

# Yangfang (Helen) Zhou

**Address** Lee Kong Chian School of Business  
Singapore Management University  
**Office** 065-6808-5370  
**Email** [helenzhou@smu.edu.sg](mailto:helenzhou@smu.edu.sg)

Published under the name Yangfang (Helen) Zhou, thus known as Y. H. Zhou, or Y. Zhou. But my name may appear as Helen Zhou, Yangfang Zhou, Helen Yangfang Zhou, thus known as H. Zhou, or Y. Zhou, H.Y. Zhou, respectively, in popular press.

[ORCID: 0000-0001-6408-3448](#); [Personal website](#); [Faculty webpage](#)

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## Research Interests

- Domain (sustainability):
  - Renewable energy and energy storage operations
  - Electrical vehicle adoption and operations
  - Agriculture operations
  - Food waste and food loss
- Methods:
  - Stochastic dynamic programming
  - Asset price modeling
  - Mechanism design
  - Math programming

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## Positions Held

Associate Professor in Operations Management, Lee Kong Chian School of Business	2022-now
Singapore Management University (SMU) (on maternity leave from May 2023 to Sept 2023)	
Assistant Professor in Operations Management, Lee Kong Chian School of Business	2013-2021
Singapore Management University (SMU) (on maternity leave from July 2016 to October 2016)	
Teaching Assistant, Tepper School of Business, Carnegie Mellon University	2008-2012
Instructor of an MBA course, Tepper School of Business, Carnegie Mellon University	2008
Teaching and Research Assistant, Department of Industrial Engineering, Tsinghua University	2005-2007

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## Education

<b>Tepper School of Business, Carnegie Mellon University (CMU), Pittsburgh, U.S.A.</b>	2007~2012
Ph.D. in Operations Management (Joint program with Robotics Institute)	
• Thesis: Managing Wind-Based Electricity Generation with Storage	
• Committee: Co-Chairs: Alan Scheller-Wolf, Stephen Smith	
Members: Jay Apt, Nicola Secomandi, Fallaw Sowell	
M.S. in Industrial Administration	2007~2009
<b>Tsinghua University, Beijing, China</b>	
M.E. in Industrial Engineering	2005~2007
<b>Huazhong University of Science and Technology (HUST), Wuhan, China</b>	
B.E. in Mechanical Engineering (with the highest honor, ranked No. 1 among 280 students)	2001~2005

## Published papers

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- Yangfang (Helen) Zhou, Alan Scheller-Wolf, Nicola Secomandi, and Stephen Smith. 2016. [Electricity Trading and Negative Prices: Storage vs. Disposal](#). *Management Science* 62(3): 880-898
  - Former titles: “Is It More Valuable to Store or Destroy Electricity Surpluses?” and “Merchant Management of Electricity Surpluses: Storage vs. Disposal”
  - Honorable Mention of the 2014 Columbia University China Business Initiative/ CSAMSE (Chinese Scholars Association for Management Science and Engineering) Annual Conference Best Paper Award
  - Best Research Presentation by a Junior Faculty or a Doctoral Student, Workshop on Analytics for Business, Consumer and Social Insights (BCSI)
  - Media mention: SMU podcast titled “[The downside of renewable energy.](#)”
  - Media mention: Asian Scientist magazine article “[When the switch flips on electricity prices.](#)”
- Yangfang (Helen) Zhou, Alan Scheller-Wolf, Nicola Secomandi, and Stephen Smith. 2019. [Managing Wind-Based Electricity Generation in the Presence of Storage and Transmission Capacity](#). *Production and Operations Management* 28(4): 970-989
  - Media mention: SMU video titled “[Management of renewable energy](#)”
  - Media mention: Asian Scientist magazine article “[When the switch flips on electricity prices.](#)”
  - [2020 Best Publication Award in Environment-Sustainability in the INFORMS Section of ENRE \(Energy, Natural Resources, and the Environment\).](#)
- Onur Boyabatli, Javad Nasiry, and Yangfang (Helen) Zhou. 2019. [Crop Planning in Sustainable Agriculture: Dynamic Farmland Allocation in the Presence of Crop Rotation Benefits](#). *Management Science* 65(5): 1949-2443
  - Media mention: SMU news article, [From farming to retailing: Here’s how math models can help](#)
- Owen Wu, Safak Yucel, Yangfang (Helen) Zhou. 2021. [Smart Charging of Electric Vehicles: An Innovative Business Model for Utility Firms](#) *Manufacturing and Service Operations Management*. 24(5):2481-2499
  - [2023 Best Publication Award in Environment and Sustainability in the INFORMS Section of ENRE \(Energy, Natural Resources, and the Environment\)](#)
  - [Finalist for 2023 Best OM paper award in M&SOM](#)
  - Media mention: [Managing a city of electric vehicles: How can this happen?](#) Dec, 2023 (City Perspective, SMU)
  - Media mention: [OM Prof’s paper on charging electric vehicles wins best publication award](#) 2023
  - Media mention: [Smart Charging of Electric Vehicles](#), Sept 2022 (Podcast, ResearchPod)
  - Media mention: [Charging smart for profit and benefit](#), Research@SMU 2022
  - Media mention: [New Electric Vehicle Charging Business Model Poses Multiple Benefits for Consumers, Utilities and the Environment - INFORMS](#)
- Chen Li, Long He, Yangfang (Helen) Zhou. 2023 [An Exponential Cone Programming Approach for Managing Electric Vehicle Charging](#) *Operations Research* (Article in advance)
  - Runner-up award for Harvey Greenberg Research Award, INFORMS Computing Society, 2023
  - Media mention: [Study on Electric Vehicle Charging to be Published \(SMU news\)](#), 2023
  - [OM Prof’s paper on charging electric vehicles wins best publication award](#) 2023

