

Yuan Zhang

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Education

- Ph.D. **University of Texas at Arlington**, Doctoral Candidate (Expected Completion: May 2020)
Major: Information System Management
- Master **University of California San Diego**, 2015
Major: Finance
- B. S **Beijing International Studies University**, China, 2011
Major: Financial Management and Accounting

Research Interest

- Topics**
- User Generated Content
 - Online Platform and Ecosystem
 - Live Streaming Social Media
 - eSports and Video Game Industry
 - Healthcare Innovation
 - Digital Marketing
 - Technology Spillover
 - Mobile Advertising
- Methodology**
- Applied Econometrics
 - Field and Lab Experiment

Dissertation

• **Title: The Power of User-Generated Contents and Online Communities**

This dissertation contains three essays that examine three aspects of user-generated content (UGC) and online communities. The first essay extends the Technology Spillover Theory and investigates the spillover effects of location-based mobile applications on local businesses' performance through a natural experiment. The second essay applies the Social Presence Theory and the Media Richness Theory and examines the impacts of the viewership of user-generated live-streaming and pre-

recorded videos on sales and customer stickiness through a comprehensive Panel-Vector-Auto-Regression analysis and an online experiment. The third essay combines the Social Comparison Theory and the Teamwork Theory on the group level and studies the moderation effects of offline team building activities and the main effects of within-group social comparison and between-group competitive climate on group exercise participation.

Essay 1 Spillover Effects of Location-Based Technologies on Local Businesses' Online Reputation

Essay 2 "Live" to win: The Impacts of Different Video Platforms on Product Sales Performance- A PVAR Analysis

Essay 3 Run for the Group: The Impacts of Offline Teambuilding, Social Comparison and Competitive Climate on Group Physical Activity - Evidence from Mobile Fitness Apps

- **Committee:** Jennifer Jie Zhang (Chair), Sridhar P. Nerur, Vaghefi Mahyar, Ritesh Saini (Marketing)
- **Proposal Date:** April 2, 2019

Research

Journal Papers Under Review and Ready for submission Y. Zhang and J. Jennifer Zhang (2019), Spillover Effects of Location-Based Technologies on Local Businesses' Online Reputation. (Information Systems Research, First Round Revision)

Y. Zhang and J. Jennifer Zhang (2019), "Live" to win: The Impacts of Different Video Platforms on Product Sales Performance- A PVAR Analysis. (Finished, Targeting ISR)

Y. Zhang, J. Jennifer Zhang, Z.L. Liu and X.L. Song (2019), Run for the Group: The impacts of offline teambuilding, social comparison and competitive climate on group physical activity - Evidence from mobile fitness apps. (Draft Finished and being Polished, Targeting MISQ)

Conference Publication and Presentation Y. Zhang, J. Jennifer Zhang, Z.L. Liu and X.L. Song (2019), Run for the Group: The Impacts of Offline Teambuilding, Social Comparison and Competitive Climate on Group Physical Activity - Evidence from Mobile Fitness Apps, HICSS 2020.

Y. Zhang, J. Jennifer Zhang, Z.L. Liu and X.L. Song (2019), Run for the Group: The Impacts of Offline Teambuilding, Social Comparison and Competitive Climate on Group Physical Activity - Evidence from Mobile Fitness Apps, CIST 2019.

Y. Zhang, J. Jennifer Zhang, Z.L. Liu and X.L. Song (2019), Run for the Group: The Impacts of Offline Teambuilding, Social Comparison and Competitive Climate on Group Physical Activity - Evidence from Mobile Fitness Apps,

INFORMS 2019.

Y. Zhang, J. Jennifer Zhang, Z. L. Liu, X. L. Song (2019), Run for the Group: The Impacts of Offline Teambuilding, Social Comparison and Competitive Climate on Group Physical Activity - Evidence from Mobile Fitness Apps, DSI 2019.

Y. Zhang and J. Jennifer Zhang (2018), “Live” to win: The Impacts of Different Video Platforms on Product Sales Performance- A PVAR Analysis, CIST 2018.

Y. Zhang and J. Jennifer Zhang (2018), “Live” to win: The Impacts of Different Video Platforms on Product Sales Performance- A PVAR Analysis, ICIS (TREQ) 2018.

Y. Zhang and J. Jennifer Zhang (2018), “Live” to win: The Impacts of Different Video Platforms on Product Sales Performance- A PVAR Analysis, INFORMS-Finalist of Social Analytics Best Student Paper 2018.

Y. Zhang and J. Jennifer Zhang (2018), “Live” to win: The Impacts of Different Video Platforms on Product Sales Performance- A PVAR Analysis, POMS 2018.

Y. Zhang and J. Jennifer Zhang (2018), Spillover Effects of Location-Based Technologies on Local Businesses’ Online Reputation, HICSS 2018.

