

**2019 Annual ISOM Research Workshop
March 15-16, 2019
University Hilton – Gainesville, Florida**

Workshop Schedule

Thursday – March 14, 2019

<i>7:00 pm – 9:00 pm</i>	<i>DINNER – The Warehouse Restaurant and Lounge</i>	<i>Address: 502 S Main Street Gainesville, FL 32601</i> <i>(Transportation from Hilton to the restaurant is provided by the ISOM faculty. Please be at the Hilton Lobby by 6:30 pm.)</i>
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Friday – March 15, 2019

<u>Time</u>	<u>Title</u>	<u>Presenter</u>
<i>7:30 am – 8:00 am</i>	<i>BREAKFAST</i>	
8:00 am – 8:15 am	Welcome & Introductions	Amy Pan & Anuj Kumar
8:15 am – 8:50 am	Go to YouTube and Call Me in the Morning: Use of Social Media for Chronic Conditions	Anjana Susarla
8:50 am – 9:25 am	Implications of the Sharing Economy through the Lens of Service Operations Strategy Theoretical Underpinnings, Conceptual Typology, and Research Agenda	Aleda Roth
9:25 am – 10:00 am	Disrupting Class: Using Video Analytics and Machine Learning to Improve Student Engagement Online	Michael D. Smith
<i>10:00 am – 10:30 am</i>	<i>COFFEE BREAK</i>	
10:30 am – 11:05 am	The Voice of the Customer: Managing Customer Care in Twitter	Vijay Mookerjee
11:05 am – 11:40 am	Ladies First, Gentlemen Third! The Effect of Fundraising Perspective on Medical Crowdfunding	Xitong Li

11:40 am – 12:15 pm	Impacts of Supplier Enforced Cross-licensing in a Supply Chain	Tingliang Huang
<i>12:15 pm – 2:00 pm</i>	<i>LUNCH</i>	
2:00 pm – 2:35 pm	Consumer Choice with Consideration Set: Threshold Luce Model	Ruxian Wang
2:35 pm – 3:10 pm	Assessing the Impact of Public Opinion Manipulation by Bot-Assisted Abusers in an Online Commenting Platform	Sang-Pil Han
<i>3:10 pm – 3:40 pm</i>	<i>COFFEE BREAK</i>	
3:40 pm – 4:15 pm	Manufacturer's Entry in the Product-Sharing Market	Baojun Jiang
4:15 pm – 4:50 pm	Designing for Visibility and Sharing: The Case of Mobile Apps	Ashish Agarwal
<i>6:30pm – 9:00 pm</i>	<i>DINNER – Leonardo 706</i>	<i>Address: 706 W University Ave, Gainesville, FL 32601</i> <i>(Transportation from Hilton to the restaurant is provided by the faculty. Please be at the Hilton Lobby by 6:00 pm.)</i>

Saturday – March 16, 2019

<u>Time</u>	<u>Title</u>	<u>Presenter</u>
<i>8:30 am – 9:00 am</i>	<i>BREAKFAST</i>	
9:00 am – 9:35 am	A Model of Smart Technologies	Xinxin Li
9:35 am – 10:10 am	Centralizing Pricing Decisions in an Online Marketplace	Srikanth Jagabathula
<i>10:10 am – 10:40 am</i>	<i>COFFEE BREAK</i>	
10:40 am – 11:15 am	Linking Clicks to Bricks: Spillover Benefits of Online Advertising	Vibhanshu Abhishek
11:15 am – 11:50 pm	Knowledge Transfer from a Radical New Product Development Project	Cheryl Gaimon
11:50 – 12:00 pm	Concluding Remarks	Haldun Aytug
<i>12:00pm</i>	<i>BOX LUNCH</i>	

2019 Annual ISOM Research Workshop
March 15-16, 2019
Presentation Abstracts

Go to YouTube and Call Me in the Morning: Use of Social Media for Chronic Conditions
Anjana Susarla, Michigan State University