## Working papers

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- Onur Boyabatli, Lusheng Shao, and Yangfang (Helen) Zhou. 2025. [Integrated Optimization of Cultivation and Fertilizer Application: Implications for Farm Management and Food Security](#) (Under a third-round review in *Management Science*)

- Pascale Crama, Yangfang (Helen) Zhou, Manman Wang. 2025. [Impact of Cosmetic Standards on Food Loss](#) (Under Review)

## Unpublished manuscripts

- Yangfang (Helen) Zhou. Is Electricity Storage Green? A Study of the Commercial Sector. (Working paper; a three-page extended abstract was peer-reviewed and accepted at MSOM conference 2017)
- Yangfang (Helen) Zhou, Jay Apt, Alan Scheller-Wolf, Nicola Secomandi, and Stephen Smith. 2012. Combining Operations Management and Engineering Models to Effectively Manage Electricity Storage.

## Invited seminar presentations

Harvard Business School (scheduled)	<i>Oct. 2025</i>
Indian School of Business (Virtual)	<i>Oct. 2021</i>
Massachusetts Institute of Technology, Data Science Lab	<i>Nov. 2019</i>
Massachusetts Institute of Technology, Laboratory for Information & Decision Systems	<i>Nov. 2019</i>
McDonough School of Business, Georgetown University	<i>May. 2019</i>
Tepper School of Business, Carnegie Mellon University	<i>May. 2019</i>
Kelly School of Business, Indiana University	<i>Oct. 2017</i>
Fuqua School of Business, Duke University	<i>Jun. 2017</i>
Nanyang Business School, Nanyang Technological University	<i>May. 2017</i>
Lundquist College of Business, University of Oregon	<i>May. 2017</i>
Tepper School of Business, Carnegie Mellon University	<i>Nov. 2015</i>
Rutgers Business School, Rutgers University	<i>Nov. 2015</i>
Business School, National University of Singapore	<i>Feb. 2014</i>
Nanyang Business School, Nanyang Technological University	<i>Sept. 2013</i>