Y. Zhang and J. Jennifer Zhang (2017), Spillover Effects of Location-Based Technologies on Local Businesses’ Online Reputation, CIST 2017.

Working Papers

Y. Zhang and J. Jennifer Zhang, How Do User-Generated Videos Shape the Sales of the Head and the Tail Products? - Evidence from Video Game Industry (Stage: Data collection and conceptual framework completed and being analyzed)

Y. Zhang, J. Jennifer Zhang, and Z.L. Liu, How Do the Food Delivery Platforms Shape Customer’s Dinning Behavior? (Stage: Data collection and conceptual framework completed and being analyzed)

Y. Zhang, J. Jennifer Zhang, and Z.L. Liu, How does IT Usage Predict Business Failure? - Evidence from Food Delivery Service Industry (Stage: Data collection and conceptual framework being constructed)

Y. Zhang and J. Jennifer Zhang, Bless or Curse: The Impacts of Trolling on the Social Norm, Platform Traffics, and Purchase Behaviors Under the Live Streaming Social Media Setting. (Stage: Collecting data and summarizing literature)

Y. Zhang and J. Jennifer Zhang, How Do Real-Time Social Interactions in the Live Streaming Matter to the generation and consumption of User-Generated Content? (Stage: Collecting data and summarizing literature)

Grand Program

09/2019- Current **Student Participant to the NSF C-Accel Award “Credible Open Knowledge Network Project” (\$999,870)**

Employment History

07/2019-07/2020 **Research Assistant working with Dr. Jie Jennifer Zhang**
Department of Information Systems and Operations Management, UTA

08/2016-08/2019 **Teaching Assistant**
Department of Information Systems and Operations Management, UTA

2012- 2013 **GX Internet Technology, Ltd** (Social media company-start-up)
Web/ Mobile UX research lead and product manager, Beijing, China

2011-2012 **Oracle Corporation-Greater China Area**
Database and Middleware pre-sales consultant, Beijing, China

2011 summer **Happy Elements Technology Co., Ltd.**
Financial Analyst Intern, Beijing, China

2010 summer **Barclay- PLC., Investment Bank**
Market risk analysis intern, Beijing, China

2008-2011 **New Oriental Education & Technology Group Inc.** (ESL institution)
Part-time TOEFL (reading, listening) and TEM4 (reading) instructor, Beijing, China

Scholarships and Awards

2019-2020 UTA Asia Scholarships

03/2019 HIMSS Doctoral Fellowship
DFW- Texas Chapter of HIMSS (Healthcare Information and Management Systems Society)

12/2018 Finalist of Best Student Paper
Social Analytics Track, INFORMS 2018, Phoenix, AZ, USA

08/2016- present Doctoral Fellowship
Department of Information Systems and Operations Management, UTA, USA

2009-2011 National Scholarship (awarded to top 5% students in the college)

06/2010 Best Student Paper, Undergraduate Graduation Project Competition
Department of Financial Management, BISU, Beijing, China

12/2009	Finalist, National Undergraduate Mathematical Modeling Contest Department of Financial Management, BISU, Beijing, China
12/2009	Best Revenue Award, Business Management Simulation Competition Microsoft, Beijing, China

Technical Skills

- Business Analytics & Intelligence, Network Analysis: SAS, R, UCINET, and MATLAB
- Database and Middleware: Oracle SQL, MySQL, MS-SQL, Oracle GoldenGate
- Programming Languages: Python, Java
- Statistical and Econometrics Analysis Tools: STATA, MATLAB, EViews, R, MiniTab, SPSS, PLS and LISREL
- Enterprise Resource Planning: SAP-ERP, Oracle NetSuite

Teaching Experiences

Instructor	<ul style="list-style-type: none">• UTA Courses: Intro to MIS and Data Processing INSY 2303-001 (Fall 2019)
Teaching Assistant	<ul style="list-style-type: none">• UTA Undergraduate Courses: Advanced Web Development 4315 (Spring 2017, Fall 2018), Cyber Security 4312 (Spring 2019), Advanced Application Development in Java 4305 (Spring 2019), Operation Management (Summer 2016), Business Statistics 3321 (Summer 2019), Introduction to Programming 3300 (Fall 2016)• UTA Graduate Courses: Data Science 5378(Fall 2016, Fall 2018), Web and Social Analytics 5377 (Fall 2018), Advanced Statistical Methods 5325 (Fall 2016, Spring 2017), Analysis and Design 5341(Summer 2019), Seminar in Research Foundations 6301 (Fall 2018)

Teaching Interests

- Business Analytics
- Web and Social Analytics
- Digital and Social Media Marketing
- Introduction to Information System
- E-Commerce
- Database, System Analysis& Design
- Business Statistic and Applied Econometrics

