# Joann de Zegher

CONTACT Information MIT Sloan School of Management 100 Main Street, E62-585

Cambridge, MA 02142 USA

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RESEARCH Interests My work examines the design of technologies and algorithms that address supply chain challenges in developing and emerging markets, by combining methods from large-scale field work, optimization, computer science, econometrics, and action research.

CURRENT POSITIONS

Massachusetts Institute of Technology, Cambridge, MA

Sloan School of Management Leave Without Pay 2018-2022-2023

Maurice F. Strong Career Development Professor & Assistant Professor of Operations Management

- Affiliate, Operations Research Center
- Affiliate, Sloan Sustainability Initiative

# PemPem Inc., Montréal, Canada

Founder, President & CEO Founder & President 2022-

2019-2022

PemPem develops mobile supply chain management software for micro-enterprises in commodity supply chains (www.pempem.org)

EDUCATION

# Stanford University, Stanford, CA

Stanford Graduate School of Business — Operations, Information & Technology

Post-doctoral Fellow

2017-2018

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Stanford School of Earth, Energy & Environmental Sciences —

Emmett Interdisciplinary Program in Environment and Resources

2012-2017

Ph.D., Operations Management & Earth System Analytics

- Dissertation Title: "Toward Sustainable Sourcing in Global Supply Chains"
- Adviser: Dan A. Iancu

# Erasmus University Rotterdam, Rotterdam, the Netherlands

2007-2012

Erasmus School of Economics

M.S., Econometrics and Management Science, 2012, with Highest Honors

Pre-M.S. Certificate, Econometrics and Operations Research, 2011

B.S., International Economics and Business Economics, 2010, with Highest Honors

JOURNAL
PUBLICATIONS &
WORKING PAPERS

- Y. Shi, J. de Zegher, I. Lo. "Two-sided Benefits of Price Transparency in Smallholder Supply Chains"  $Reject \ @ Resubmit, Management Science$
- Accepted at the 22nd ACM Conference on Economics and Computation (EC'21)
- V. Stienen, D. den Hertog, J. de Zegher, J. Wagenaar. "Enhancing digital road networks for better operations in developing countries" Submitted for review
- J. de Zegher, B. Liu, L. Rende Taylor, M. Taylor. "Low-skilled labor shortages contribute to forced labor" Submitted for review
- M. Fatunde, A. Calmon, J. de Zegher, and G. Romero. "The value of long-term relationships when selling to informal retailers Evidence from India"  $Reject \ \mathscr{C}$  Resubmit,  $Management \ Science$
- Second Place, 2021 Best Student Paper in Sustainable Operations (O. Fatunde), POMS Society

- J. de Zegher and I. Lo. "Crowdsourcing Market Information from Competitors" Submitted for review
- H. Bastani and J. de Zegher. "Are Bans Effective under Limited Enforcement? Evidence from High Seas Management" Reject & Resubmit, Management Science
- People's Choice Award, 2019 Early-Career Sustainable OM Workshop
- J. de Zegher, D. Iancu, and E. Plambeck. "Sustaining Rainforests and Smallholders by Eliminating Payment Delay in a Commodity Supply Chain—It Takes a Village." Reject & Resubmit, Management Science
- Third place, 2018 INFORMS George E. Nicholson Student Paper Competition
- Winner, 2016 SAWIT Challenge, USAID, Indonesia Business Council for Sustainable Development & Indonesia Smallholders Association
- T. Thorlakson, J. de Zegher, and E. Lambin. "Companies' Contributions to Sustainability through Global Supply Chains." **PNAS** vol. 115, no. 9, 2018
- News coverage: Science Daily, Stanford News, Science 360, GreenBiz, Sustainable Brands
- J. de Zegher, D. Iancu, and H. Lee. "Designing Contracts and Sourcing Channels to Create Shared Value." **M&SOM** vol. 21, no. 2, 2017
- Finalist, 2022 MSOM Society Award for Best Paper in M&SOM Journal
- Finalist, 2021 M&SOM Best Paper Award
- 2nd place, 2016 POMS College for Supply Chain Management Best Student Paper Competition

## Teaching EXPERIENCE

# MIT Sloan School of Management, Cambridge, MA

15.761 – Introduction to Operations Management	Spring 2019-2021
15.915 – Strategies for Sustainable Business ("S-Lab")	Spring 2019-2021
15.830 – Enterprise Management Lab	Fall 2020