Video sharing social media platforms, such as YouTube, offer an effective way to deliver medical information. Few studies have identified evidence-backed digital therapeutics as well as technology-enabled interventions to improve the ease with which patients can retrieve medical information to manage chronic conditions. We propose an interdisciplinary lens that synthesizes deep learning methods with themes emphasized in Information Systems (IS) and Healthcare Informatics (HIS) research to examine user engagement with encoded medical information in YouTube videos. We first use a bidirectional long short-term memory (BLSTM) method to identify medical terms in videos and then classify videos based on whether they encode a high or low degree of medical information. We then employ principal component analysis on aggregate video data to discover three dimensions of collective engagement with videos: non-engagement, selective attention driven engagement, and sustained attention driven engagement. Videos with low medical information result in non-engagement; at the same time, videos with a greater amount of encoded medical information struggle to maintain sustained attention driven engagement. Our study provides healthcare practitioners and policymakers with a nuanced understanding of how users engage with medical information in video format. Our research also contributes to enhancing current public health practices by promoting normative guidelines for educational video content enabling management of chronic conditions.

Implications of the Sharing Economy through the Lens of Service Operations Strategy
Theoretical Underpinnings, Conceptual Typology, and Research Agenda
Aleda Roth, Clemson University

Applying the lens of service operations strategy, we discuss the theoretical underpinnings of the sharing economy. “Sharing economy” services represent much more than dynamic, real-time buyer and seller matching; they also enable enhanced and novel forms of service operations value creation. Today’s technology-mediated sharing economy platforms enable shared service offerings between service providers and receivers--many of whom are neither employees nor customers of the platform firm. Characteristically, throughout the production process — from inception to distribution to consumption — peers are active co-producers of goods and services. Therefore, the sharing economy is, indeed, a paradigm shift in service business model and delivery system structure and it warrants new service operations strategies. We start by offering a general discussion of the sharing economy relative to service operations. Next, we offer a new conceptual typology as a first attempt to lay the groundwork, in part, for addressing strategic operational issues with this type of structure. Specifically, the typology relates platforms to three salient dimensions—(1) primary sharing function types, (2) generic transaction types, and (3) noneconomic versus economic incentive mechanisms—that address the nature and inherent complexities of different combinations of platform attributes. We conclude with a research agenda

to inspire future sharing economy services typology research and understanding of related service operations implications

Disrupting Class: Using Video Analytics and Machine Learning to Improve Student Engagement Online

Michael D. Smith, Carnegie Mellon University

Despite the steady growth of online education, student engagement and retention rates online have lagged relative to physical classrooms. In this research, we develop a content genome framework, based on machine learning and computer vision techniques, to understand how online video content influences student engagement rates. We then apply this framework in a unique dataset provided by Masterclass.com consisting of 771 online course videos and more than 2.6 million viewing records from 225,580 students. Our analysis shows that readily observable characteristics of course delivery can be used to accurately predict student engagement. Our results provide managerial implications for online education platforms to optimize online course video content design and improve student engagement. The findings and methods in this study also shed light on how to advance management research using unstructured video data in other contexts such as video marketing and entertainment analytics.

Note: Joint work with Mi Zhou, George Chen, and Pedro Ferreira.

The Voice of the Customer: Managing Customer Care in Twitter

Vijay Mookerjee, University of Texas at Dallas

We investigate digital customer care in the Telecommunications industry. The primary goal is to determine an optimal strategy to manage customer sentiment on social media sites such as Twitter. We also aim to identify factors and external events that can influence the effectiveness of customer care. Recently, managing customer sentiment (particularly on social media) has become crucial as more customers have started to use social media to seek help from firms. Our study uses data consisting of sentiments expressed by customers directed at Twitter's service accounts of four major U.S. telecommunication- service providers: AT&T, Verizon, Sprint and T-Mobile. To understand the antecedents of digital customer care, we model a diffusion process of customer sentiment over time. This diffusion process is influenced (or controlled) by the firm through the strategy employed to respond to customer tweets. The main benefit of our methodology is that it can be used in a prescriptive sense (specifically, to improve digital customer care), rather than merely for prediction (e.g., to forecast customer sentiment). The parameters of the controlled diffusion process are estimated to shed several insights into digital customer care in this industry. First, we find a clear separation among the firms in terms of digital customer care effectiveness. Second, we find that good customer care is not merely a matter of responding to customer tweets: T-Mobile and Sprint have high response rates, but are low on effectiveness. Third, the quality of digital customer care that customers expect varies across firms:

Customers of higher priced firms (e.g., Verizon and AT&T) expect better customer care. Fourth, seemingly unrelated events (such as signing an exclusive contract with a celebrity) can impact digital customer care. These events can be firm-initiated or exogenous. Our study has important implications for managers as it can help firms determine the optimal strategy to influence customer sentiment.

