

# WITS 2020 Program

December 16-18, 2020 Virtual Workshop

## Joining Instructions

### Wednesday, December 16

7:00 – 7:30 PM EST	WITS Reception – Virtual Networking
7:30 – 8:30 PM EST	Fireside Chat: IS and Societal Engagement
	Ravi Bapna, Analytics for Good Institute – Carlson School of Management, University of Minnesota, Twin Cities, MN
	Kartik Hosanagar, Center for AI in Business – The Wharton School, University of Pennsylvania, Philadelphia, PA
	Ramayya Krishnan, Block Center for Technology and Society – Heinz College of Information Systems and Public policy, Carnegie Mellon University, Pittsburgh, PA
8:30 – 8:40 PM EST	Break
8:40 – 9:30 PM EST	Virtual Guided Tour of Hyderabad

### Thursday, December 17

10:00 – 10.30 am EST Welcome Note & Opening Remarks

10:30 – 11:30 am EST **WITS Keynote: Dr. Soumya Swaminathan, Chief Scientist, World Health Organization**

11:30 – 11:45am EST Break

11.45 am -1.15pm EST Session 1a: 4 Papers Location

			Location
1.	Personalized Training Set – A New Problem and Algorithm	Tomer Geva (Tel Aviv University); Inbal Yahav (Tel Aviv University)*	Tel Aviv, Israel
2.	Real-Time Dynamic Congestion Pricing: An Online Optimization Approach	Richard Littmann (Technische Universität München)*; Martin Bichler (Technical University of Munich)	Munich, Germany
3.	Equilibrium Learning in Combinatorial Auctions: Computing Approximate Bayesian Nash Equilibria via Pseudogradient Dynamics	Stefan Heidekrüger (Technical University of Munich)*; Paul Sutterer (Technical University of Munich); Nils Kohring (Technical University of Munich); Martin Bichler (Technical University of Munich)	Munich, Germany
4.	<b>Extracting User Suggested Features for Product Development from Noisy User</b>	Aditya Karanam (University of Texas at Austin)*; Ashish Agarwal (University of Texas at Austin);	Austin, TX

	<b>Generated Content (Best Paper Nomination)</b>	Anitesh Barua (UT Austin)	
--	--	---------------------------	--

**11.45am - 1.15pm EST**

**Session 1b: 4 Papers**

**Location**

1.	Prescriptive Analytics with Deep Reinforcement Learning for Combinatorial Action Spaces: An Application to Maintenance Management	Niklas Goby (University of Freiburg)*; Tobias Brandt (Erasmus University Rotterdam); Dirk Neumann (Universität Freiburg)	Freiburg, Germany
2.	<b>Customer Engagement Prediction on Social Media: A Novel Graph Neural Network Method with Attention Mechanism (Best Paper Nomination)</b>	Tengteng Ma (University of Illinois at Chicago)*; Yuheng Hu (University of Illinois at Chicago); Yingda Lu (University of Illinois of Chicago); Siddhartha Bhattacharyya (University of Illinois of Chicago)	Chicago, IL
3.	A Hybrid Deep Learning Model for Dynamic Stock Movement Predictions based on Supply Chain Networks	John Rios (University of Iowa)*; Kang Zhao (University of Iowa); W. Nick Street (The University of Iowa); Hu Tian (Institute of Automation, Chinese Academy of Sciences); Xiaolong Zheng (Institute of Automation, Chinese Academy of Sciences)	Iowa City, IA
4.	Now You See it, Now You Don't: Analysis of Website Obfuscation Strategies on User Information Sharing	Ashkan Eshghi (University of Calgary)*; Ram Gopal (Warwick Business School); Hooman Hidaji (University of Calgary); Raymond Patterson (University of Calgary)	Calgary, Canada

**11.45am - 1.15pm EST**

**Session 1c: 4 Papers**

**Location**

1.	Targeting Pre-Roll Ads using Video Analytics	Sungho Park (Seoul National University); Gene Moo Lee (University of British Columbia); Donghyuk Shin (Arizona State University)*; Sang Pil Han (Arizona State University)	Phoenix, AZ
2.	<b>Upending the Obesity Trend: An Empirical Study of Instacart's Impact on Obesity Epidemic in the US</b>	Hyeonsik Shin (Temple University)*; Taha Havakhor (Temple University); Min-Seok Pang (Temple University)	Philadelphia, PA
3.	Hiding under the ROC Curve: Detection of Malicious Cyberattacks in EHR Data from Model Prediction Variance	Lina Bouayad (Florida International University)*; Balaji Padmanabhan (University of South Florida)	Tampa, FL
4.	YouTube Video Analytics for Patient Engagement: Evidence from Colonoscopy Preparation Videos	Yawen Guo (Carnegie Mellon University); Xiao Liu (Arizona State University)*; Anjana Susarla (Michigan State University); Rema Padman (Carnegie Mellon University)	Phoenix, AZ

