

## Qiang (David) Gao, PhD

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### Research Interests

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Topics : Online Finance, particularly crowdfunding; Online Labor Market; Online Community, including user-generated contents (UGC); Healthcare, particularly mobile-based healthcare for elderly people; Knowledge diffusion network.

Methods : Predictive Modeling, Econometric Modeling, Field Experiment

### Teaching Interests

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Technical courses : Data Analytics, Data Mining and Management, Programming, Data Communication  
Business course : Business Foundation for IT, Project Management

### Education

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Ph.D. (August 2011 - August 2016)	Eller College of Management, University of Arizona, Tucson, USA
M.S. (January 2008 - December 2010)	Computer Information Systems, University of Central Missouri, Warrensburg, US
M.S. (September 2004 - November 2006)	Department of Mechanical Engineering, Dublin City University, Dublin, Ireland

### Dissertation Abstract

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**Dissertation committee chairs:** *Dr. Paulo Goes and Dr. Mingfeng Lin*, University of Arizona

**Other committee members:** *Dr. Jesse Bockstedt* (Emory University) and *Dr. Wei Chen* (University of Arizona)

**Title:** *Empirical Studies of Online Crowdfunding*

Online crowdfunding, an emerging business model, has been thriving for the last decade. It enables small firms and individuals to conduct financial transactions that would previously been impossible. Along with unprecedented opportunities, two fundamental issues still hinder crowdfunding ability to fulfill its potentials: the information asymmetry and the understanding of the impact of crowdfunding. Both are actually exacerbated by the “virtual” nature of these marketplaces. The success of this new market therefore critically depends on both improving existing mechanisms or designing new ones to mitigate the issue of unobservable fundraiser quality, which can lead to adverse selection and market collapse; and better understanding the impact of crowdfunding, and particularly its offline impact, which will allow the effective allocation of scarce resources.

My dissertation includes three essays around these topics, using data from debt-, reward- and donation-based crowdfunding contexts, respectively. My first two essays focus on two popular but understudied components in crowdfunding campaigns, texts and videos, and aim at predicting fundraiser quality by quantifying texts and videos. In particular, the first essay focuses on developing scalable approaches to extracting linguistic features from texts provided by borrowers when they request funds; and on using those features to explain and predict the repayment probability of the problematic loans. The second essay focuses on videos in reward crowdfunding, and preliminary results show excellent predictive performance and strong associations between multi-dimensional video information and crowdfunding campaign success and quality. The last essay investigates the

impact of educational crowdfunding on school performance, using data from a crowdfunding platform for educational purposes. The results show that educational crowdfunding plays a role far beyond simply a financial source. Overall, my dissertation identifies the non-financial impact of crowdfunding as well as potential opportunities for efficiency improvement in the crowdfunding market, which have thus far not been documented in the literature.

## Research

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### Publications

- “The roles of sharing, transfer, and public funding in nanotechnology knowledge-diffusion networks”, with Chen, H., Jiang, S., & Roco, M. C (2015), published in *Journal of the Association for Information Science and Technology*, 66(5), 1017-1029.
- “Statistical Modeling of Nanotechnology Knowledge Diffusion Networks”, with Chen, H. & Jiang, S., published in the *Proceedings of ICIS 2013*, Milan, Italy (refereed)
- “Global nanotechnology development from 1991 to 2012: patents, scientific publications, and effect of NSF funding”, with Chen, H., Jiang, S., Larson, C. A., Roco, M. C., & Son, J. (2013), published in the *Journal of Nanoparticle Research*, 15(9), 1-21.C.

