Program Schedule

28th WORKSHOP ON INFORMATION TECHNOLOGIES AND SYSTEMS
(WITS 2018)
December 16-18, 2018, Santa Clara, CA, USA

Sunday, December 16

12:30 pm	Registration starts at Hyatt Place San Jose
1:30 pm	Pick up from Hyatt Place San Jose to Savannah–Chanelle Vineyards Wine Tasting at Savannah–Chanelle Vineyards Location: 23600 Big Basin Way, Saratoga, CA 95070 (RSVP Mandatory)
4:30 pm	Pick up from Savannah–Chanelle Vineyards back to Hyatt Place San Jose
5:30 – 8:00 pm	Reception and Registration at Hyatt Place San Jose

Monday, December 17

Shuttle from Hyatt to SCU (7:00 am, 7:40 am, 8:20 am, 9 am, 9:40 am)

8:00 – 8:30 am	Continental Breakfast & Registration
8:30 – 8:40 am	Welcome Remarks and Logistics
8:40 – 9:30 am	Industry Keynote Speech by Dr. Phil Mui, Senior VP of Salesforce
9:30 – 9:45 am	Coffee Break

9:45 – 11:00 am **Session 1A: Industry Presentations**   **206 Lucas Hall**
Session Chair: *Jingjing Li, University of Virginia*

Discovering Domain Specific Dialog Acts: A Quantitative and Unsupervised Method
Sabina Tomkins, University of California, Santa Cruz,
Anbang Xu, Haibin Liu, Zhe Liu, Yufan Guo, Vibha Sinha, Rama Akkiraju, IBM Almaden Research Center

I Know You'll Be Back: Interpretable New User Clustering and Churn Prediction on a Mobile Social Application
Carl Yang, University of Illinois, Urbana Champaign,
Xiaolin Shi, Jie Luo, Snap Inc,
Jiawei Han, University of Illinois, Urbana Champaign

Lessons We Learning from Applying Machine Learning to Adversarial Environment
Xiang Sheng, Facebook

Session 1B: Healthcare I   **207 Lucas Hall**
Session Chair:

Extended Similarity Measures to Predict Trauma Patient Mortality
Joel Fredrickson, Michael Mannino, Omar Alqahtani, Farnoush Banaei-Kashani
University of Colorado Denver

Multiple Disease Prediction: A Multi-label Learning Approach Using Deep Generative Learning and BiomedicalKnowledge
Lin Qiu, Vaibhav Rajan, Bernard C. Y. Tan, National University of Singapore

A Deep Learning Architecture for De-identification of Patient Notes: Implementation and Evaluation (***Best Paper Nominee***)
Kaung Khin, Philipp Burckhardt, Rema Padman, Carnegie Mellon University

Session 1C: Data Mining   **209 Lucas Hall**
Session Chair: *Ken Peffers, University of Nevada Las Vegas*

A Bivariate Dynamic Latent Difference Score Model for Longitudinal Data Analysis
Youyou Tao, Loyola Marymount University,
Katherine Masyn, Georgia State University,
Abhay Nath Mishra, Iowa State University,
Jeong-Ha Oh, Mark Keil, Georgia State University

Don't Classify, Translate: Multi-Level E-Commerce Product Categorization Via Machine Translation
Maggie Yundi Li, Stanley Kok, National University of Singapore,
Liling Tan, Rakuten Institute of Technology

On the Self-Consistency of K-Nearest Neighbors Technique
Gediminas Adomavicius, University of Minnesota,
Jingjing Zhang, Indiana University,
Meizi Zhou, University of Minnesota

11:00 – 11:15 am Coffee Break

11:15–12:30 pm **Session 2A: Industry Presentations**   **206 Lucas Hall**
Session Chair: *Jingjing Li, University of Virginia*

Towards Real-time 3D Reconstruction using Consumer UAVs
Qiaosong Wang, eBay Inc.

