

Christian Kaps

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Employment

2023 – now Harvard Business School, Cambridge (US)
Assistant Professor, Technology & Operations Management

Education

2018 – 2023 Wharton Business School, Philadelphia (US)
PhD, Operations Management
Committee: Serguei Netessine, Simone Marinesi, Santiago Gallino

2016 – 2017 RSM – Rotterdam School of Management, Rotterdam (NL)
MSc, Supply Chain Management
Exchange at Wharton Business School, Philadelphia (US)

2011 – 2014 WHU – Otto Beisheim School of Management, Vallendar (DE)
BSc, Business Administration and Law
Exchange at Korea University Business School, Seoul (KR)

Research

■ Articles Published or Forthcoming

[1] Balk, B.M., De Koster, M.R., Kaps, C. and Zofío, J.L., 2021. An evaluation of cross-efficiency methods: With an application to warehouse performance. *Applied Mathematics and Computation*, 406, p.126261. <https://www.sciencedirect.com/science/article/pii/S0096300321003507>

[2] Kaps, C., Marinesi, S., & Netessine, S. (2023). When should the off-grid sun shine at night? optimum renewable generation and energy storage investments. *Management Science*, 69(12), 7633-7650. <https://pubsonline.informs.org/doi/10.1287/mnsc.2021.04129>

■ Working Papers (partially available on [SSRN](https://papers.ssrn.com))

Kaps, C., Netessine, S., 2024. Privately-Owned Battery Storage - Reshaping The Way We Do Electricity. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4219247

Kaps, C., Marinesi, S., 2024. When Batteries Meet Hydrogen: Dual-Storage Investments for Load-Shifting Purposes. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4993905

Kaps, C., 2023. Quality-Adjusted-Power: How to Decide Where to Site Renewables.

■ Professional Activities

Referee: Management Science, Manufacturing & Service Operations Management, Omega, Operations Research, Production and Operations Management Society

PhD Student Advising: Vishrut Rana (committee member, current)

2024 onwards, Faculty Associate – Salata Institute for Climate and Sustainability

2024 PhD admissions Committee, Harvard Business School

2023 onwards, Faculty Member – Climate and Sustainability Impact Lab

2022 Organizing Committee Member, Early-Career Sustainable OM Workshop, Virtual

2021-22 Wharton PhD student representative

2021 Moderating Sustainability Session at LSE's Germany Symposium, Virtual

2020 Organizing Committee Member, Wharton-INSEAD Doctoral Consortium, Fountainebleau

■ Honors

2024, Best PhD Paper Award, Commodity & Energy Markets Association
"Residential Battery Storage - Reshaping the Way We Do Electricity"

2024, People's Choice Flash Talk Award, Early-Career Sustainable Operations Workshop
"Power vs. Energy - When To Transition Between Storage Technologies"

2023 MSOM Meritorious Service Award

2023, Second Place, ENRE Early Career Award
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity."

2023, Second Place, TIMES Best Working Paper Competition
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity."

2023, Finalist, POMS COMS Student Paper Competition
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity."

2023, Second Place, POMS PITM Student Paper Competition
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity."

2022, Honorable Mention, POMS CSO Student Paper Competition
"When should the Off-grid Sun Shine at Night? Optimum Renewable Generation and Energy Storage Investments. Optimum Renewable Generation and Energy Storage Investments."

2019, Dutch Material Handling Thesis Award
"Towards better warehouse efficiency distinction through cross-efficiency measurement"

2018-2023, Wharton PhD Fellowship

2018, SmartPort Thesisprice
"Towards better warehouse efficiency distinction through cross-efficiency measurement"

2017, Professor Jo van Nunen Award
"Towards better warehouse efficiency distinction through cross-efficiency measurement"

■ Invited Presentations (By Year)

2023 University of Southern California, Harvard Business School, UT Dallas, Columbia Business School.

2022 University of Boulder Colorado, Indiana University, IESE Business School, The Ohio State University, Vanderbilt University, Rice University, University of Michigan, Boston College.

■ Conference Presentations

2024, CEMA Annual Conference, Boston, US
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2024, POMS Annual Conference, Minneapolis, US
"Power vs. Energy - When To Transition Between Storage Technologies"

2024, Early-Career Sustainable Operations Workshop, Lincoln, US
"Power vs. Energy - When To Transition Between Storage Technologies"

2023, INFORMS Annual Meeting, Phoenix, US
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2023, Early-Career Sustainable Operations Workshop, Amherst, US
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2022, INFORMS Annual Meeting, Indianapolis, US
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2022, INFORMS Annual Meeting, Indianapolis, US
"When should the off-grid sun shine at night? Optimum renewable generation and energy storage investments"

2022, MSOM Conference, Munich, DE
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2022, MSOM Conference, Munich, DE
"When should the off-grid sun shine at night? Optimum renewable generation and energy storage investments"