### Conference presentations and invited talks

- “More than Just Money: Educational Impact of Online Charitable Crowdfunding”, with Mingfeng Lin. *Conference on Information Systems and Technology (CIST)*, Nashville, TN; November, 2016.
- “Effects Of Charitable Giving In Crowdfunding: Crowds Fund Our Kids”, with Mingfeng Lin. *INFORMS Annual Meeting*, Nashville, TN; November, 2016.
- “The Role of Syndication in Democratizing Capital Flow in Online Equity-crowdfunding”, with Guofang Hunag and Mingfeng Lin. *INFORMS Annual Meeting*, Nashville, TN; November, 2016.
- “Effects of Charitable Giving in Crowdfunding”, with Mingfeng Lin. *Industry Studies Conference*, Minneapolis, MN; May, 2016.
- “Lemon or Cherry? The Value of Texts in Debt Crowdfunding”, with Mingfeng Lin. *Industry Studies Conference*, Minneapolis, MN; May, 2016.
- “Informational Value of Video in Crowdfunding: A Predictive Analysis”, with Paulo Goes and Mingfeng Lin. *INFORMS Annual Meeting*, Philadelphia, PA; November, 2016.
- “Lemon or Cherry? The Value of Texts in Debt Crowdfunding”, with Mingfeng Lin. *Conference on Information Systems and Technology (CIST) (Runner up for Best Paper)*, San Francisco, CA; November, 2014.
- “Linguistic Features and Peer-to-Peer Loan Quality: A Machine Learning Approach”, with Mingfeng Lin. *INFORMS Annual Meeting*, San Francisco, CA; November, 2014.
- “Linguistic Features and Peer-to-Peer Loan Quality: A Machine Learning Approach”, with Mingfeng Lin. *Second Annual Berkeley Crowdfunding Symposium*, University of Berkeley; September, 2014.
- “Linguistic Features and Peer-to-Peer Loan Quality: A Machine Learning Approach”, with Mingfeng Lin. *2014 Winter Conference in Business Intelligences*, Salt Lake City; March, 2014.

### Work in progress

- “The Impact and Informational Value of Video in Reward Crowdfunding”, with Paulo Goes and Mingfeng Lin.
- “More than Just Money: Educational Impact of Online Charitable Crowdfunding”, with Mingfeng Lin.

- “Selection or Value Added? The Syndicates in Online Crowdfunding”, with Guofang, Huang and Mingfeng Lin.
- “Consumer Behavioral Scoring via High-dimensional Sparse Additive Models”, with Mingfeng Lin and Junming Yin
- “Intelligent” Word-of-Mouth: Toward a More Informative Online Reputation Mechanism”, with Mingfeng Lin

### **Appointments and Professional Associations**

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- **Assistant Professor (August, 2016 – present)**  
Department of Statistics and Computer Information Systems, Zicklin School of Business  
Baruch College, City University of New York
- **Instructor and Teaching Assistant (August, 2013 – May, 2016)**  
Department of Management Information Systems, Eller College of Management,  
University of Arizona
- Member of Association for Information Systems
- Member of INFORMS

### **Teaching Experiences (Since 2013)**

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- **Instructor**, CIS 2200 (undergraduate), *Intro to MIS*, Baruch College (Fall 2016)
- **Instructor**, CIS 9660 (graduate), *Data Mining for Business Intelligence*, Baruch College (Fall 2016)
- **Instructor**, MIS 304 (undergraduate), *Using and Managing IS*, University of Arizona (Summer 2015) (Rating: **4.6/5**)
- **TA and Guest Lecturer**, MIS 513 (graduate), *Business Foundations for IT* (Spring 2015, 2014)
- **TA and Guest Lecturer**, MIS 307/MIS 543 (undergraduate/graduate), *Business Data Communications & Network*, University of Arizona (Fall 2013, 2014 and 2015)
- **TA**, MIS 478 (undergraduate), *Project Management*, University of Arizona, (Fall 2013).

### **Services**

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- **Reviewer** for Information Systems Research (ISR) (2016)
- **Reviewer** for Management Information Systems Quarterly (MISQ) (2016)
- **Session chair** – Online Crowds: Crowdfunding and Social Media, INFORMS Annual Meeting, Philadelphia, PA; November, 2015.
- **Reviewer** for International Conference on Information Systems (ICIS 2013, 2014, 2015).
- **Reviewer** for Conference on Information Systems and Technology (CIST 2013, 2014).
- **Reviewer** for Pacific Asia Conference on Information Systems (PACIS 2014, 2015).
- **Reviewer** for Journal of Information Science (JIS).

### **Awards and Grants**

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- 2015 Grant to attend the SMART (Structural Modeling Applications for Research on Technology) Workshop
- Nominated for Best Conference Paper Award at the 2014 Conference on Information Systems and Technology (CIST).
- Graduate and Professional Student Council Travel Grant Award (2016, 2015, and 2014).