

# Qian Zhang (Kenneth)

PHD STUDENT · BUSINESS ANALYTICS & OPERATIONS

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📄 <https://github.com/kennethqianzhang>

## Education

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### University of Pittsburgh

Pittsburgh, PA

PH.D. IN BUSINESS ANALYTICS & OPERATIONS

2019.08 - present

- Advisor: Prof. Arian Aflaki, Prof. Esther Gal-Or

### Penn State University

State College, PA

M.A. IN THEORETICAL ECONOMICS

2016.08 - 2018.05

- Advisor: Prof. Ran Shorrer

### the University of Tokyo

Tokyo, JP

M.A. IN ECONOMICS

2013.04 - 2016.07

- Advisor: Prof. Michihiro Kandori, Prof. Akihiko Matsui

## Research Interest

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**Primary Fields:** Customer behavior in operations, revenue management and pricing, information design, platform design, supply chain management, machine learning applications

**Methodologies:** Game Theory, Optimization, Econometrics, Machine Learning

## Publications

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### PUBLISHED

**Zhang, Q.**, “Mechanism Design Implementation Strategy in Industrial Policy Applications”,  
Book Chapter in “Recent Developments in New Structural Economics: The First Winter Conference of New Structural Economics”, by Justin Yifu Lin, etc., Peking University Press, 2016 (In Chinese)

### IN REVIEW

**Zhang, Q.**, w/ Arian Aflaki, Is Your Price Personalized? Alleviating Customer Concerns with Inventory Availability Information, Submitted & Under Review in **Operations Research**

**Zhang, Q.**, w/ Ran Shorrer, Strategic Application & Preference Submission Timing in Constrained School Choice Matching, Submitted & Under Review in **Game & Economic Behavior**

### READY FOR SUBMISSION

**Zhang, Q.**, w/ Arian Aflaki, Review Platform Design with Reference Effects

**Zhang, Q.**, w/ Y. Peng, Y. Tao, & Pandu Tadikamalla, A Multi-attribute Group Decision Making Method based on a New Score Function under Hesitant Intuitionistic Fuzzy Linguistic Term Sets Environment

### WORKING PAPER

**Zhang, Q.**, w/ Arian Aflaki, Multi-Dimensional Optimal Rating Design

**Zhang, Q.**, w/ Jinyong Jeong, Dynamic Information Revelation as Matching with Contracts

**Zhang, Q.**, w/ Esther Gal-Or, Luying Wang, Optimal Bayesian Persuasion Regulation Design with firm's R&D Incentive

**Zhang, Q.**, Pattern Recognition for Dividend Forecasting: Deep Learning Approach

**Zhang, Q.**, School Choice Matching with Incomplete Information on the School Side: Sampling Equilibrium Approach

**Zhang, Q.**, The Evolution of Preference under OLG Model with Imperfect Information, Probabilistic Election and Coalition

## Teaching Experience

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Spring 2023 **Data Mining (Graduate Level)**, Instructor

*University of  
Pittsburgh*

**Evaluations: 4.74/5, with response rate 52.63%,  
Master of Science Student Choice Awards for Outstanding Teaching,**

Fall 2021 **Statistical Analysis (Graduate Level)**, Instructor

*University of  
Pittsburgh*

**Evaluations: 4.70/5, with response rate 63.16% ,**

Fall 2023 **Applied Economics (Executive Doctor of Business Administration)** , Teaching Assistant

Fall 2022 **Quantitative Research Methods (Executive Doctor of Business Administration)**, Teaching Assistant

Spring 2022 **Statistical Analysis (Graduate Level)**, Teaching Assistant

Fall 2021 **Statistical Analysis (Graduate Level)**, Teaching Assistant

Spring 2021 **Data Mining (Graduate Level)**, Teaching Assistant

Spring 2021 **Decision Technology in Operations Management (Graduate Level)**, Teaching Assistant

Spring 2021 **Statistical Analysis (Graduate Level)**, Teaching Assistant

Fall 2020 **Statistical Analysis (Graduate Level)**, Teaching Assistant

Fall 2017 **Development Economics (Undergraduate Level)** , Teaching Assistant

*Penn State*

Spring 2017 **Microeconomics (Undergraduate Level)**, Teaching Assistant

Spring 2016 **International Econmoics (Undergraduate Level)**, Teaching Assistant