**1.15pm – 1.30pm EST Break**

**1.30pm – 3:00pm EST**

**Session 2a: 4 Papers**

**Location**

1.	Consumer Acquisition for Recommender Systems: A Theoretical Framework and Empirical Evaluations	Xuan Bi (University of Minnesota); Mochen Yang (University of Minnesota)*; Gediminas Adomavicius (University of Minnesota)	Twin Cities, MN
----	---	--	-----------------

2.	The Effect of Voice AI on Consumer Purchase and Search Behavior	Chenshuo Sun (NYU)*; Zijun Shi (HKUST); Xiao Liu (New York University); Anindya Ghose (New York University)	NYC, NY
3.	<b>Predicting Employee Turnover through Network Embeddedness (Best Paper Nomination)</b>	Yuanyang Liu (University of Tennessee)*; Gautam Pant (University of Iowa); Olivia Sheng (University of Utah)	Knoxville, USA
4.	Helping Retailers Improve Essential Products Distribution Amid COVID-19 Pandemic Using Data Analytics	Yossiri Adulyasak (HEC Montreal); Omar Benomar (Ivado Labs); Ahmed Chaouachi (Ivado Labs); Maxime Cohen (McGill University); Warut Khern-am-nuai (McGill University)*	Montreal, Canada

**1.30pm – 3:00pm EST**

**Session 2b: 4 Papers**

**Location**

1.	Relaxed Multivariate Bernoulli Distribution and Its Applications to Deep Generative Models	Xi Wang (East China Normal University); Junming Yin (University of Arizona)*	Tucson, AZ
2.	Beyond Bot Detection: Automated User Type Classification on Social Media Using Machine Learning	Yuanxia Li (The University of Arizona)*; Sudha Ram (University of Arizona)	Tucson, AZ
3.	<b>The Vertical Spillover Effect of Online Ratings on Platform Competition: An Empirical Investigation (Best Paper Nomination)</b>	Yulia Vorotyntseva (Saint Louis University)*; Aleksi Aaltonen (Temple University); Subodha Kumar (Temple University); Paul Pavlou (Bauer College of Business University of Houston)	Saint Louis, MO
4.	On Mobile Application Update Strategy in Response to Consumer Reviews: A Differential Games Approach	Youngjin Kwon (Temple University)*; Sumanta Singha (Indian School of Business); Subodha Kumar (Temple University)	Philadelphia, PA

**1.30pm – 3:00pm EST**

**Session 2c: 4 Papers**

**Location**

1.	<b>Toward a Better Understanding of AI Innovations (Best Paper Nomination)</b>	Yu-Kai Lin (Georgia State University)*; Likoebe Maruping (Georgia State University)	Atlanta, GA
2.	Making Smart Healthcare Decisions: A Deep-Learning and Diversity-Enhanced Bandit Recommendation Design	Tongxin Zhou (University of Washington)*; Yingfei Wang (University of Washington); Lu Yan (Indiana University); Yong Tan (University of Washington)	Seattle, WA
3.	Adding Community-level Social Determinants of Health Factors to Patient-level Data to Predict Stroke	Min Chen (Florida International University)*; Xuan Tan (Santa Clara University); Rema Padman (Carnegie Mellon University)	San Jose, CA
4.	Towards a Long Short-Term Memory Network Model for Forecasting COVID-19 Hospital Admissions	Arindam Ray (University of South Florida)*; Kimia Keshanian (University of South Florida); Wolfgang Jank (University of South Florida); Kaushik Dutta (University of South Florida); Matthew Mullarkey (University of South Florida)	Tampa, FL