Probabilistic Autocomplete Suggestion Ranking with Localization and Personalization in Geosearch
Xugang Ye, Zillow, Zijie Qi, Dropbox

Visual Product Recognition – Bing Ads VPR API to Monetize Product Images
Jia He, Tim Wang, Hao Wang, Sravya Popuri, Keng-hao Chang, Bruce Zhang, Microsoft

Session 2B: Review and Recommendation   **207 Lucas Hall**
Session Chair: TBA

How Does Online Review Manipulation Influence Sales? Evidence from the Hotel Industry

Cheng Nie, Iowa State University,
Zhiqiang (Eric) Zheng, Sumit Sarkar, University of Texas at Dallas

How Would you Rate it? Anchoring Effects and User Personality Traits in Recommender Systems
Konstantin Bauman, Temple University,
Tamilla Triantoro, Quinnipiac University

Blockchain-Enabled Data Sharing Recommender Systems
Xiaoying Xu, South China University of Technology,
Kaushik Dutta, University of South Florida,
Chunmian Ge, South China University of Technology

Session 2C: Advertisement   **209 Lucas Hall**
Session Chair: TBA
"To Be or Not to Be" Designing L-Shape Advertising for Mobile Movie Streaming Service
Taekyung Kim, University of Suwon,
Jihae Suh, Jaehwan Lee, Jinsoo Park, Byungjoon Yoo, Seoul National University

The Effectiveness of Mobile Short-Message-Service Based Peak-Time Rebate Program for Household Electricity Demand Response
Gloria JinaKim, KAIST,
Dongsik Jang, Korea Electric Power Research Institute,
Jiyong Eom, KAIST

Budget-Constrained Ad Selection in Large-Scale Advertising Systems
Hemant K. Bhargava, UC Davis,
Ramnik Arora, Stanford University

12:30– 2:00 pm   Lunch and Keynote Speech by Dr. Arun Rai, Georgia State University:
"The Discipline at an Inflection Point: Overcoming Competency Traps, Seizing New Opportunities"

2:00 – 3:15 pm   **Session 3A: WITS Feeder Workshop (Smart Data Pricing)**   **206 Lucas Hall**
Session Chair: *Soumya Sen, University of Minnesota*

Turbulence in Media and Entertainment: Chaos or a New Order?
H. Bhargava, UC Davis

Duopoly Competition in Advertising-Sponsored Wi-Fi Provision
Joshua Eberhardt, Bharath Sreenivas, Illinois Mathematics and Science Academy,
Moksh Shah, Northwestern University

Using Neural Detection for Truthful Crowdsourced Content Evaluation
C. Huang, The Chinese University of Hong Kong,
H. Yu, Northwestern University,
J. Huang, The Chinese University of Hong Kong,
R. Berry, Northwestern University

Sponsored Data: Smarter Data Pricing with Incomplete Information
X. M. Mei, L. Qiu, University of Florida

Session 3B: Health Care II   **207 Lucas Hall**
Session Chair: TBA

Using Deep Learning to Improve Healthcare Quality and Efficiency (***Best Dissertation proposal Nominee***)
Weiguang Wang, University of Maryland

Drug-Drug Interaction Mining and Interaction Terms Extraction using Deep Learning: A Word-level Attention Bi-Directional LSTM
Zhengchao Yang, Sudha Ram, Faiz Currim, University of Arizona

Social Support and User Churn Prediction for Online Health Communities -- A Trajectory-based Deep Learning Method
Xiangyu Wang, University of Iowa,
Apoorva Joshi, FireEye, Inc.
Xun Zhou, Kang Zhao, University of Iowa

Session 3C: Dissertation Proposals   **209 Lucas Hall**
Session Chair: TBA

Health Information Exchanges: Impact on Healthcare Costs, Referral Networks, and Induced-Utility in Referral Processes (***Best Dissertation proposal Nominee***)
Saeede Eftekhari, University at Buffalo

Predicting Labor Market Competition and Employee Mobility --- A Machine Learning Approach (***Best Dissertation proposal Nominee***)
Yuanyang Liu, University of Iowa

Essays on Operational Problems in Digital Economy (***Best Dissertation proposal Nominee***)
Rakesh Mallipeddi, Texas A&M, College Station

3:30 pm	Pick up from Santa Clara University to Commodore Cruise at 2394-A Mariner Square Drive, Alameda, CA, 94501
5:45 pm	Cruise Boarding
6:00 – 9:00 pm	Commodore Cruise Tour of San Francisco Bay
9:15 pm	Pick up from Commodore Cruise back to Hyatt Place San Jose

Tuesday, December 18

Shuttle from Hyatt to SCU (7:00 am, 7:40 am, 8:20 am, 9 am, 9:40 am)

8:00–8:15 am   Registration and Networking with Coffee and Tea at Santa Clara University

8:15–9:30 am   **Session 4A: Data Science Applications**   **206 Lucas Hall**
Session Chair: *TBA*