The study also helps firms anticipate the impact of external events on digital customer care and adjust the response strategy to accommodate these events.

Ladies First, Gentlemen Third! The Effect of Fundraising Perspective on Medical Crowdfunding
Xitong Li, HEC Paris

As medical crowdfunding becomes increasingly popular but many fundraising campaigns fail to collect sufficient donations for patients in need, it is important to explore how to craft an effective fundraising campaign. While in practice a majority of fundraising campaigns are narrated from the third-person perspective, little prior research examines if it is optimal to narrate the campaigns from the third-person perspective. In the present research, we draw upon multiple theories in the literature and propose that the relative effectiveness of the first- vs. third-person perspective is contingent on patient gender. Empirically, we conduct a randomized field experiment on a leading medical crowdfunding platform in China. The empirical results show that the third-person perspective is more effective in motivating donation-related behaviors for male-patient fundraising campaigns, whereas the first-person perspective is more effective for female-patient fundraising campaigns. Furthermore, we find that, to a large extent, the choice of the narrative perspectives matters more for potential donors who do not have many historical donations and have fewer friends with donations on the focal fundraising campaigns. The findings generate important theoretical and managerial implications for medical crowdfunding.

Impacts of Supplier Enforced Cross-licensing in a Supply Chain
Tingliang Huang, Boston College & University College London

Qualcomm, the largest cellphone chipmaker in the world, was recently fined RMB 6.088 billion (approximately \$975 million) by the Chinese government for alleged anti-competitive conducts including requiring downstream phone manufacturers to cross-license their patents to Qualcomm and its customers. Qualcomm's cross-licensing practice has also received similar charges or scrutiny in South Korea, Japan, European Union, and the United States. Motivated by this practice, we study the impacts of cross-licensing in a supply chain in which an upstream supplier requires its downstream competing manufacturers to cross-license. We find that, contrary to common belief, cross-licensing may incentivize more innovation investment by the weak manufacturer. In addition, besides the weak manufacturer, even the strong one may benefit from cross-licensing under certain conditions. However, the supplier does not always benefit from conducting the cross-licensing practice. We show that cross-licensing does not always hurt social welfare or consumer surplus as it is accused for. We also find that allowing manufacturers to charge each other royalties

benefit manufacturers at the cost of the supplier and consumers. Our results shed light on how cross-licensing affects innovation, profits and welfare, which have managerial implications to firms in high-tech industries, as well as to policy makers around the world.

Consumer Choice with Consideration Set: Threshold Luce Model
Ruxian Wang, Johns Hopkins University

This paper investigates the threshold Luce model, a recently proposed choice model with a threshold for the consideration-set formation. Under the threshold Luce model, consumers first form their consideration set: If an alternative with significantly low utility is dominated by another one, it will not be included in the consideration set. The threshold Luce model can alleviate the independence of irrelevant alternatives (IIA) property and allow more flexible substitution patterns. We characterize the optimal strategy and develop efficient solutions for price and assortment optimization problems. Under the threshold Luce model, the price competition may have zero, one, two, or infinite Nash equilibria, depending on the magnitude of the threshold effect. Moreover, we also develop an efficient estimation method to calibrate the threshold Luce model. Our numerical study on synthetic and real data sets shows that the new model can improve the goodness of fit and prediction accuracy of consumer choice behavior. Thus, the threshold effect should be taken into account in decision making if it exists.

Assessing the Impact of Public Opinion Manipulation by Bot-Assisted Abusers in an Online Commenting Platform
Sang-Pil Han, Arizona State University

With the rise of misinformation epidemic fueled by coordinated efforts by humans and bots, this study aims to empirically investigate how bot-assisted attention manipulations in online commenting platforms impact the diffusion of targeted specific opinions. We focus on Naver (a Yahoo-like online platform in Korea) accounts used by a bot-assisted abuser to sway public opinion about the South Korean government. Using ground-truth of the abuser accounts externally verified by court proceedings, we capture the entire dynamic interaction between regular users and malicious users at an individual user level and reveal that there are two forces at work, the herding effect and the correction effect. Further, we conduct counterfactual analyses to evaluate several governance options, namely input control, behavior control, and output control, to mitigate the adverse consequences of online opinion manipulations by abusers. As it is increasingly difficult for people to tell truth apart from manipulated opinions, transparency on an online public square remains a huge concern. This study will provide valuable implications to managers and policy makers to estimate the consequences of malicious behaviors.

