

# Yuan Hu

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## EDUCATION

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2018 – to date	<b>Imperial College London</b> Ph.D. Economics, Business School
2015 – 2017	<b>London School of Economics</b> M.Sc. Economics (two-year programme)
2011 – 2015	<b>Peking University</b> Bachelor in Economics, The National School of Development Bachelor in Korean Language and Culture, The School of Foreign Languages

## REFERENCES

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### Jonathan Haskel

Department of Economics & Public Policy  
Imperial College Business School  
[j.haskel@imperial.ac.uk](mailto:j.haskel@imperial.ac.uk)

### Esther Boler

Department of Economics & Public Policy  
Imperial College Business School  
[e.boler@imperial.ac.uk](mailto:e.boler@imperial.ac.uk)

### Saul Estrin

Department of Management  
London School of Economics  
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### Ralf Martin

Department of Economics & Public Policy  
Imperial College Business School  
[r.martin@imperial.ac.uk](mailto:r.martin@imperial.ac.uk)

## RESEARCH INTERESTS

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Economics of Innovation, Green Innovation, Climate Change and Sustainability, Innovation in Emerging Markets, Firm Strategy

## JOB MARKET PAPER

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### Green Technological Change After Natural Disasters: Evidence from Hurricane Katrina

**Media Coverage:** CEPR VoxEU Talk – The next generation: PSE 2024 (<https://cepr.org/multimedia/next-generation-pse-2024>)

**Abstract:** Climate change leads to more destructive natural disasters, particularly hurricanes, which can significantly disrupt knowledge production. This paper studies the effects of Hurricane Katrina — one of the costliest and deadliest storms in U.S. history — on inventors' innovation outcomes, including green innovation which helps combat climate change. Using hazard and patent data for U.S. inventors in a difference-in-differences design, I find that Katrina reduced inventors' production of green patents, while non-green patents were unaffected. Specifically, affected inventors could have produced an additional 0.220 green patents following the storm, i.e., a potential 415 percent increase,

had Katrina not occurred. The negative effects are driven by the greater distance in technological expertise (knowledge diversity) among collaborators in green innovation teams, making it harder to substitute for affected inventors and continue their technological tasks. These findings suggest that climate change can disrupt human efforts aimed at addressing its impact, particularly through natural disasters and that knowledge diversity can compromise the resilience of technological development when faced with disruptions.

## **PUBLICATIONS**

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[1] Agglomeration Costs Limit Sustainable Innovation in Cities in Developing Economies (with Saul Estrin, Daniel Shapiro and Peng Zhang), *PLOS One*, 2024

**Research Summary:** Kudos (<https://www.growkudos.com/publications/10.1371%25252Fjournal.pone.0308742/reader>)

## **WORKING PAPERS**

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[1] Exporting Modes as Learning Strategies: A Penrosian Approach (with Saul Estrin and Lilac Nachum), under review *Journal of Management*

[2] Individualism and Green Innovation (with Saul Estrin)

## **WORK IN PROGRESS**

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[1] Path Dependency for Inventors? Evidence from Green vs Non-Green Innovation

[2] The Role of Institutions in Shaping the Relationship Between Agglomeration and Innovation in Emerging Markets (with Saul Estrin, Daniel Shapiro and Peng Zhang)

[3] GVC Participation as a Venue for Firms' Upgrading? Towards a Theory of Capability Development via Global Integration (with Saul Estrin and Lilac Nachum)

## **SEMINARS, WORKSHOPS AND CONFERENCES**

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| 2025 | “Oxford in Varese” 2025 Residence Week for Entrepreneurship Scholars, LBS Transatlantic Doctoral Conference, Barcelona School of Economics Summer Forum, LSE Environment Camp, Northwestern Kellogg (CSSI), Rotterdam School of Management;  |
| 2024 | LSE PRINZ/POID seminar, PSE-CEPR Policy Forum 2024, Columbia University Ph.D. Workshop in Sustainable Development, Tenth ZEW/MaCCI Conference on the Economics of Innovation and Patenting, Naples School of Economics: 3rd PhD and Post-Doctoral Workshop, AOM The Organisation of Science PDW, AOM Technology and Innovation Management (TIM) Division Doctoral Student Consortium, AOM Strategic Management (STR) Division Dissertation Consortium: The Job Market and Beyond, DRUID24, 13th Oxford Residence Week for Entrepreneurship Scholars; |
| 2023 | 12th Oxford Residence Week for Entrepreneurship Scholars, Imperial College Business School Economics & Public Policy Department Internal Seminar, Essex Paper Development Workshop for Early Career Scholars on Innovation, Technology and R&D Management;   |
| 2022 | NBER Entrepreneurship Research Boot Camp, NBER Summer Institute Entrepreneurship, 11th Oxford Residence Week for Entrepreneurship Scholars;  |

2021	PhD Research Day in Strategy, Entrepreneurship and Innovation organised jointly by The Business School, City, London Business School and Imperial College Business School;
2020	American Economic Association (AEA) Annual Meeting

### **RESEARCH ASSISTANT**

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2017 – 2022	<b>London School of Economics</b> Prof. Saul Estrin
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### **TEACHING ASSISTANT**

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2022 – 2023	<b>Imperial College Business School</b> Dr. Sam Asher Analytics for Applied Economics and Business (MSc Level)
2021 – 2022	<b>Imperial College Business School</b> Prof. Ralf Martin Analytics for Applied Economics and Business (MSc Level)

### **PROFESSIONAL SERVICE**

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2023 – to date	Oxford Residence Week for Entrepreneurship Scholars Assistant to organisers Prof. Saul Estrin, Prof. Maryann Feldman and Prof. Janet Bercovitz
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### **HONOURS AND SCHOLARSHIPS**

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2018 – to date	<b>Imperial College Business School</b> Graduate Teaching Assistant Scholarship
2014	<b>Peking University</b> Hana Financial Group Scholarship

### **LANGUAGES**

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Chinese (native), English (fluent), Korean (fluent), German (basic)

### **IT SKILLS**

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Stata, R, Matlab, Python, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office