JANGHO YANG

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PROFESSIONAL SUMMARY

My research focuses on technological change, productivity dynamics, and firm innovation, integrating information theory, Bayesian modeling, and distributional analysis, with a special emphasis on power-law patterns. I hold positions at the University of Waterloo and the University of Oxford.

CURRENT POSITION

Assistant Professor, University of Waterloo   *2020 - Present*
Department of Management Sciences, Faculty of Engineering

· *Affiliated Member*, Waterloo Data and Artificial Intelligence Institute
· *Affiliated Member*, Waterloo Institute for Complexity and Innovation

Research Associate, University of Oxford   *2020 - Present*
Institute for New Economic Thinking at the Oxford Martin School

PREVIOUS ACADEMIC POSITION

Postdoctoral Research Fellow, University of Oxford   *2018 - 2020*
Oxford Martin Programme on Technological and Economic Change
Institute for New Economic Thinking at the Oxford Martin School

EDUCATION

Ph.D. in Economics   *2015 - 2018*
New School for Social Research, New York, NY
Dissertation Title: "Essays on the Statistical Equilibrium Model of Technical Change"
Dissertation Committee: Duncan Foley (Chair), Paulo dos Santos, Mark Setterfield, Deepankar Basu

Master's in Economics   *2013 - 2015*
New School for Social Research, New York, NY

Bachelor in Western History   *2005 - 2010*
Seoul National University, Seoul, Korea

RESEARCH INTERESTS

Economics of Technological Change; Productivity Distribution, Firm-level Data Analysis; Information-Theoretic Economics; Bayesian Multilevel Modeling, Power-Law Distribution in Economic Data.

TEACHING EXPERIENCE

Department of Management Sciences, University of Waterloo: *Quantitative Data Analysis* (2021-2023); *Statistical Methods for Data Analytics* (2022-2025); *Engineering Economics: Financial Management for Engineers* (2021-2023)

Department of Economics, New School for Social Research: *Advanced Econometrics* (TA and lab consultant , Fall 2017, Spring 2017, Spring 2016)

PEER-REVIEWED JOURNAL PUBLICATIONS

1. Bonwoo Koo, **Yang, Jangho** & Brian D. Wright (2025), "On optimality of secrecy and scarcity of idea," *Forthcoming, Journal of Economics & Management Strategy*

2. **Yang, Jangho**, Brian Cozzarin, Sarah Feng, & Torsten Heinrich (2025), "Productivity Dispersion and Investment Slowdown in Canada," *Journal of Evolutionary Economics*.

3. **Yang, Jangho**, Torsten Heinrich, Julian Winkler, François Lafond, Pantelis Koutroumpis, & J. Doyne Farmer (2024), "Measuring Productivity Dispersion: a Parametric Approach Using the Lévy Alpha-Stable Distribution," *Industrial and Corporate Change*.

4. Strauss, Ilan & **Jangho Yang** (2024), "Testing for secular stagnation in investment rates using a Bayesian multilevel model," *Structural Change and Economic Dynamics*.

5. **Yang, Jangho** (2022), "Information-Theoretic Model of Induced Technological Change: Theory and Empirics," *Metroeconomica*.

6. Heinrich, Torsten, **Jangho Yang**, & Shuanping Dai (2021), "Levels of structural change: An analysis of Chinas development push 1998-2014," *Journal of Evolutionary Economics*.

7. Strauss, Ilan & **Jangho Yang** (2021), "Slowing investment rates in developing economies: Evidence from a Bayesian hierarchical model," *International Review of Financial Analysis*.

8. **Yang, Jangho** & Adrián Carro (2020), "Two Tales of Complex System Analysis: MaxEnt and Agent-Based Modeling," *European Physical Journal Special Topics*.

9. Scharfenaker, Ellis & **Jangho Yang**, (2020), "Maximum Entropy Economics," *European Physical Journal Special Topics*.

10. dos Santos, Paulo & **Jangho Yang** (2020), "Capital Mobility, Quasi-rents, and the Competitive Self-organization of Distributions of Profitability," *Advances in Complex Systems*.

11. dos Santos, Paulo & **Jangho Yang** (2019), "The persistent and informative distribution of returns on capital," *Economics and Business Letters*.

12. **Yang, Jangho** & Luis Daniel Torres Gonzales (2019), "The Persistent Statistical Structure of the US Input-Output Coefficient Matrices: 1963-2007," *Economic Systems Research*.

13. **Yang, Jangho** (2018), "A Quantal Response Statistical Equilibrium Model of Induced Technical Change in an Interactive Factor Market: Firm-Level Evidence in the EU Economies," *Entropy*.

14. **Yang, Jangho** (2018), "Information Theoretic Approaches in Economics," *The Journal of Economic Surveys*.