Manufacturer's Entry in the Product-Sharing Market
Baojun Jiang, Washington University in St. Louis

Mobile communications technologies and online platforms have enabled large-scale consumer-to-consumer (C2C) sharing of their under-utilized products. A product owner's self-use values can differ over time, and in a period of low self-use value, the consumer may rent out her product in a product-sharing market. In response to consumer-to-consumer product sharing, many manufacturers (e.g., General Motors, BMW) have entered the product-sharing market to provide their own rental services in addition to outright sales to consumers. This paper develops an analytical framework to study a manufacturer's optimal entry strategy in the product-sharing market and the economic implications of its entry. Our analysis shows that when C2C sharing has a low transaction cost and the manufacturer's marginal cost of production is not very high, the manufacturer will find it not optimal to offer its own rental services to consumers. In contrast, when the transaction cost for C2C sharing is high or the manufacturer's marginal cost of production is high, the manufacturer should offer enough units of the products for rental to squeeze out C2C sharing (in expectation). When the transaction cost for C2C sharing and the manufacturer's marginal cost are both in the middle ranges, the manufacturer's rental services and the C2C sharing will coexist, in which case the manufacturer's entry in the product-sharing market may reduce the total number of units of the product in the whole market but increase the consumer surplus and the social welfare. Furthermore, we find that, to maximize the total profit from both the retail market and the sharing market, it may be more efficient for the manufacturer to adjust its quantity offered for rental rather than its retail price in the retail market, i.e., it may be best for the manufacturer to keep the same optimal retail price that it would choose in the absence of the sharing market, but use how much direct rental services to offer to respond to the C2C product sharing.

Designing for Visibility and Sharing: The Case of Mobile Apps
Ashish Agarwal, University of Texas at Austin

App developers face a significant challenge in generating market demand. Given their resource constraints, app developers need insights into which features of their products are the most important drivers of demand. Categorizing features of an app as intrinsic or social, we focus on the role played by these features in different parts – head, body and tail – of the demand distribution. Using data from the iOS platform for a large number of apps, we extract intrinsic and social features from a panel of version release notes using a hierarchical deep learning model. We determine how these extracted features impact the number of downloads. We find that social features increase the demand for tail apps. However, social features along with intrinsic features help the head apps, as they help get the word out about the new capabilities. Our results underscore the heterogeneity in the effect of product features on app demand, and reveal the demand drivers and underlying consumer behavior in the app selection process. The key contribution of our research is to demonstrate that the choice of features made by app developers is critical to their success, and that there is no one-size-fits-all approach that works in all parts of the demand distribution.

A Model of Smart Technologies
Xinxin Li, University of Connecticut

We study the pricing and profit implications of smart technologies that can predict consumers' real-time needs and customize the offering according to the predictions. In a two-period monopoly model with dynamic pricing and random consumer preferences, we find that when prediction accuracy is low, the firm adopts a conservative pricing strategy and smartness benefits both the consumer and the firm through reducing the consumer's usage cost. As accuracy increases, the firm raises the second-period price, which makes the consumer less inclined to engage in initial consumption. Under certain conditions, the reduction of the first-period price or demand can lower total profit and consumer surplus to levels below those with the traditional technology. The dynamic inconsistency in our model differs significantly from the "ratchet effect" in the behavior-based pricing literature, as our main results would not hold if the consumer's needs were not random. When prediction accuracy is high, smart technology once again outperforms traditional technology in terms of firm profit. Our results challenge the conventional wisdom that it is always profitable to increase accuracy when it comes to using data to predict consumer preferences

Centralizing Pricing Decisions in an Online Marketplace
Srikanth Jagabathula, New York University & Harvard University (Visiting Professor)

Because sharing economy platforms have less control on the assets and labor of the providers on the platform, they face unique challenges in implementing platform-wide changes. We discuss some of these challenges in the context of a platform changing its pricing from being completely decentralized to being completely centralized. Our study reveals that the negative effects of provider retaliation due to platform changes may outweigh the potential benefits of centralization. We offer ways to mitigate provider retaliation while retaining the benefits of centralization.

