume	Daniel Chino*, University of Sao Paulo; Alceu Costa, ; Agma Traina, ; Christos Faloutsos, Carnegie Mellon University