Characterizing Social TV Activity Around Televised Events: A Joint Topic Model Approach (***Best Paper Nominee***)
Yuheng Hu, University of Illinois at Chicago

Mining Reputation Effects in Citations of Scientific Publications
Moez Farokhnia, He Zhang, Balaji Padmanabhan, University of South Florida

Waiting to be Found: Using Data Science to Discover TV Programs for Public Service Announcements
Arash Barfar, University of Nevada,
Balaji Padmanabhan, University of South Florida

Session 4B: Predictive Analytics   **207 Lucas Hall**
Session Chair: **TBA**

The misty crystal ball: Efficient concealing of privacy-sensitive attributes in predictive analytics
Nicolas Banholzer, Stefan Feuerriegel, ETH Zurich

Do Better Predictions Lead to Better Decisions? Insights from Predictive Policing
Oliver Dlugosch, University of Freiburg,
Tobias Brandt, Erasmus University Rotterdam,
Dirk Neumann, University of Freiburg

Patient Health Status Prediction: A Multi-State Markov Model
Youyou Tao, Loyola Marymount University,
Abhay Nath Mishra, Iowa State University,
Yichen Cheng, Georgia State University

Session 4C: Social Media & Reviews   **209 Lucas Hall**
Session Chair: **TBA**

Topic-based Intervention on Social Media Network Search
Clinton Daniel, Donald Berndt, University of South Florida

How do Social Ties Influence User-Generated Content: A Dynamic Perspective
Yue Jin, Tsinghua University,
Yong Tan, University of Washington,
Jinghua Huang, Tsinghua University

How Online Reviews Interact with A Firm's Free Version Strategy
Huanhuan Cao, Zhejiang University of Technology,
Jinhu Jiang, Xi'an Jiaotong University,
Xianjun Geng, Tulane University

Online Reputational Loss Aversion: Empirical evidence from StackOverflow
Ramesh Shankar, University of Connecticut

9:30 – 9:45 am   Coffee Break

9:45 – 11:00 am	**Session 5A: Crowd Platforms**	**206 Lucas Hall**

Session Chair: *TBA*

Matching Donors to Projects on Philanthropic Crowdfunding Platforms
Yicheng Song, University of Minnesota,
Zhuoxin Li, Nachiketa Sahoo, Boston University

Investigating the Fee-Delay Relationship in Cryptocurrency Transactions: Evidence from the Bitcoin Network
Noyan Ilk, Guangzhi Shang, Florida State University,
Shaokun Fan, Oregon State University

Towards Better Learning from Crowd Labeling: A Variational Inference Approach (***Best Paper Nominee***)
Jerry Luo, Xuan Wei, Daniel Dajun Zeng, Junming Yin, University of Arizona

Session 5B: Two-Sided Platform	**207 Lucas Hall**

Session Chair: **TBA**

Meet an Emergency? An Empirical Analysis on Productivity of Taxi and Ridesharing Platforms
Yingjie Zhang, UT Dallas,
Beibei Li, Zhen (Sean) Qian, CMU

Technology Restriction and Demand Shifts in Transportation Dynamics: An Empirical Study
Kyungsun (Melissa) Rhee, University of Washington,
Jinyang Zheng, Purdue University,
Yuowei Wang, Fudan University,
Yong Tan, University of Washington

Time Preference based Cloud Resource Management
Anik Mukherjee, Sundarraj P Rangaraja, IndianInstitute of Technology

Session 5C: Language Processing	**209 Lucas Hall**

Session Chair: **TBA**

A Deep Learning Architecture for Psychometric Natural Language Processing
Jingjing Li, Ahmed Abbasi, Faizan Ahmad, University of Virginia,
Hsinchun Chen, University of Arizona

Aspect Extraction from Online Consumer Reviews with WordNet-Guided Continuous-Space Language Models (***Best Paper Nominee***)
Jie Tao, Fairfield University,
Lina Zhou, The University of North Carolina at Charlotte,
Conor Feeney, Fairfield University

Predicting Complainers on Social Media: A Machine Learning Approach
Yuheng Hu, Ali Tafti, David Gal, University of Illinois at Chicago

11:00 –11:15 am	Coffee Break	

11:15–12:30 pm	Poster Slam Session	Room TBA
	Poster Demo	Room TBA

Session Chair: *Hong Guo, University of Notre Dame*

12:30 – 2:00 pm	Lunch and WITS Awards

2:00 – 3:15 pm	**Session 6A: Data Mining**	**206 Lucas Hall**

Session Chair: TBA

Data Challenges in the Digitization Era
Veda C. Storey, Georgia State University,
Carson C. Woo, University of British Columbia

