

# Yangfang (Helen) Zhou

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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.

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## Research Interests

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- 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

## Positions Held

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

## Education

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<b>Tepper School of Business, Carnegie Mellon University (CMU), Pittsburgh, U.S.A.</b> Ph.D. in Operations Management (Joint program with Robotics Institute) <ul style="list-style-type: none"><li>• Thesis: Managing Wind-Based Electricity Generation with Storage</li><li>• Committee: Co-Chairs: Alan Scheller-Wolf, Stephen Smith Members: Jay Apt, Nicola Secomandi, Fallaw Sowell</li></ul>	<i>2007~2012</i>
M.S. in Industrial Administration	<i>2007~2009</i>
<b>Tsinghua University, Beijing, China</b> M.E. in Industrial Engineering	<i>2005~2007</i>
<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)	<i>2001~2005</i>

## 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)
- 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
  - 2020 Best Publication Award in Environment and 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
- Owen Wu, Safak Yucel, Yangfang (Helen) Zhou. 2021. [Smart Charging of Electric Vehicles: An Innovative Business Model for Utility Firms](#) (Forthcoming in **Manufacturing and Service Operations Management**)

## Working papers

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- Chen Li, Long He, Yangfang (Helen) Zhou. 2021 [An Exponential Cone Programming Approach for Managing Electric Vehicle Charging](#) (Invited for a third-round review in *Operations Research*)
- Onur Boyabatli, Lusheng Shao, and Yangfang (Helen) Zhou. 2021. [Integrated Optimization of Cultivation and Fertilizer Application: Implications for Farm Management and Food Security](#) (Reject-and-resubmit in *Management Science*)

## Work in progress

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- Pascale Crama, Yangfang (Helen) Zhou, Why do Apples Look So Perfect? Drivers of Cosmetic Standards and Implications on Food Waste.

## Unpublished manuscripts

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- 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

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Indian School of Business (Virtual)	Oct. 2021
Massachusetts Institute of Technology, Data Science Lab	Nov. 2019
Massachusetts Institute of Technology, Laboratory for Information & Decision Systems	Nov. 2019
McDonough School of Business, Georgetown University	May. 2019
Tepper School of Business, Carnegie Mellon University	May. 2019
Kelly School of Business, Indiana University	Oct. 2017
Fuqua School of Business, Duke University	Jun. 2017

Nanyang Business School, Nanyang Technological University	May. 2017
Lundquist College of Business, University of Oregon	May. 2017
Tepper School of Business, Carnegie Mellon University	Nov. 2015
Rutgers Business School, Rutgers University	Nov. 2015
Business School, National University of Singapore	Feb. 2014
Nanyang Business School, Nanyang Technological University	Sept. 2013

## Conference presentations

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INFORMS Annual Meeting (Hybrid, Invited)	Oct. 2021
Manufacturing & Service Operations Management Conference (Virtual, Peer-reviewed)	Jun. 2021
POMS Annual Meeting (Invited)	May. 2021
INFORMS Annual Meeting (Virtual, Invited)	Oct. 2020
INFORMS Annual Meeting, Seattle (Invited)	Oct. 2019
Manufacturing & Service Operations Management Conference, Singapore (Peer-reviewed)	Jul. 2019
POMS Annual Meeting, D.C. (Invited)	May. 2019
INFORMS Annual Meeting, Houston (Invited)	Nov. 2018
Manufacturing & Service Operations Management Conference, Dallas (Peer-reviewed)	Jul. 2018
POMS International Meeting, Taipei (Invited)	June. 2018
INFORMS Annual Meeting, Houston (Invited)	Oct. 2017
Chinese Scholars Association for Management Science and Engineering (CSAMSE) Annual Conference, Guangzhou (Invited)	Jul. 2017
Manufacturing & Service Operations Management Conference, Chapel Hill (Peer-reviewed)	Jun. 2017
POMS, Seattle, 2017 (Invited)	May. 2017
POMS-HK, Hong Kong, 2017 (Invited)	Jan. 2017
INFORMS Annual Meeting, Philadelphia (Invited)	Nov. 2015
Manufacturing & Service Operations Management Conference, Toronto (Peer-reviewed)	Jun. 2015
Workshop on Analytics for Business, Consumer and Social Insights (BCSI)	Mar. 2015
INFORMS Annual Meeting, San Francisco (Invited)	Nov. 2014
Chinese Scholars Association for Management Science and Engineering (CSAMSE) Annual Conference, Inner Mongolia (Invited)	Jul. 2014
Manufacturing & Service Operations Management Conference, Seattle (Peer-reviewed)	Jul. 2014
INFORMS Annual Meeting, Minneapolis (Invited)	Oct. 2013
Supply Chain Analytics Workshop, Sydney	Dec. 2013
Manufacturing & Service Operations Management Conference, Fontainebleau (Peer-reviewed)	Jul. 2013
INFORMS Annual Meeting, Phoenix (Invited)	Oct. 2012
INFORMS Annual Meeting, Charlotte (Invited)	Nov. 2011
MSOM Special Interest Group on Sustainability, Ann Arbor (Peer-reviewed, Invited)	Jun. 2011
INFORMS Annual Meeting, Austin (Invited)	Nov. 2010
Smart Grid Conference, Electricity Industry Center, Carnegie Mellon University	Apr. 2010

## Teaching Experience

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### Instructor

- Operations Management (Undergraduate in SMU) (Three most recent ratings: 6.69/7 in 2021; 6.39/7 in 2020: hospitalization; 6.64/7 in 2019) *Spring 2013- now*
- Sustainable Operations (MSc in Management in SMU) (Ratings: 5.86/7 in 2020) *Fall 2020-present*
- 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

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- 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

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

• Operations Management (OPIM 201) Course coordinator	2018- present
• Member of Operations Management seminar committee	2013-present
• 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: <i>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</i>	
• Co-chair for the Special Interest Group on Sustainability in MSOM conference, 2022	2021-2022
• Moderator for the International Advisory Committee (IAC) panel discussion on food security and sustainability	Oct. 2021
• Judge for the MSOM student paper competition	2021
• 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
• Session chairs for INFORMS, POMS, and CSAMSE conferences	2013-present

## Media mention of research

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- 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
- 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

- Management of Renewable Energy (SMU mediacast), 2019
- From Farming to Retailing: Here's How Math Models Can Help (SMU News), 2019
- Crop Planning in Sustainable Agriculture (SMU mediacast; discussed by one co-author), 2019
- The Downside of Renewable Energy (Podcasts@SMU), 2018
- Technology and The Art of the Optimum (SMU News), 2017
- The Switch Flips on Electricity Prices (Asian Scientist Magazine), 2017

Last revised in April-2022