2022, POMS Annual Conference, Virtual
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2022, Wharton-INSEAD Doctoral Consortium, Fontainebleau, FR
"Privately-Owned Battery Storage - Reshaping The Way We Do Electricity"

2021, INFORMS Annual Meeting, Anaheim, US
"When should the off-grid sun shine at night? Optimum renewable generation and energy storage investments"

2021, POMS Annual Meeting, Virtual
"When the wind of change blows, build batteries? Optimum renewable generation and energy storage investments"

2020, INFORMS Annual Meeting, Virtual
"When the wind of change blows, build batteries? Optimum renewable generation and energy storage investments"

2020, Early-Career Sustainable Operations Workshop, Washington DC, US
"When the wind of change blows, build batteries? Optimum renewable generation and energy storage investments"

■ Teaching

Harvard Business School

Instructor, MBA Required Curriculum, Fall 2023
Technology and Operations Management

The Wharton School

Graduate Teaching Assistant, Wharton Business School, Spring 2023
OIDD611: Operations Management: Quality and Productivity – with Simone Marinesi

Lecturer, Wharton Undergraduate Course, Spring 2023
WH1508: Evaluating Evidence

Instructor, Wharton Global Youth Program, Summer 2022 (evaluation 3.45/4.00)
OIDD001: Prescriptive Analytics: Making Business Decisions using Optimization and Simulation

Course Organizer, Wharton Global Modular Courses, Summer 2022
MGMT897: Innovations in Environmental Sustainability: Germany's Approach, Progress and Future Challenges – with Nicolaj Siggelkow and John Paul MacDuffie

Instructor, Wharton Global Youth Program, Fall 2021
OIDD001: Prescriptive Analytics: Making Business Decisions using Optimization and Simulation

Graduate Teaching Assistant, Wharton Business School, Fall 2021
OIDD321: Introduction to Management Science – with Hamsa Bastani

Graduate Teaching Assistant, Wharton Business School, Fall 2020
OIDD101: Introduction to Operations – with Daniel Rock, Hummy Song, and Sergei Savin

EMBA Teaching Assistant, Wharton Business School, Summer 2020
OIDD636: Scaling Operations: Linking Strategy and Execution – with Gad Allon

Graduate Teaching Assistant, Wharton Business School, Spring 2020
OIDD636: Scaling Operations: Linking Strategy and Execution – with Gad Allon

Lecturer, Wharton Business School - Leadership in a Business World, Summer 2019
Course: Introduction to Operations

Lecturer, Wharton Business School - Leadership in a Business World, Summer 2019
Course: Python Programming 101

Lecturer, Wharton Business School – SMASH Academy, Summer 2019
Course: Python Programming 101

■ Funded Research

Mack Institute PhD Fellowship, 2022
Research project “Privately-Owned Battery Storage - Reshaping The Way We Do Electricity”, Extension”, \$8,000

Kleinman Energy Center Research Grant, 2022
Research project “Privately-Owned Battery Storage - Reshaping The Way We Do Electricity”, \$15,000

Mack Institute PhD Fellowship, 2021
Research project “Privately-Owned Battery Storage - Reshaping The Way We Do Electricity”, \$6,000

Russell Ackoff Doctoral Student Fellowship, 2021
Research project “Privately-Owned Battery Storage - Reshaping The Way We Do Electricity”, \$2,500

Mack Institute PhD Fellowship, 2020
Research project “Power-to-X – Why and when to use electricity to make gas renewable”, \$4,000

Mack Institute PhD Fellowship, 2019
Research project “Energy Storage Capacity Investment for Grids with Renewable Generation”, \$5,000

Kleinman Energy Center Research Grant, 2019

Research project "Guiding Energy Storage Capacity Investment for Renewable Grids", \$4,250

Professional

- 2021 AWS, Economic Development and Public Policy Researcher, Virtual
- Performed economic impact study of renewable energy projects
 - Investigated impact of cloud IT investment on national economies
- 2016 BMW AG, Big Data Material Planning, Wackersdorf (DE)
- Programmed & launched material control and ordering tool
 - Optimized Chinese factory supply, saving 4% in logistics cost
- 2015 Gap Year including military service, work & travel in Canada
- 2014 Bonaverde, Head of Finance and Business Intelligence, Berlin (DE)
- Managed investor leads for €2mn. Series-A funding round
 - Established SQL-based business intelligence environment
- 2014 BMW Manufacturing, In-House Consulting, Greenville (US)
- Analyzed capacity of Tier-2 supplier, leading to \$20mn. investment
 - Improved of leather seat supply chain, reducing scrap by 17%
- 2013 J.P.Morgan, Investment Banking - M&A, Frankfurt (DE)
- Created IPO prospectus & investors pitch for \$750mn. deal
 - Modelled and valued multiple companies and deals