Optimal Classification Performance Metric for Constructing Variables for Further Regression Analysis
Mengke Qiao, Ke-Wei Huang, National University of Singapore

Role of Reference Points in the Goal-directed Website: A Randomized Field Experiment
Qinglai He, Victor Benjamin, Yili Hong, Raghu Santanam, Arizona State University

Session 6B: Digital Economy	**207 Lucas Hall**

Session Chair: *Wolfgang Ketter, Erasmus University Rotterdam*

The Impact of Price Perception in the Dynamics of Competition in an On-Demand Economy Environment: A Differential Games Approach
Samayita Guha, Temple University,
Emre Demirezen, University of Florida,
Subodha Kumar, Temple University

Data Acquisition Accounting for Customer Heterogeneity
Xiaoping Liu, University of Massachusetts Lowell,
Xiao-bai Li, Northeastern University

Towards Efficient Energy Management: Transforming Energy Business with IT
Dmitry Zhdanov, Georgia State University

FleetPower: Creating Virtual Power Plants in Sustainable Smart Electricity Markets
Micha Kahlen, Erasmus University Rotterdam
Alok Gupta, University of Minnesota
Wolfgang Ketter, Erasmus University Rotterdam

Session 6C: Online Communities	**209 Lucas Hall**

Session Chair: TBA

Bursty Coordination in Online Communities
Lei (Nico) Zheng, Feng Mai, Stevens Institute of Technology,
Deborah M. Gordan, Stanford University,
Jeffrey V. Nickerson, Stevens Institute of Technology

Auction Parameters and Bidder Entry: Evidence from Online Outsourcing Platforms
Yili (Kevin) Hong, Benjamin Shao, Pei-yu Chen, Chen Liang, Arizona State University

Online Privacy and Information Disclosure by Consumers
Shota Ichihashi, Bank of Canada

3:15 – 4:00 pm	Coffee Break / Academic Demo/Prototype
4:00 – 4:45 pm	WITS General Body Meeting
5:00 pm	Shuttle from Santa Clara University to Hyatt Hotel
6:30 pm	Pick up from Hyatt Hotel to Maggiano's Little Italy at Santana Row
7:00 – 9:00 pm	Dinner at Maggiano's Little Italy at Santana Row (RSVP Mandatory)

Poster Session Papers

Optimal Release Strategy for the Competing Software Vendors in the Presence of Word-Of-Mouth Effect *Yu Wang (College of Management and Economics, Tianjin University, Tianjin P. R. China) , Minqiang Li (College of Management and Economics, Tianjin University, Tianjin P. R. China), Haiyang Feng, Nan Feng (College of Management and Economics, Tianjin University, Tianjin P. R. China)*
Digitally Nudged: How Websites Influence Donation Behavior *Markus Weinmann (University of Liechtenstein), Christoph Schneider (City University of Hong Kong), Nadine Székely (University of Liechtenstein), Jan vom Brocke (University of Liechtenstein)*
A Machine Learning Approach to Identify Fake News and Clickbait Websites *R. Gopal (Indian Institute of Management, India.), H. Hidaji (University of Calgary, Canada.), S. N. Kutlu (University of Connecticut, USA.), R. A. Patterson (University of Calgary, Canada.)*
Topic Modeling in Twitter: An Attribute Lattice-Based Approach *Mojtaba Asgari (Memorial University of Newfoundland, St. John's, NL,), Jeffrey Parsons (Memorial University of Newfoundland, St. John's, NL,)*
Competition in Online Consumer Ratings: An Equilibrium Analysis *Mingwen Yang (University of Texas at Dallas, Richardson, TX), Eric Zheng (University of Texas at Dallas, Richardson, TX), Vijay Mookerjee, (University of Texas at Dallas, Richardson, TX)*
Impact of Collection Structures and Type of Data on Quality Of User-Generated Content *Mahed Maddah (Florida International University), Roman Lukyanenko (HEC Montréal), Debra VanderMeer (Florida International University)*
Managing Externalities of Internet Security with Scoring Rules *Xiaofan Li, Andrew Whinston*
Creation of Homophilous Networks Using Simulated Annealing *Lev Muchnik (Jerusalem School of Business Administration, The Hebrew University of Jerusalem), Arie Jacobi (Ono Academic College, Kiryat Ono, Israel), Dylan Walker (Questrom School of Business, Boston University)*
A Classification Artifact to Support Mental Health Surveillance: A Comparison of Feature and Classifier Ensembles *Yang Gu (University of Arizona, Tucson, Arizona), Gondy Leroy (University of Arizona, Tucson, Arizona), Mihai Surdeanu (University of Arizona, Tucson, Arizona), Sydney Pettygrove (University of Arizona, Tucson, Arizona)*
If You Can't Measure it, You Can't Manage it *Arion Cheong (Rutgers Business School), Soohyun Cho (Rutgers Business School), Won Gyun No (Rutgers Business School), Miklos A. Vasarhelyi (Rutgers Business School)*
Persistence of Consumer Preference Biases in Recommender Systems *Gedaminas Adomavicius (University of Minnesota), Jesse Bockstedt (Emory University), Shawn Curley (University of Minnesota), Jingjing Zhang (Indiana University)*
From Head to Long Tail: Flexible Recommendation using Cosine Patterns *Yaqiong Wang (Carlson School of Management, University of Minnesota), Junjie Wu (School of Economics and Management, Beihang University), Zhiang Wu (Jiangsu Provincial Key Laboratory of E-Business, Nanjing University of Finance and Economic), Gediminas Adomavicius (Carlson School of Management, University of Minnesota)*