Note: Joint work with Apostolos Filippas and Arun Sundararajan.

Linking Clicks to Bricks: Spillover Benefits of Online Advertising
Vibhanshu Abhishek, University of California, Irvine

Businesses have widely used email ads to directly send promotional information to consumers. While email ads serve as a convenient channel that allows firms to target consumers online, are they effective in increasing offline revenues for firms that predominantly sell in brick-and-mortar stores? Is the effect of email ads, if any, heterogeneous across different consumer segments? If so, on which consumers is the effect highest? In this research, we address these questions using a unique high-dimensional observational dataset from one of the largest retailers in the US, which links each consumer's online behaviors to the item-level purchase records in physical stores. We use a doubly robust estimator (DRE) that incorporates nonparametric machine learning methods and allows us to perform causal estimation on observational data. Using the DRE we find that receiving email ads can increase a consumer's spending in physical stores by approximately

\$11.82. Additionally, we find that the increased offline sales result from increased purchase probability and a wider variety of products being purchased. Further, we use a data-driven approach to demonstrate that the effect of email ads is heterogeneous across different consumer segments. Interestingly, the effect is highest among consumers who have fewer interactions with the focal retailer recently (i.e., lower email opening frequency). Overall, our results suggest a reminder effect of email ads. Receiving email ads from the retailer can generate awareness and remind the consumer of the retailer's offerings of various products and services, which gradually increase the consumer's purchase probability in the retailer's physical stores. These findings have direct implications for marketers to improve their digital marketing strategy design and for policy makers who are interested in evaluating the economic impact of prevalent email advertising.

Knowledge Transfer from a Radical New Product Development Project to an Existing Product Improvement Project

Cheryl Gaimon, Georgia Institute of Technology

The successful introduction of radical new products is fraught with challenges including technical uncertainty (can the firm create the new product) and time-based competition (how fast can the firm enter the marketplace). To alleviate these challenges, a firm may choose to redirect its NPD efforts and transfer a portion of the knowledge developed for the radical product to improve an existing product in its portfolio. While the market value of the existing product improves, the knowledge transfer also reduces the market potential of the radical new product. We analyze a model to provide a deep understanding of conditions that drive a firm to undertake knowledge transfer from a radical new product under development to an existing product improvement project. Importantly, we evaluate these decisions in the context of the ability of the existing product improvement team to integrate the knowledge transfer (i.e., the team's absorptive capacity) and thereby enhance the market value of the existing product.

2019 Annual ISOM Research Workshop
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Participant Bio-Sketches

Vibhanshu Abhishek

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Vibhanshu Abhishek is an Associate Professor of Information Systems the Paul Merage School of Business, University of California - Irvine. His research focuses on the effect of emerging technologies on consumers' behavior, business strategy and market structure. He is particularly interested in multi-channel coordination and examines issues in multi-channel retail, advertising and pricing. He studies how consumers respond to different forms of advertising and how companies can strategically use new advertising channels to connect with their consumers. He also examines the dynamics of e-commerce marketplaces and their interaction with traditional retail. Dr. Abhishek has published in top management journals like Operations Research, Marketing Science, Management Science, MIS Quarterly and Journal of Interactive Marketing. He is also a recipient of the Google Faculty research award, Adobe Faculty grant, Flipkart research grant and has won several awards like the ISA-INFORMS best paper award, CIST best student paper award and the ISS Nunamaker-Chen Dissertation award. His research has been cited in popular press outlets such as the Sloan Management Review, NY Times, Forbes, Fortune, Pittsburgh Post Gazette, Seattle times and Wall Street Journal. He has worked with several firms including McKinsey & Co., Sequoia Capital, Pirates, LEGO, Adobe, FICO, IBM and Omnicom and advises hi-tech startups. He received a PhD in Operations and Information Management and a M.A. in Statistics from the Wharton School, University of Pennsylvania. He also holds a B.Tech in Computer Science from IIT Kanpur. Before joining UC Irvine, Dr. Abhishek was an Assistant Professor of Information Systems at the Heinz College, Carnegie Mellon University.