- Introduction to Programming

Professional Services and Professional Affiliations

Ad hoc	Conference on Information Systems and Technology 2019
Reviewers	Hawaii International Conference on System Sciences 2018 Electronic Commerce Research 2018
Members	AIS INFORMS

References

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<https://mentis.uta.edu/explore/profile/radha-mahapatra>

Research Statement

My current research interests generally focus on various types of user-generated contents and online communities, how technologies can impact on their development, and how UGCs can shape online and offline user behaviors and company decisions. I am also interested in the application of econometrical analysis to build causality conclusions and extend related theories and literature in the field of IS. More specially, my dissertation studies cover three different streams across my research interests: how the penetration of mobile technologies spillovers on local business and their online reputations; how live streaming and pre-record user-generated videos shape the related product sales and customers' retentions; and how offline activities moderate the online communities' impacts on user participation.

In the first essay, I examine the spillover effects of the penetration of LBS-featured mobile applications on local businesses' performance and their online reputation by focusing on the entry of a phenomenal mobile app. I leverage a natural-experiment involving this mobile app, and conduct propensity- score-matched difference-in-difference analysis in tandem with a relative time approach. I find that in general, local businesses that are close to the in-app portals do benefit from the spillovers of the mobile app in improving their online reputation (in terms of review rating, review volumes, and check-in records). Moreover, internalization of the spillover effects depends on the established reputation of the business and the time frames. That is, low reputation businesses only benefit from the app in the short term, and the long-term results demonstrate a rich-get-richer effect: only businesses with a high rating can reap the benefits from these applications. This paper also sheds light on how local businesses leverage these types of LBS-featured applications to improve online reputation and create potential business opportunities.

User-generated-video platforms are growing rapidly, has engendered massive proliferation, and is evolving to various forms, which includes more and more interpersonal interaction and socialization features. Motivated thus, in the second essay, I focus on live streaming video platforms and pre-recorded video platforms. The objective is to examine how effectively do live streaming video platform and pre-recorded video platforms play in influencer marketing, in terms of product sales and customer stickiness? Moreover, do platforms perform equally in converting viewers to shoppers and why? Through Panel-Vector-Auto-Regression analysis and a lab experiment through the MTurk, we find that (1) Live streaming video platforms can improve both the short-term and long-term product sales and customer stickiness. (2) Pre-recorded video platforms can only improve long-term product sales and customer stickiness. (3) Live streaming video platforms have a more significant and stronger predictive relationship than pre-recorded video platforms with the response level and explanatory power of product sales and customer stickiness. I use the media richness theory and the social presence theory to explain the results. Collectively, this research adds the contributions to marketing, IS and communication literature by extending the propositions of media richness theory and social presence theory and by providing managerial implications to managers who conduct content and influencer marketing.

The essay studies online communities' influence on users and how offline interactive activities shape the influence through a fitness app. To encourage users to exercise more and to improve the retention, fitness application developers build apps with more social interaction features on the collective level like allowing users to join and work out with groups and hold offline group meetup events. However, the impacts of the within-group social comparison and between-group competitive climate on the group exercise participation are unclear. Motivated thus, I build a conceptual framework to explain the effects based on the social comparison theory. Based on the Teamwork theory, I also propose that offline group team building activities moderate the effects of the within-group comparison and between-group competitive climate on group exercise participation. I conduct a series of comprehensive empirical analyses through a fitness app dataset to test and validate the main and moderating effects. The results show that both the within-group social comparison and the between-group competitive climate can improve group exercise participation. Additionally, the number of offline activities moderate the main effects in opposite directions. The findings help fitness app developers to better understand the impacts of offline team building activities on the participation of the online virtual groups, and further, we provide implications regarding how to make online community policies and design gamification incentive mechanism to stimulate and promote offline team building activities.

Besides the above topics studied by my three dissertation essays, I am obsessed with all kinds of fascinating phenomena as the consequences of the rapid and continuous development of ever-changing internet and mobile technologies. For example, besides boosting related product sales, live streaming content generators are also influencers for promoting niche markets and shaping long-tail of specific industries. Live streaming platforms, given its timely inter-personal interaction and communication feature, can serve to be the ideal sample of cyberbullying and trolling behaviors, users' privacy concerns and the impacts of these interactions on content generation and consumptions. I am currently working on several projects to examine these puzzles and expect to build both theoretical and practical contributions to the field. I consider myself an open-minded and continuous-learning researcher. Besides keeping updating my applied econometrics toolkits, I will also incorporate other research methodologies in my future works such as structural modeling, game theory analysis, and machine learning.

Teaching Statement

I believe that being an instructor in the information system field, and I always need to prepare and teach myself with the most cutting-edge techniques and get familiar with the latest technology trend and phenomena. I formed a proactive and continuous learning habit when I work in the industry, and relying on this habit, I motivate myself to learn new techniques, when I pursuing my master and Ph.D. This habit helps me to equip with informative resources and knowledge as a lecturer no matter I am teaching a standardized introduction undergrad course or a grad-level course focusing on specific topics. I hope I can also inspire and encourage students to form these beneficial habits to better learn knowledge from the textbooks and better prepare for their future works.