## Conference presentations

INFORMS Annual Meeting, Atlanta (Invited, Scheduled)	<i>Oct. 2025</i>
Manufacturing & Service Operations Management Conference, London (Peer-reviewed)	<i>Jun. 2025</i>
INFORMS Annual Meeting, Seattle (Invited)	<i>Oct. 2024</i>
Manufacturing & Service Operations Management Conference, Minnesota (Peer-reviewed)	<i>Jun. 2024</i>
INFORMS Annual Meeting, Phoenix (Invited, presented by co-authors)	<i>Oct. 2023</i>
POMS Annual Meeting (Invited, presented by co-authors)	<i>May. 2023</i>
INFORMS Annual Meeting, Minneapolis (Invited, presented by co-authors)	<i>Nov. 2022</i>
Manufacturing & Service Operations Management Conference, Munich (Peer-reviewed)	<i>Jun. 2022</i>
INFORMS Annual Meeting (Hybrid, Invited)	<i>Oct. 2021</i>
Manufacturing & Service Operations Management Conference (Virtual, Peer-reviewed)	<i>Jun. 2021</i>
POMS Annual Meeting (Invited)	<i>May. 2021</i>
INFORMS Annual Meeting (Virtual, Invited)	<i>Oct. 2020</i>
INFORMS Annual Meeting, Seattle (Invited)	<i>Oct. 2019</i>
Manufacturing & Service Operations Management Conference, Singapore (Peer-reviewed)	<i>Jul. 2019</i>
POMS Annual Meeting, D.C. (Invited)	<i>May. 2019</i>
INFORMS Annual Meeting, Houston (Invited)	<i>Nov. 2018</i>
Manufacturing & Service Operations Management Conference, Dallas (Peer-reviewed)	<i>Jul. 2018</i>
POMS International Meeting, Taipei (Invited)	<i>June. 2018</i>
INFORMS Annual Meeting, Houston (Invited)	<i>Oct. 2017</i>

Chinese Scholars Association for Management Science and Engineering (CSAMSE) Annual Conference, Guangzhou (Invited)	<i>Jul. 2017</i>
Manufacturing & Service Operations Management Conference, Chapel Hill (Peer-reviewed)	<i>Jun. 2017</i>
POMS, Seattle, 2017 (Invited)	<i>May. 2017</i>
POMS-HK, Hong Kong, 2017 (Invited)	<i>Jan. 2017</i>
INFORMS Annual Meeting, Philadelphia (Invited)	<i>Nov. 2015</i>
Manufacturing & Service Operations Management Conference, Toronto (Peer-reviewed)	<i>Jun. 2015</i>
Workshop on Analytics for Business, Consumer and Social Insights (BCSI)	<i>Mar. 2015</i>
INFORMS Annual Meeting, San Francisco (Invited)	<i>Nov. 2014</i>
Chinese Scholars Association for Management Science and Engineering (CSAMSE) Annual Conference, Inner Mongolia (Invited)	<i>Jul. 2014</i>
Manufacturing & Service Operations Management Conference, Seattle (Peer-reviewed)	<i>Jul. 2014</i>
INFORMS Annual Meeting, Minneapolis (Invited)	<i>Oct. 2013</i>
Supply Chain Analytics Workshop, Sydney	<i>Dec. 2013</i>
Manufacturing & Service Operations Management Conference, Fontainebleau (Peer-reviewed)	<i>Jul. 2013</i>
INFORMS Annual Meeting, Phoenix (Invited)	<i>Oct. 2012</i>
INFORMS Annual Meeting, Charlotte (Invited)	<i>Nov. 2011</i>
MSOM Special Interest Group on Sustainability, Ann Arbor (Peer-reviewed, Invited)	<i>Jun. 2011</i>
INFORMS Annual Meeting, Austin (Invited)	<i>Nov. 2010</i>
Smart Grid Conference, Electricity Industry Center, Carnegie Mellon University	<i>Apr. 2010</i>

## Teaching Experience

### Instructor

- Operations Management (Undergraduate in SMU) (Three most recent ratings: 6.75/7 in 2025, 6.77/7 in 2023, 6.75/7 in 2022) *Spring 2013- now*
- Sustainable Operations (MBA in SMU) (Ratings: 6.30/7 in 2025) *Mar 2025-present*
- Sustainable Operations (MSc in Management in SMU) (Ratings: 5.86/7 in 2020) *Fall 2020-2022*
- Dynamic Programming (PhD course in SMU) (Ratings: 7/7 in 2019, 6.95/7 in 2017, 7/7 in 2016) *Spring 2016, 2017, 2019*
- Quantitative Skills Review Program (for incoming MBAs, CMU) *Summer 2008*