WORKING PAPERS (UNDER REVIEW AND R&R)

1. **Jangho Yang** and Ilan Strauss, "Developing Dynamic Capabilities Through Acquisitions: A patent lens on M&A's impact on Big Tech's technological profile," *R&R in Industrial and Corporate Change*

2. **Yang, Jangho** & Christian Schoder, "Impact of temperature uncertainty on firm growth: A grid-level analysis" *Under Review*

3. Sujung Jee, **Jangho Yang**, Torsten Heinrich, & Kejia Zhu, "Flexibility Stigma and Gender in Innovation: Evidence from Inventors during Lockdown" *Under Review*

4. **Jangho Yang**, Ilan Strauss, & Mariana Mazzucato "Rich-Get-Richer"? Analyzing Content Creator Earnings Across Large Social Media Platforms," *Under Review*

5. Ilan Strauss, **Jangho Yang**, Tim O'Reilly, Sruly Rosenblat, and Isobel Moure, "The Attribution Crisis in LLM Search Results: Estimating Ecosystem Exploitation," *Under Review*

RESEARCH GRANTS

New Frontiers in Research Fund - Special Call. $241,500 CAD. Feb 2023 - Jan 2026 (with one year automatic extension).
PI: **Jangho Yang**. Co-PIs: Su Jung Jee, Torsten Heinrich, Kejia Zhu.

UW-SSHRC Explore Grant. $7,000 CAD Jan 2023 - Dec 2024 (with one year automatic extension).
PI: **Jangho Yang**.

International Research Partnership Grant, University of Waterloo. $20,000 CAD. Mar 2022 - Feb 2023.
PI: **Jangho Yang**.

Economic Security Project. $25,000 USD. Mar 2022 - Feb 2023.
PIs: **Jangho Yang** and Ilan Strauss.

Treasury Board Secretariat, Canada. $27,000 CAD. Mar 2022 - Feb 2023.
PIs: **Jangho Yang** and Brian Cozzarin.

Starter Grant, University of Waterloo. $45,000 CAD.

AWARDS

Edith Henry Johnson Memorial Award in Economics, Civil Affairs, And Education *2018*
awarded for the dissertation "Essays on the Statistical Equilibrium Model of Technical Change"

Eugene Lang College Social Science Fellowship *2017-2018*

Outstanding Graduate Student Teacher Award *2016*

New School for Social Research Prize Fellowship *2015-2018*
full-funding for a PhD program

SUPERVISION

Current PhD Students
(Co-supervision indicated by names in parentheses)

Jihae Hwang (Stan Dimitrov), Management Science and Engineering, Aug 2024 – Present

Ho Yi Wong (Bonwoo Koo), Management Science and Engineering, Aug 2024 – Present

Julia DAlessandro (Bonwoo Koo), Management Science and Engineering, Aug 2023 – Present

Wendy de Gomez (Kejia Zhu), Management Science and Engineering, May 2023 – Present

Bolaji Vincent (Stan Dimitrov), Management Science and Engineering, Sep 2021 – Present

Current MASc Students

Yuhan Zhang (Kejia Zhu), Management Science and Engineering, Aug 2024 – Present

Lida Ghasemi (Stan Dimitrov), Management Science and Engineering, May 2023 – Present

Eugene Kayal, Management Science and Engineering, Jan 2025 – Present

Current Undergraduate Research Assistants

Bhuvnesh Nagpal, Software Engineering, Sep 2024 – Dec 2024 (Presidents Research Award, URA)

Nina Do, Systems Design Engineering, Sep 2024 – Dec 2024 (Presidents Research Award, URA)

Previous PhD Students

Kirsten Wright (Sean Geobey), Systems Design Engineering, Sep 2021 – 2024 (Graduated)

Previous Undergraduate Research Assistants

Joanna Yang, Management Science and Engineering, Sep 2023 – Dec 2023 (NSERC-USRA)

Mick Wang, Computer Science, May 2023 – Aug 2023 (NSERC-USRA)

Fuyang Deng, Mathematical Finance, May 2023 – Aug 2023 (NSERC-USRA)

Edward Jeong, Management Science and Engineering, Jan 2023 – Apr 2023 (ENG URI)

Elisha Matharu, Computer Engineering, Jan 2023 – Apr 2023 (ENG URI)

Samantha Raven Kobes, Biochemistry, Jan 2021 – Apr 2021 (URA)

Hao Xiang Bian, Actuarial Science & Statistics, Jan 2021 – Apr 2021 (URA)

CONSULTING EXPERIENCE

Short Term Consultant, World Bank. 2023 - 2024

CONFERENCE PRESENTATION

2025	Canadian Economic Association, Montreal, Canada
2024	Info-Metric Workshop, Washington D.C., US
2023	Canadian Economic Association, Winnipeg, Canada
2022	Canadian Economic Association, Ottawa, Canada
2019	Nuffield College Postdoctoral Seminar, Oxford, UK Workshop on Economic Science with Heterogeneous Interacting Agents, London, UK International Input-Output Conference, Glasgow, UK Eastern Economic Association Conference, New York, US
2018	European Association for Evolutionary Political Economy, Nice, France
2017	International Input-Output Conference, Seoul, Korea IIPPE Annual Conference in Political Economy, Berlin, Germany

PROFESSIONAL SERVICE

Editorial Service   *2019 - 2020*
Guest Editor, European Physical Journal Special Topics

Co-editing the special issue on "Maximum Entropy Economics: Foundations and Applications," with Ellis Scharfenaker.

Referee Service
Oxford University Press, Journal of Economic Growth, Cambridge Journal of Economics, OMEGA, International Journal of Technology Management, Economic Systems Research, European Physical Journal Special Topics, Metroeconomica, International Review of Financial Analysis, Structural Change and Economic Dynamics, Journal of Economic Interaction and Coordination, Journal of Evolutionary Economics, Review of Social Economy, Sustainability, Big Data and Cognitive Computing