Ashish Agarwal

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Ashish Agarwal is an Associate Professor in Information, Risk and Operations Management Department at the McCombs School of Business, U T Austin. Prior to joining U T Austin, Ashish obtained his PhD in Information Systems from Tepper School of Business, Carnegie Mellon University. He also holds a Bachelors in Engineering from Indian Institute of Technology, Mumbai (India), and an MS in Engineering from Massachusetts Institute of Technology. His research interests include sponsored search, online information and investment markets, social media advertising, economics of app ecosystems, and network analysis. His papers have been accepted in several leading conferences and journals in information systems and marketing, including Management Science, Information Systems Research and Journal of Marketing Research. He serves on the editorial board for Management Science.

Cheryl Gaimon

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Cheryl Gaimon is the Esther and Edward Brown Chair and a Regents Professor in the Scheller College of Business at the Georgia Institute of Technology. She initiated establishment of the Operations Management (OM) Program and was a core participant in the development of an interdisciplinary Certificate Program in the Management of Technology (MOT) (currently serving as that program's director). Professor Gaimon's research and teaching consider how a firm manages its knowledge-based assets (including people, manufacturing and service technologies, processes and procedures, materials and information) in environments characterized by innovations in science and technology, global competition and a dynamic marketplace. Particular topics of interest include outsourcing knowledge, innovation and new product development strategies (such as knowledge creation and transfer), and environmental process improvement. Her research has appeared in journals including *Management Science*, *Manufacturing and Service Operations Management*, *Operations Research*, *Organization Science*, and *Production and Operations Management*. Professor Gaimon is a Fellow of the Production and Operations Management Society (POMS). She served as the President of POMS in 2008-2009. She is the recipient of the "Sushil K. Gupta POMS Distinguished Service Award" in 2014; the "2014 Brady Family Award for Faculty Research Excellence" given by the Scheller College.. Professor Gaimon is the Management of Technology Department Editor for *Production and Operations Management*. Formerly, she was Associate Editor for *Management Science*, Senior Editor of *Manufacturing and Service Operations Management*, Department Editor of *IIE* (Institute of Industrial Engineers) *Transactions*, and Department Editor of *IEEE Transactions on Engineering Management*.

Sang-Pil Han

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Sang Pil Han is an Associate Professor of Information Systems in the W. P. Carey School of Business at the Arizona State University. Han is interested in studying how firms gain useful insights and competitive advantages from big-data and business analytics. He is especially interested in topics related to mobile analytics, mobile apps, mobile marketing, and social media. Han's recent research focuses on addiction to mobile social apps, mobile targeting, mobile content consumption modeling and mobile media planning. In his research, he relies upon empirical research methods including econometric analyses, hierarchical Bayesian modeling, dynamic structural modeling and randomized field experiments. His papers were published in top-tier journals such as *Management Science*, *Management Information Systems Quarterly*, *Information Systems Research*, among others. He currently serves an Associate Editor at *Information Systems Research*.

Tingliang Huang

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Tingliang Huang is an Associate Professor in the Carroll School of Management at Boston College, Massachusetts, and an honorary faculty member at the University College London, UK. He has research interests in modeling consumer behavior, the interface of operations and marketing, service operations, and business analytics. He has published in leading journals such as Marketing Science, Management Science, Manufacturing & Service Operations Management, and Production and Operations Management. His research has been recognized by some research awards, such as the 2018 POMS Wickham Skinner Early-Career Research Accomplishments Award, the 2015 Wickham Skinner Best Paper Award published in Production and Operations Management, the 2018 Most Influential Service Operations Paper Award, and the 2016 INFORMS Service Science Best Student Paper Award. Tingliang obtained a PhD in Operations Management from the Kellogg School of Management, Northwestern University, an MS from the University of Minnesota, and a BS from the University of Science and Technology of China (USTC).