With several years of working experience in the industry across different leading IT companies at different positions, I believe that by providing context-specific industry cases, examples and practical implications can help students learn to theories and concepts more efficiently. Hands-on skills and rules-of-thumb can help students faster apply concepts they memorize from the classroom to their work or even daily life. For example, when teaching the introduction course INSY2303 at UTA, I provide students a short tutorial regarding useful excel functions based on my working experience as the UX researcher for analyzing user networks and predicting retentions. Students who have not learned statistics can also have a relatively more rigorous and informative way to explore and examine whatever data samples they have and have a taste on association relationships between observations. I also introduce and teach students some tips, such as open-sources or code-free tools regarding prototype design, marketing analysis, and simple text analysis. These tips encourage students to explore more about the application of the IS field and do little experiments about freshly learned concepts. Most of the students in my introduction class can use these tricks to crawl data, draw word-cloud, or conduct simple text analysis before taking any programming courses.

Third, I believe that it is beneficial and interesting to share students with my research findings and introduce them to the latest literature streams regarding related concepts I am teaching. Textbooks do not always timely reflect up-to-date literature. Discussing the latest literature and academic research findings in class can also help students to generate interest to do research or have a broader and more in-depth view of the contents they are learning.

Diversity Statement

Demographic Diversity Being Associated with My Research Interests

I am an Asian female post-90 generation researcher, originally coming from Beijing, China. Besides the culture diversity coming along with my demographic background, I want to highlight my hobby passion as a slash youth in a sub-culture- ACG (Animation, Comics, and Gaming). One of my research interest is User-generated-contents and especially the video content and live streaming content. Before I start a Ph.D. life, I was also a slash video content generator and streamer, who earns money by making and uploading videos about how I play video games on multiple platforms. In the IS field, mainstream literature might still have a not-positive stereotype regarding gaming, gamer, and live streaming. However, live streaming platforms are not only dominated by gaming contents. These platforms and social media, given their timely interpersonal interaction and communication features, are also practically useful media for online education, healthcare telecommuting, digital marketing, especially the influencer marketing, etc., to support niche markets and enlarge the long-tail effects. Moreover, how companies', UGC generators', and consumers' decisions and behaviors impact on each other and are associated with optimized strategies regarding online traffic management and operation are also worthy of being researched. For example, my second dissertation essay studies how live streaming video platforms and pre-recorded video platform respectively shape the sales of video games. I find that live streaming video platforms have a more significant and stronger predictive relationship than pre-recorded video platforms with the response level and explanatory power of product sales and customer stickiness. Twitch (an actually leading live streaming platform but many researchers haven't heard of) is more efficient than YouTube in promoting game sales. Similar to live streaming videos, video games sometimes, are also treated with prejudice by academia and mass media. Rather, I view quality video games as another genre of art loading with advanced technologies, and I believe many of its positive influences and economics value on society are needed to be studied. For example, in my first dissertation Essay, I find an LBS-AR featured mobile game can promoting the spatial spillover effect on local business.

In sum, my hobby in the ACG culture can bring fresh ideas and unique insights to IS research and serve to be the source of my research passion. I believe live streaming is the new social media, and I will dedicate myself in researching this treasure land full of fascinating internet phenomena and research ideas.

Diversity from my Work Experience, Education and Research Methodology

I have a very diversified and a little bit complex background before I started my Ph.D. in IS at UTA. My undergrad major is in Financial Management and Accounting. After the graduate, I became a Database consultant at Oracle to support field sales representative and customers to know better about the benefits of new version software from the white paper. With strong interests in internet technology start-ups, I left Oracle and join a social media start-up as a UX architecture and researcher. The experience of designing application prototype, managing products, and researching user demands provide me more perspectives and interests in how online platforms, company

decisions, and internet technologies shapes the game structure and behaviors of all internet participators. Later, when I was pursuing my master degree in finance at UCSD, I grew strong interests in the applied econometrics, which becomes the primary methodology for my research. I also tried Ph.D. experience in the field of both quantitative marketing at UMN and consumer behavior marketing at UTA. These experiences of trying helped me to find my true research passion in the field of IS and accumulated me rich theoretical and methodological foundations in my later research life. Thus, I can claim myself as a researcher who knows every academic and industrious aspect a little bit across all fields of business administration.

Given my main research methodology in applied econometrics, microeconomics and quasi-experiments and given my research interests and diversified backgrounds, I am excitedly looking forward to coauthor with future colleagues who have different backgrounds and specialize other methodologies like game-theory analysis, lab and field experiments, machine learnings and qualitative research, etc.