Stanford Graduate School of Business, Stanford, CA	
Invited Lecturer, Executive Education	<b>Summer 2017</b>
BNP Paribas: Executive Education of Women Entrepreneurs	
Teaching Assistant, OIT 262 (Operations)	Spring 2016
MBA Core course taught by E. Plambeck, Y. Gur, and L. Wein	
Teaching Assistant, ENVRES 280 (Environmental Science for Managers)	Fall 2013
MBA Elective course taught by E. Plambeck	

# Erasmus University Rotterdam, Rotterdam, the Netherlands Teaching Assistant, FEB12004 (International Economics)

Fall 2009

### Grants

# **Good Energies Foundation**

07/2020 - present

- Undisclosed amount for "Scaling PemPem digital platform to advance formalization and transparency in Indonesia smallholder palm oil supply chain" (07/2021)
- Undisclosed amount for "Formalizing smallholder palm oil supply chains through efficiency & transparency" (07/2020)

08/2020 - present Temasek

US\$ 975,000 for "Mobile platform to advance traceability & sustainability in smallholder palm oil supply chains"

Prompt Artificial Intelligence (Prompt AI), Prompt Québec 06/2020 - present CA\$ 300,000 for "Ensuring traceability in informal supply chains through AI," with LM Rousseau

**Packard Foundation** 07/2018 - 2020

- US\$ 74,000 for "Palm fruit trading platform to advance traceability and livelihoods in smallholder supply chains," with G. Paoli (12/2019)
- US\$ 104,000 for "Palm fruit trading platform to advance traceability and livelihoods in small-holder supply chains," with G. Paoli (02/2019)
- US\$ 100,000 for "Design of a palm fruit trading platform to advance traceability in smallholder palm oil supply chains," with G. Paoli (07/2018)

# Abdul Latif Jameel Water and Food Systems Lab (J-WAFS) 09/2019 - present US\$ 150,000 for "Designing Supply Chain Platforms for Smallholders in Indonesia."

### Unilever Plc., Singapore

04/2017 - 12/2018

US\$ 700,000 for program design and implementation of pilots for "Achieving sustainability commitments in palm procurement through disruptive sourcing," with G. Paoli and G. Limberg

- Includes survey design, training, supervision, and management of enumeration and research teams, monitoring and implementation quality control procedures during data collection, handling and storage of sensitive data
- Survey and polygon data collected on 3,045 smallholder farms in Indonesia

# Stanford Institute for Innovation and Entrepreneurship in Developing

Economies (SEED), Stanford University

03/2017 - 06/2018

US\$ 113,647 for "Advancing smallholder palm farmers under no-deforestation pressures," with E. Plambeck

### Packard Foundation, Unilever Plc. & Daemeter,

10/2016

2010

US\$ 32,000 for field research on "Achieving sustainability commitments in palm procurement through disruptive sourcing."

PREVIOUS
PROFESSIONAL
EXPERIENCE

All Pensions Group (APG), Asset Management Group, Amsterdam, the Netherlands

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Designed a novel strategy for algorithmic trading of equities to minimize exposure to tail risk in equity portfolios

# United Farmers Fund (UFF) Asset Management, Cape Town, South Africa Intern.

Designed novel investment strategies for long-term agricultural investments

# Environmental Protection and Development Organization, UNDP, Cambodia 2008 Intern

Assisted in grant writing and reported about progress in villages that benefited from micro-finance

# United Nations Commission on Sustainable Development, New York Representative & Coordinator

Represented and coordinated the The Hague International Youth Network (TYN) delegation

# Honors and Awards

- Winner (PemPem), Cultivhacktion, World Bank & Tanihub Group (Jakarta, 12/2021)
- Winner, Tropical Forest Commodities Challenge, Uplink (the open innovation platform of the World Economic Forum) (Glasgow, 11/2021)
- Finalist, 2021 M&SOM Best Paper Award (06/2021)
- Second Place, 2021 Best Student Paper in Sustainable Operations (O. Fatunde), POMS Society (04/2021)
- People's Choice Award, Early-Career Sustainable OM Workshop (03/2019)
- Honorable Mention, INFORMS George Nicholson Student Paper Competition (11/2018)
- Post-doctoral Fellowship (Stanford Institute for Innovation and Entrepreneurship in Developing Economies, Stanford, 2017-2018)