**Recess**

**7:00pm – 8:30pm EST**

**Academic Panel: Journal EiCs/DEs**

**Andrew Burton-Jones (MISQ), Alok Gupta (ISR), Sudha Ram (JBA), Galit Shmueli (IJDS), DJ Wu (Management Science)**

**Moderator: Prabuddha De**

**8:30pm – 8:40pm EST**

**Break**

**8:40pm – 10:00pm EST**

**Social Event – Kuchipudi Dance by Ms. Yamini Reddy,  
Hyderabad, India**

## **Friday, December 18**

**10:00am - 11.30am EST**

**Session 3a: 3 Industry talks I**

**Location**

11	Rigor, Relevance and Practical Significance: A Real-Life Journey to Organizational Value	Joseph S. Valacich (Neuro-ID; University of Arizona); Jeffrey L. Jenkins (Neuro-ID; Brigham Young University)	Arizona; Utah
12	Sensing as a Service in the Era of Mixed Reality	Xiang Sheng (Facebook)	Menlo Park, CA
13	Inferring Impact Direction Graphs from Large Scale Online User Engagement Data	Weinan Wang (Snapchat); Yuxiang Xie (Snapchat); Xiaolin Shi (Snapchat)	Los Angeles, CA

**10:00am - 11.30am EST**

**Session 3b: 3 Industry talks II**

**Location**

14	Leveraging IBM Watson AIOps to Predict IT Outages from Logs	Anbang Xu (IBM Research); Rama Akkiraju (IBM Research)	Almaden, CA
15	Improving Taxonomy-based Categorization with Categorical Graph Neural Networks	Keng-hao Chang (Microsoft); Tianchuan Du (Microsoft); Paul Liu (Stanford); Ruofei Zhang (Microsoft)	Sunnyvale, CA
16	Teach Alexa to Correct Her Own Defect: A Feedback-based Self-learning System in Alexa	Chenlei (Edward) Guo (Amazon)	Seattle, WA

**10:00am - 11.30am EST**

**Session 3c: 8 Ignite talks**

**Location**

1.	Impact of spatial street network characteristics on ride-hailing systems	Kevin-Morris Wigand (Universität Freiburg)*; Tobias Brandt (Erasmus University Rotterdam); Dirk Neumann (Universität Freiburg)	Rotterdam, Netherlands
2.	Visual Analytics on Online Real Estate Platforms: Using Floor Plans in Rent Price Appraisal	Kirill Solovev (Uni Giessen)*; Nicolas Pröllochs (Uni Giessen)	Giessen, Germany
3.	Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data	Guohou Shan (Temple University)*; Zhe Deng (Temple University); Konstantin Bauman (Temple University); Qian Sun (NorthWest University)	Philadelphia, PA
4.	A Decision Support System for Seekers in Crowdsourcing Contests	Wangsheng Zhu (The University of Texas at Dallas); Jiahui Mo (Nanyang Technological University); Sumit Sarkar (The University of	Dallas, TX

		Texas at Dallas); Syam Menon (The University of Texas at Dallas)*	
5.	Managing Uncertainty in the Scheduling of Traumatic Brain Injuries Patients with Hidden Markov Models	Gleb Zavadskiy (University of South Florida)*; Wolfgang Jank (University of South Florida); Daniel Zantedeschi (University of South Florida)	Tampa, FL
6.	Tell Me Something New: Online Review Selection and Review Novelty	Yagmur Ozdemir (University of Texas at Dallas)*	Dallas, TX
7.	Robots Serve Humans: Does AI Robot Adoption Enhance Operational Efficiency and Customer Experience?	Myunghwan Lee (University of British Columbia)*; Gene Moo Lee (University of British Columbia); Donghyuk Shin (Arizona State University); Sang Pil Han (Arizona State University)	Vancouver, Canada
8.	Corporate Social Network Analysis: A Deep Learning Approach	Rui Cao (University of British Columbia)*; Gene Moo Lee (University of British Columbia); Hasan Cavusoglu (University of British Columbia)	Vancouver, Canada