Telematics Sensor Data Analytics for Sustainable Business: Transportation and Backhaul Collaboration
Sudip Bhattacharjee (School of Business, University of Connecticut), Robert Day (School of Business, University of Connecticut), Mohsen Emadikhiav (School of Business, University of Connecticut)

I Know Where You Are: A Deep Learning Approach to Predict Location for Personalized Mobile Targeting
Da Xu (David Eccles School of Business, University of Utah), Xiao Fang (Lerner College of Business and Economics, University of Delaware), Paul Jen-Hwa Hu (David Eccles School of Business, University of Utah)

Utility Maximization in Physicians' Referral Networks: Model and Methodology
Saeede Eftekhari (State University of New York at Buffalo), Niam Yaraghi (University of Connecticut), Ram Gopal (University of Connecticut), Ram Ramesh (State University of New York at Buffalo)

The Price of Being Polite
Yi Wang (Rochester Institute of Technology)

Demo/Prototypes

SCNetworkViz: A Web-Based System for Interactive Visualization of Supply Chain Network
Yihong Liu (Shanghai University of Finance and Economics), Hui Fang (Shanghai University of Finance and Economics), Yao Bao (Shanghai Jiao Tong University)

Addressing the Cybersecurity Talent Gap through a Serious Games Approach with Young Adults
Laura Amo (SUNY at Buffalo), Joana Gaia (SUNY at Buffalo), Savit Aluri(SUNY at Buffalo), Jonathan Higgins(SUNY at Buffalo), David Murray(SUNY at Buffalo), Kevin Cleary (SUNY at Buffalo), Shambhu Upadhyaya (SUNY at Buffalo)

A Serious Game for Data Warehouse Maturity Concepts
Michael Mannino (University of Colorado Denver), Mohammed Khojah (King Abdul-Aziz University)

Demo: An Online Evidence-based Text Simplification Editor for Medical Text
David Kauchak (Pomona College), Gondy Leroy (University of Arizona), Melissa Grueter (Pomona College)

Context-Adaptable Trigger: A New IS Paradigm and Challenge
Ji Taek Lim (Pohang University of Science and Technology), Hokyeom Kim (Pohang University of Science and Technology), Injun Choi (Pohang University of Science and Technology)

Finding a Collaborative Outsourced Team: A Search System Over Social Coding Websites
Ahmad Jowhar (Ted Rogers School of Information Technology Management), Morteza Zihayat(Ted Rogers School of Information Technology Management)

PUSH: A blockchain-based application for provider facilitated patient-to-patient sharing of medical records and clinical pathways for collaborative decision support
Lina Bouayad (Florida International University), Hemant Jain (Rollins College of Business, The University of Tennessee at Chattanooga), Monica Tremblay (College of William and Mary), Carmelo Gaudioso (Roswell Park Comprehensive Cancer Center)

Dynamic cybersecurity risk score measurement for US public firms
Arion Cheong(Rutgers, The State University of New Jersey), Soohyun Cho (Rutgers, The State University of New Jersey), Won Gyun No (Rutgers, The State University of New Jersey), Miklos Vasarhelyi (Rutgers, The State University of New Jersey)