- Winner, SAWIT Challenge, USAID, Indonesia Business Council for Sustainable Development & Indonesia Smallholders Association (Jakarta, 2016)
- 2nd Place, 2016 POMS College for Supply Chain Management Best Student Paper Competition (Orlando, 2016)
- Teresa Elms and Robert D. Lindsay Ph.D. Fellowship (Stanford School of Earth, Energy & Environmental Sciences, Stanford, 2016-2017)
- Ph.D. Fellowship for Innovation & Entrepreneurship in Developing Economies (Stanford Institute for Innovation and Entrepreneurship in Developing Economies, Stanford, 2015-2016)
- Gene T. Sykes Ph.D. Fellowship (Stanford School of Earth, Energy & Environmental Sciences, Stanford, 2012-2015)
- McGee/Levorsen Summer Research Fellowships (Stanford School of Earth, Energy & Environmental Sciences, Stanford, 2013, 2014, 2016)
- Member of the winning team, London Corporate Finance Competition (2009)
- Erasmus Trustfonds and Van Beek-Donnor Stiching's first student research grant, to implement research proposed in the Honors Class Essay Competition (2009)
- 2nd Place, Honors Class Essay Competition, Erasmus University, Rotterdam (2009)
- Best Speaker, International Model United Nations, Vienna (2007)

### STUDENT ADVISING

- Advisor: Yuan Shi, PhD Candidate in Operations Research, MIT
- Advisor: Mureji Fatunde, PhD Candidate in MIT Supply Chain Management
- Advisor: Boyu Liu, MS Candidate in the MIT Technology & Policy Program
- Advisor: Teuku Aufar Kari, MS, MIT Technology & Policy Program (First placement: Amazon)
- Co-author: Valentijn Stienen, PhD Candidate, Tilburg School of Economics and Management
- Co-author & Committee Member: Sergio Camelo-Gomez, PhD Candidate in the Institute for Computational and Mathematical Engineering, Stanford University

#### INVITED TALKS

- Dutch OR Society (Plenary Talk) (05/2022)
- World Bank, Agriculture Global Practice unit (01/2022)
- Climate & Land Use Alliance (CLUA) (02/2021)
- University of Toronto, School of Cities (02/2021)
- McGill University, Operations Management (12/2021)
- Duke's Fuqua School of Business, Operations Management (12/2020)
- MIT, Center for Transportation and Logistics (CTL) (11/2020)
- Columbia Graduate School of Business, Decision, Risk, and Operations (11/2020)
- Ross School of Business, Technology and Operations (11/2019)
- Issara Global Forum, Bangkok (11/2019)
- MIT, Operations Research Center (10/2019)
- Carnegie Mellon University (08/2019)
- International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR), Master Class (06/2019)
- Yale School of Management, Operations (03/2018)
- UCLA Anderson School of Management, Decisions, Operations & Technology Management (02/2018)
- UC San Diego, Rady School of Management, Innovation, Technology & Operations (02/2018)
- Berkeley, Haas School of Business (01/2018)
- Harvard Business School, Technology & Operations Management (01/2018)
- HEC Montreal, Department of Logistics & Operations Management (12/2017)
- INSEAD, Technology & Operations Management (12/2017)
- MIT, Sloan School of Management (12/2017)
- London Business School (12/2017)

• Erasmus University, Rotterdam School of Management (11/2017)

## Professional Service

Master's Admissions Committee, MIT Operations Research Center, 2022

Reviewer for MIT J-WAFS Seed Grant, 2021

Judge, POMS College of Supply Chain Management's Best Student Paper Competition, 2021

Program Committee, EC Mechanism Design for Social Good Workshop, 2020

Judge, MSOM Student Paper Competition, 2020 MIT Council on the Uncertain Human Future, 2020 Judge, Supply Chain Management SIG in MSOM, 2020

Co-chair, INFORMS Sustainable Operations MSOM Track, 2020

Doctoral Admissions Committee, MIT Operations Research Center, 2020

# JOURNAL REVIEW

Reviewer for Management Science, 2019-2022

Editor for Proceedings of the National Academy of Sciences (PNAS), 2022

Reviewer for Manufacturing & Service Operations Management (M&SOM), 2020-2022 Reviewer for Production & Operations Management Society (POMS) Journal, 2022

Reviewer for Business, Strategy & the Environment, 2020

#### SKILLS

- Programming languages: R, Python
- Scientific Computing: MATLAB, Mathematica
- Field Data Collection: GeoODK/ODK, GPX Logger
- Geospatial Analysis: ArcGIS, R
- Languages: English (full professional proficiency), French (native or bilingual proficiency), Dutch (native or bilingual proficiency), Indonesian (professional working proficiency), Spanish (limited working proficiency)
- Hobbies: alpine skiing, rock climbing, horseback riding, mountaineering, surfing