**11:30am – 11:45am EST                      Break**

**11:45am – 1:00pm EST                      Academic Keynote: Dr. Pinar Keskinonak, INFORMS President**

**1:00pm – 1:15pm EST                      Break**

**1.15pm – 2:00pm EST                      Session 4a: 5 Demos                      Location**

1.	InfoRec: An Information Retrieval and Recommendation Engine for Scientific Papers	Pratyush Yadav (IIT Madras ); Soofi Hussain (Indian Institute of Technology, Madras); Nargis Pervin (IIT Madras)*	Chennai
2.	Implementing Basic Income on the Blockchain	Johannes Rude Jensen (University of Copenhagen)*; Victor von Wachter (University of Copenhagen); Dr. Omry Ross (University of Copenhagen, Department of Computer Science, DK); Peter Emil Jensen (University of Copenhagen)	Copenhagen, Denmark
3.	A Virtual Reality Prototype for Dyslexia	Johannes Antony Klein Bramel (Middlesex University)*; Luz Rello (IE Business School); Mark Borg (University of Malta)	Valletta, Malta
4.	A ML-based Smart Retail Service Prototype using Biosignals	Nurten Oeksuez (Saarland University)*; Hafiza E. Manzoor (German Research Center for Artificial Intelligence (DFKI)); Amin Harig (German Research Center for Artificial Intelligence (DFKI)); Wolfgang Maass (Saarland University)	Saarbruecken, Germany
5.	An Interactive Web-Based Dashboard for COVID-19 Hospitalizations in the U.S.	Yi Zhu (University of Minnesota)*; Soumya Sen (University of Minnesota); Pinar Karaca-Mandic (University of Minnesota); Archelle Georgiou (Starkey Technologies); Khoa Vu (University of Minnesota)	Minneapolis

**1.15pm – 2:00pm EST****Session 4b: Dissertations I****Location**

1.	Consumer Centric Design of Recommender Systems	Somnath Bhattacharya, sbhatt@iitk.ac.in	Kanpur, India
2.	An Investigation of the Human Propensity to Agree with Artificial Intelligence Across Diverse Tasks of Heterogenous Difficulty	Eric Bogert, etbogert@uga.edu	Austin, TX
3.	Essays on Bidding Strategies and Auction Design	Paul Sutterer, Technical University Munich, paul.sutterer@tum.de	Munich, Germany
4.	The Emergence of Live Streaming: Exploring Heterogeneity and Dynamics of Live Streamers	Keran Zhao, University of Illinois at Chicago, kzhaoz23@uic.edu	Chicago, IL
4.	Essays on the Design of Online Marketplaces and Platforms	David Holtz, MIT Sloan School of Management, dholtz@mit.edu	Brooklyn, NY
6.	Understanding Value and Quality of Free and Paid Financial Advice on the Internet	Tianyou Hu, The University of Auckland, hutianyou6@gmail.com	Auckland, New Zealand

**1.15pm – 2:00pm EST****Session 4c: Dissertations II****Location**

1.	Designing a Health Coach-Augmented mHealth System for the Secondary Prevention of Coronary Heart Disease	Avijit Sengupta, University of South Florida, avijits@usf.edu	Tampa, FL
2.	The Dual Nature of Control in Social Networking Services	Arturo H. Cano Bejar, National Tsing Hua University, arturocano@iss.nthu.edu.tw	Taiwan
3.	Frameworks for Cyber-risk Management	Kalpita Sharma, Indian Institute of Management Lucknow, fpm18012@iiml.ac.in	Lucknow, India
4.	Dynamics of Human Behavior in the Machine-Platform-Crowd Transformation	Yipu Deng, Purdue University, deng127@purdue.edu	West Lafayette, IN
4.	Data Driven Transportation and Logistics	Mayukh Ghosh, University of Amsterdam, m.ghosh@uva.nl	Amsterdam, Netherlands
6.	Natural Language Processing for Complex Tasks: Design Challenges and Solutions in the Era of Deep Learning	Yang Gu, University of Arizona, ygu@email.arizona.edu	Tucson, AZ
7.	Essays on Strategic Digital Initiatives In Modern Organizations	Katsiaryna Siamionava, Georgia Institute of Technology, ksiamionava3@gatech.edu	Atlanta, GA

**2:00pm – 3:00pm EST****WITS General Body Meeting****Recess****7:00pm - 8.30pm EST****Session 5a: 4 papers****Location**

1.	<b>The Effect of Content Filtering on the Internet: An Empirical Investigation (Best Paper Nomination)</b>	Ping Fan Ke (Singapore Management University); Wei T. Yue (City University of Hong Kong); Kai-Lung Hui (Hong Kong University of Science and Technology)*	Singapore
2.	<b>Tagging Items with New Tags: A Few-shot Learning Model (Best Paper Nomination)</b>	Shen Liu (Tsinghua University); Hongyan Liu (Tsinghua University)*	Beijing, China