### Recitation Leader

- Introduction to Accounting (Undergraduate core, CMU) *Spring 2011*
- Production and Operations Management (Undergraduate core, CMU) *Fall 2010*

### Teaching Assistant

- Investment Analysis (Undergraduate, CMU) *Fall 2010*
- Logistics and Supply Chain Management (Undergraduate core, CMU) *Fall 2009*
- Data Mining (MBA, CMU) *Spring 2008, 2009, 2010*
- Operations Research Techniques for Consultants (MBA, CMU) *Spring 2009, 2010*
- Optimization Methods in Finance (MBA, CMU) *Summer 2008, 2009*
- Optimization and Decision Making (MBA core, CMU) *Fall 2008*
- Production and Operations Management (MBA core, CMU) *Spring 2008*
- Introduction to Industrial Engineering (Tsinghua University) *Fall 2006*

## Awards and Honors

SMU MPA Research Fellow	<i>2025</i>
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Lee Kong Chian School of Business Dean's Teaching Honor List, 2024- 2025	2025
SMU MPA Research Fellow	2024
Lee Kong Chian School of Business Dean's Teaching Honor List, 2023- 2024	2024
Best Publication Award in Environment and Sustainability in the INFORMS Section on ENRE (Energy, Natural Resources, and the Environment)	2023
Runner-up award for Harvey Greenberg Research Award, INFORMS Computing Society	2023
Urban Fellow, Singapore Management University	2024-present
Finalist for 2023 Best OM paper award in M&SOM	2023
Lee Kong Chian School of Business Dean's Teaching Honor List, 2022 - 2023	2023
Lee Kong Chian Fellowship	2022
Lee Kong Chian School of Business Dean's Teaching Honor List, 2021 - 2022	2022
Lee Kong Chian School of Business Dean's Teaching Honor List, 2020 - 2021	2021
Best Publication Award in Environment and Sustainability in the INFORMS Section on ENRE (Energy, Natural Resources, and the Environment).	2020
Lee Kong Chian School of Business Dean's Teaching Honor List, 2019 - 2020	2020
Lee Kong Chian School of Business Dean's Teaching Honor List, 2018 - 2019	2019
Lee Kong Chian School of Business Dean's Teaching Honor List, 2017 - 2018	2018
Nominee for The Most Promising Teacher Award, Singapore Management University	2016
Lee Kong Chian School of Business Dean's Teaching Honor List, 2015 - 2016	2016
Lee Kong Chian School of Business Dean's Teaching Honor List, 2014 - 2015	2015
Best Research Presentation by a Junior Faculty or a Doctoral Student, Workshop on Analytics for Business, Consumer and Social Insights (BCSI)	2015
Honorable Mention of The 2014 CSAMSE Annual Conference Best Paper Award	2014
Research assistantship, Carnegie Mellon University	2010-2012
Department Nominee to the INFORMS Future Academician Colloquium	Nov. 2011
William Larimer Mellon Fellowship, Tepper School of Business	2007-2010
The second prize of Yellow Roadway Corporation Scholarship, Tsinghua University (Top 3%)	Oct. 2006
Research assistantship, Department of Industrial Engineering, Tsinghua University	2005-2007
The second prize of undergraduate thesis of Hubei Province (Top 0.1%)	Jul. 2005
The first prize of undergraduate thesis, HUST (Top 1%)	Jun. 2005
Excellent Graduate Award, HUST (Top 1%)	Jun. 2005
The Model Student Award, HUST (20 out of 50,000 students) (Top 0.04%)	Oct. 2003
The first-class scholarship of HUST (Top 5%)	2002-2004
Excellent league leader, HUST (Top 3%)	Dec. 2002
The first-class scholarship of PeiXinXing, Department of Mechanical Engineering, HUST	Sept. 2002

## Service

### Service for Lee Kong Chian School of Business, Urban Institute, and Singapore Management University

• Member of the Faculty Senator, SMU	2024-present
• Operations Management Summer Camp Co-chair	2024-present
• Urban Fellow, Urban Institute	2023-present
• Chair of Operations Management seminar committee	2022-2024
• Member of hiring committee	2022-2023