Srikanth Jagabathula

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Srikanth Jagabathula is Visiting Associate Professor of Technology and Operations Management Unit at Harvard Business School and Associate Professor (on leave) at the Department of Information, Operations, and Management Sciences at Leonard N. Stern School of Business of New York University. Professor Jagabathula's research interests broadly lie at the intersection of operations, machine learning, and marketing. His current work broadly focuses on developing data-driven modeling and learning techniques with the goal of improving the accuracy of operational decision-making. The objective of his research is to obtain easy-to-use techniques for a wide range of managerial decisions: the right products to design, the right products and prices to offer to customers, and the right quantity of each product to carry. More broadly he is interested in understanding how to handle and extract useful insights from the large quantities of data being generated by businesses. He has received a number of awards recognizing his work, including the NSF CAREER Award, the Wickham Skinner Early-Career Research Accomplishments Award from the Production and Operations Management Society, best student paper awards in operations and machine learning conferences, best master's thesis award, and the President of India Gold Medal in 2006. Professor Jagabathula received a B.Tech. degree in Electrical Engineering from IIT Bombay, and an S.M. degree and Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology.

Baojun Jiang

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Baojun Jiang is an associate professor of marketing at the Olin Business School at Washington University in St. Louis. He received a B.A. in economics and physics from Grinnell College, an M.S. in physics and an M.S. in electrical engineering from Stanford University, an M.B.A. from the University of Texas at Austin, and an M.S. and Ph.D. in information systems from Carnegie Mellon University. His current research interests include the sharing economy, platform-based

business models, competitive strategy, behavioral economics, and marketing-operations interface. His research has been published in top-tier journals such as Marketing Science, Management Science, Journal of Marketing Research, and Production and Operations Management. He was selected as a 2017 MSI Young Scholar by the Marketing Science Institute, and serves as a Senior Editor at Production and Operations Management and is on the Editorial Review Boards of Journal of Marketing Research and Marketing Science.

Xinxin Li

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Xinxin Li is an Associate Professor of Operations and Information Management at the School of Business at the University of Connecticut. Her research interests are in economics of information systems with an emphasis on the implications of new technologies to consumer welfare, firm pricing and competitive strategies. Her work has been published in Management Science, Information Systems Research, MIS Quarterly, Marketing Science, Strategic Management Journal, among other journals. She received her Ph.D. from the Wharton School at University of Pennsylvania and her B.S. from Tsinghua University in China.

Xitong Li

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Xitong Li is an Associate Professor in the department of Information Systems and Operations Management, HEC Paris, France. His recent research interests include the economic and social impacts of using online data/information, and innovative technologies using online data and services. His research has appeared, or is forthcoming, in Information Systems Research, MIS Quarterly, Journal of Management Information Systems, ACM Transactions on Internet Technology, ACM Transactions on Multimedia Computing Communications and Applications, IEEE Transactions on Engineering Management, IEEE Transactions on Automation Science and Engineering, IEEE Transactions on Systems, Man & Cybernetics, IEEE Communications Magazine, and other leading international journals and conference proceedings. His research has recently been granted by ANR AAPG France (solo PI, Agence Nationale de la Recherche in France, equivalent to National Science Foundation in the U.S.) for three years of 2018-2020. He won the Best Paper Award at the 46th Hawaii International Conference on System Sciences (HICSS) in 2013 and the OCIS Best Paper Award Finalist at the 77th Academy of Management (AoM) Annual Meeting in 2017. He received his Ph.D. in management from the MIT Sloan School of Management, and his Ph.D. in engineering from Tsinghua University.

Vijay Mookerjee

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Dr. Vijay Mookerjee is a Professor and Charles and Nancy Davidson Professor of Information Systems at Naveen Jindal School of Management in UT Dallas. He has earned his bachelor of engineering from Nagpur University in India. Prior to joining UT Dallas in 2001, he taught at the University of Washington, where he received the PhD Mentor of the Year award. He earned his PGDM in systems and marketing from the Indian Institute of Management. He earned his PhD in management with a major in management information systems from Purdue University.

His research interests include social networks, managerial issues in information security, optimal software development methodologies, storage and cache management, content delivery systems, and the economic design of expert systems and machine learning systems. In 2011, his research on how companies can improve the online forum experience for customers won the Best Paper award at the Conference on Information Systems and Technology, which is held in conjunction with the Institute for Operations Research and the Management Sciences (INFORMS) national meeting. In the co-authored paper, Mookerjee, his wife, Dr. Radha Mookerjee, and another colleague created a computer program that can help companies determine when they should provide expert input to customers using online forums.