3.	Adversarial Learning for Cross-Domain Recommendations	Pan Li (New York University)*; Brian Brost (Spotify); Alexander Tuzhilin (New York University, USA)	Hangzhou, China
4.	Mitigating Selection Biases in Recommendation: Joint Modeling Purchase and Rating Stages	Yansong Shi (Tsinghua University); Cong Wang (Carnegie Mellon University)*; Guoqing Chen (Tsinghua University)	Beijing, China

**7:00pm - 8.30pm EST**

**Session 5b: 4 papers**

**Location**

1.	<b>Enhancing Early Detection of Criminal Activities: An Internet of Things-Enabled Paradigm (Best Paper Nomination)</b>	Xiaotong Sun (Indiana University)*; Qili Wang (Renmin University of China); Liangfei Qiu (University of Florida); Wei Xu (Renmin University of China)	Beijing, China
2.	Understanding the Role of Psychological Distance in Hate Speech on Social Media	Nirupama Rajapaksha (University of Moratuwa)*; S. Ahangama (University of Moratuwa, Sri Lanka); Shalinda Adikari (National University of Singapore)	Sri Lanka
3.	Bid Farewell to Laborious Screening: An Orthogonal Space Based Method for Extracting Semantically Relevant, Diverse, and Integral Online Reviews	Shuaiyong Xiao (Fudan University); Gang Chen (Fudan University); Chenghong Zhang (Fudan University)*	Shanghai, China
4.	CEO's Facial Expression and Sentiment Analysis with Deep Learning: A Multi-dimensional Approach to Discovering CEO's Personality	Jian Shen (Fordham University)*; Yilu Zhou (Fordham University)	NYC, NY

**7:00pm - 8.30pm EST**

**Session 5c: 8 Ignite talks**

**Location**

1.	Optimizing the Advertising Budget Across Multiple Online Channels: A Budget-Performance Curve Based Non-Linear Programming Model	Sung-Hyuk Park (KAIST College of Business)*; Minhyung Lee (KAIST College of Business); Dongwook Shin (HKUST)	Seoul, South Korea
2.	Detecting Algorithmically-generated Social Media Videos	Victor Benjamin (Arizona State University)*; Raghu Santanam (Arizona State University)	Phoenix, AZ
3.	Analysis of Third-party Supply Chains of Legitimate and Fraudulent Websites	Afrouz Hojati (Calgary University)*; Ram Gopal (Warwick Business School); Raymond Patterson (University of Calgary)	Calgary, Canada
4.	Social Recommendation with Attention-Based Personality Mining in the Online Dating Context	Yue Guan (Tsinghua University)*; Yumei He (University of Houston; Tsinghua University); Yili Hong (University of Houston); Ni Huang (University of Houston); Xunhua Guo (Tsinghua University); Guoqing Chen (Tsinghua University)	Beijing, China
5.	UnitedANT: A Multimodal Deep Learning Framework for Predicting Financial Risk from Acoustic, Numeric, and Textual Cues in Earnings Conference Calls	Sen Yan (Shanghai University of Finance and Economics); Yang Bao (Shanghai Jiao Tong University)*; Hui Fang (Shanghai University of Finance and Economics)	Shanghai, China
6.	Let's Cut the Bloat! Automated Video Highlight Extraction using Timeline Comments and Emotions	Vivek K Singh (University of Missouri - St Louis)*; Balaji Padmanabhan (University of South Florida); Stephanie Andel (Indiana University Purdue University); Gert-Jan de Vreede (University of South Florida); Triparna De Vreede (University of	St. Louis, MO

		South Florida); Paul Spector (University of South Florida)	
7.	Supporting Students in the Peer-Review Process by Recommending Features of Written Feedback that Should be Improved	Konstantin Bauman (Temple University)*; Roman Rietsche (University of St. Gallen); Matthias Soellner (University of Kassel)	Philadelphia, PA
8.	Adjustable Multi-Source Bayesian Learning for Audience Estimation	Mingwei Sun (University of Maryland)*; Jessica Clark (University of Maryland); Jean-Francois Paiement (AT&T Labs Research); Jianxiong Dong (AT&T)	New York, NY

**8:30pm – 9:30pm EST**

**Awards Ceremony & Closing Remarks**