- Operations Management (OPIM 201) Course coordinator 2018-2024
- Member of Operations Management seminar committee 2013-2022
- PhD thesis committee member of Bin Li 2017-2020
- Co-advisor of the Master thesis of Jiahui Xu 2018-2020

#### Service for the profession:

- Ad-hoc Referee for the following journals:  
*Management Science, Manufacturing and Service Operations Management, Production and Operations Management, Operations Research, International Journal of Control, Computer and Operations Research, OR spectrum, IEEE SmartGridComm Symposium, IIE transactions, Special Issue on Energy in Computational Management Science, Computational Management Science, Wind Energy, European Journal of Operations Research, Annals of Operations Research, Management Information Systems Quarterly, Journal of Optimization, Economics Modelling*
- Co-chair for the Special Interest Group on Sustainability in MSOM conference, 2022 2021-2022
- POMS sustainable operations track co-chair, 2023 2022-2023
- Moderator for the SMU International Advisory Committee (IAC) panel discussion on food security and sustainability Oct. 2021
- Judge for the MSOM student paper competition 2021-present
- External committee member of the PhD thesis of Preethi Kulasekara Manavala Ramanujam, from Nanyang Technological University 2020-present
- Co-organizer of the annual lunch gathering of Operations Management scholars in energy and sustainability in INFORMS 2017-present
- Reviewer for iFORM SIG, in MSOM 2021
- Moderator for the panel discussion session “European Excellence in Sustainability Sharing Sessions: Clean and Efficient Energy” organized by European Chamber of Commerce in Singapore 2020
- VP of meetings for the college of POMS sustainable operations 2020-2022
- External reviewer of a research proposal from Hong Kong Polytechnic University 2020
- Discussant of a paper in Special Interest Group on Sustainability in MSOM conference Jul. 2019
- Committee member of the MSOM conference in Singapore 2019
- Judge for the POMS Hong Kong student paper competition 2018, 2019, 2022
- Session chairs for INFORMS, POMS, and CSAMSE conferences 2013-present

#### Media mention of research

- [Managing a city of electric vehicles: How can this happen?](#) (28-December 2023)
- [OM Prof's paper on charging electric vehicles wins best publication award](#) (8-December 2023)
- [International Symposium on Electromobility in the UK and Singapore 2023](#) (see minute 1.50 onward)
- [Study on Electric Vehicle Charging to be Published](#) (SMU news), 2023
- [Sustainable strategic planning: 3 ways to become a responsible organisation](#) (SMU city perspectives), 2023
- [Charging smart for profit and benefit](#), Research@SMU 2022
- [Smart Charging of Electric Vehicles](#), Sept 2022 (Podcast, ResearchPod)
- Moderator of the panel discussion on clean and efficient energy organized by the

European Chamber of Commerce in Singapore as part of the European Excellence in Sustainability Sharing Sessions, 2020

- [New Electric Vehicle Charging Business Model Poses Multiple Benefits for Consumers, Utilities and the Environment - INFORMS News Room](#), Feb 2022
- [Shedding Light on Solar Challenges \(SMU Blog\)](#), Jan 2022
- [Riding The Solar Power Wave | Money Mind | Green Technology \(Channel News Asia\)](#), 2021
- [From farming to retailing: Here's how math models can help \(SMU news\)](#), 2019
- [Crop Planning in Sustainable Agriculture \(Podcasts@SMU; discussed by one of my co-authors\)](#) 2019
- [Management of Renewable Energy \(SMU mediacast\)](#), 2019
- [The Downside of Renewable Energy \(Podcasts@SMU\)](#), 2018
- [Technology and the art of the optimum \(SMU news\)](#), 2017
- [When The Switch Flips On Electricity Prices \(Asian Scientist Magazine\)](#), 2017

## Business Case Studies

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Rwanda Electric Motors: Carbon Credit Monetisation. (2024). SMU-24-0025. By Yangfang Helen Zhou and Lakshmi Appasamy. <https://cmp-shop.smu.edu.sg/products/rwanda-electric-motors-carbon-credit-monetisation-copy?variant=42309601394730>. <https://store.hbr.org/product/rwanda-electric-motors-carbon-credit-monetisation/148SMU> (Very detailed teaching notes with accompanying Excel sheet for instructors)

Last revised in September-2025