Mookerjee said he is most proud of being named a fellow of the Information Systems section of INFORMS. He is senior editor of *Information Systems Research*. He serves as an associate editor of several leading journals, including *Decision Support Systems*, *Management Science: Information Systems Department*, *INFORMS Journal on Computing: Telecommunications and E-Commerce Area*, *Information Technology and Management* and *Journal of Data Management*. He has published in several journals, including *Information Systems*, *Computer Science*, and *Operations Research*. He has been involved with the Workshop on Information Technologies and Systems (WITS), serving as co-chair of the WITS workshop in Australia in 2000.

Aleda Roth

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Aleda Roth is a Distinguished Professor at Clemson University. Before then, she held the W.P. Carey Endowed Chair at ASU and the Mary Farley Lee Endowed Chair at UNC-Chapel Hill. She also held faculty positions at Duke and Boston University; and invited visiting scholar positions, including London Business School, IESA, Xi'an Jiaotong, Católica Portuguesa, WHU (Germany), INSEAD (Singapore), and others. Aleda is an internationally recognized thought leader in manufacturing, supply chain and service operations strategy. Her research is motivated by theoretical and practical explanations of how firms can best deploy their operations, global supply chains, and technology strategies for “triple-aim” performance - competitive advantage, sustainability and public well-being. She addresses strategic and policy impacts of emerging paradigms, such as service innovation/design strategies in the sharing economy, hospitality, health care, humanitarian and other sectors. She proposes new business models for supply chain and operations, including business synergies of responsible/sustainable operations; strategic sourcing strategies for resiliency to political risk and mitigating quality risks in food, pharmaceuticals and other consumer products. With over 250 publications (106 refereed), Aleda’s work ranks #2 in the

world for publications in premier journals: POM, JOM, MSOM & Mgt. Sci. from 2001-2015 and 7th worldwide in service management research. Aleda has received over 100 research honors since earning her doctorate in 1986. Most recently, Aleda was honored to be selected for the 2018 Inaugural Class of Clemson University's Research, Scholarship and Artistic Achievement Award and the 2015-2016 Senior Scholar Research Excellence Award (Clemson College of Business); and was named an Academic Scholar for Cornell University's Institute for Healthy Futures. In 2014, Aleda was honored with the Award for the Advancement of Women in Operations Research and Management Sciences (OR/MS); in 2013, was inducted into the Inaugural Class of Texas A&M Institute for Advanced Study (TIAS) as an Eminent Scholar. Aleda served the first woman elected as President of the Production and Operations Management Society; was elected as a Distinguished Fellow of her three professional societies; and holds senior editorial leadership roles. She served as a subject matter expert for NSF grant reviews, the NY State Attorney General's Office, the National Academies of Sciences, Engineering and Medicine and the National Center for Health Statistics. She serves on the Executive Advisory Committee of the U.S. Manufacturing Competitiveness Initiative; and since 1991, as an industry-sponsored member of the Conference Board's Business Performance Excellence Council. She received over \$2.75 million in external research funding. Since 1991, Aleda is a member of Conference Board's Business Performance Excellence Council; and she served on the Executive Advisory Board of the Council on Competitiveness' U.S. Manufacturing Initiative. She has consulted with numerous corporate entities, including Nestle (Vevey), J&J, GE, Baxter, IBM, National Center for Manufacturing Sciences, Smith & Nephew (UK), Deloitte, Accenture, E&Y, etc. Aleda earned her doctorate from Ohio State University in production and operations management and BS in psychology; and holds a MSPH in biostatistics from the UNC-Chapel Hill. Prior to her doctorate, she worked for more than 10 years in health care, holding senior research and top management positions.

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Dr. Ruxian Wang is currently an associate professor at Johns Hopkins University, Carey Business School. Before returning to academia, he worked in Hewlett-Packard Company for several years as a research scientist. He received Ph.D. from Columbia University, M.S. and B.S. from Nanjing University. His research and teaching interests include operations management, revenue management, pricing, consumer choice models, data-driven decision making. His research articles appeared in several journals, such as Management Science, Manufacturing & Service Operations Management, Operations Research, Production and Operations Management.