Spring 2016 **Advanced Microeconomics (Graduate Level)** , Teaching Assistant

*U-Tokyo*

Fall 2015 **Microeconomics (Undergraduate Level)**, Teaching Assistant

Fall 2015 **Mathematical Economics (Graduate Level)**, Teaching Assistant

Spring 2015 **Advanced Microeconomics (Graduate Level)**, Teaching Assistant

## Presentations

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*\*presenting author*

### 1. IS YOUR PRICE PERSONALIZED? ALLEVIATING CUSTOMER CONCERNS WITH INVENTORY AVAILABILITY INFORMATION

\*2023 INFORMS Annual Meeting (2023 October, Pheonix AZ, USA)

2023 INFORMS Annual Revenue Management & Pricing (RMP) Section Conference (2023 July, London, UK)

\*2023 MSOM Annual Conference (2023 June, Montreal, Canada)

\*2023 POMS Annual Conference ( 2023 May, Orlando FL, USA)

\*2022 DSI Annual Conference (2022 November, Houston TX, USA)

### 2. PRICING & RATING SYSTEM DESIGN WITH REFERENCE EFFECT

\*2023 DSI Annual Meeting (2023 November, Atlanta GA, USA)

### 3. MECHANISM DESIGN IMPLEMENTATION STRATEGY IN INDUSTRIAL POLICY APPLICATIONS

\*2015 New Structural Economics Annual Conference (2015 December, Beijing China)

### 4. THE EVOLUTION OF PREFERENCE UNDER OLG MODEL WITH IMPERFECT INFORMATION, PROBABILISTIC ELECTION AND COALITION

\*2016 Japanese Game Theory Annual Conference (2016 February, Tokyo JP)

\*2015 University of Tokyo Microeconomics Seminar (2015 October, Tokyo JP)

## Awards, Fellowships, & Grants

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- 2023 **Master of Science Student Choice Awards for Outstanding Teaching**, University of Pittsburgh  
**Dean's PhD Merit Scholar**, University of Pittsburgh
- 2022 **Sheth PhD Fellowship**, Sheth Foundation  
**Dean's PhD Merit Scholar**, University of Pittsburgh
- 2021 **Gerooge G. Main Fellowship**, University of Pittsburgh
- 2019 - 2020 **Myra G. Mervis Fellowship**, University of Pittsburgh
- 2016 - 2018 **Teaching Assistant Scholarship**, Penn State University
- 2016 **Annual Research Grant (DC 1)**, Japan Society for the Promotion of Science (JSPS)  
**Special Research Fellowship**, Japan Society for the Promotion of Science (JSPS)  
**Research Assistant Scholarship**, the University of Tokyo
- 2015 **Scholarship for Academic Excellence**, the University of Tokyo  
**Teaching Assistant Scholarship**, the University of Tokyo

## Industrial Experience & Services

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### MEDIA REFERENCE

#### **Personalizing the Prices While Keeping Customers Happy**

The FinReg Blog, Sponsored by the Duke Financial Economics Center, January 2023

### INDUSTRIAL EXPERIENCE

#### **Gusto**

*Remote*

##### RESEARCH SCIENTIST/DATA COMPETITION PROJECT

*2022.05 - 2022.08*

- Initiated and created the real-time-post-leads Conversion Score Prediction model for R&D Tax Credit

#### **Bloomberg L.P.**

*Tokyo, JP*

##### DATA SCIENTIST/SPECIALIST

*2018.05 - 2019.07*

- In charge of BDVD (Dividend Forecasting) product for Japan Market, covering more than 3,000 Japanese companies
- Initiated and led the Dividend Forecasting global expansion project, increased global coverage from 8,000 to 21,000 and accuracy by 41% using Machine Learning models such as RNN, LSTM, and Time Series models
- Participated in News Headline and Material Automation using NLP models, such as RoBERTa model
- Performed pattern recognition and forecasting model analysis for various financial products such as Index Membership and VC screening process evaluation with non-linear patterns

#### **Japan Society for the Promotion of Science(JSPS)**

*Tokyo, JP*

##### SPECIAL RESEARCH FELLOW (DC 1)

*2015.04 - 2016.07*

- Conducted theoretical research on the Industrial Policy implementation mechanism in Japan and China
- Constructed a mathematical model to build the structured hypothesis for examining the effects of network links and industrial policy implementation mechanisms on firms' technological competitive advantage
- Collected and analyzed data using Econometrics and Causal Inference models