

# CONNIE LEE

## Contact Information

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Centre of Industrial Economics  
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## Education

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**Mines Paristech, PSL University**  
*Ph.D. Candidate in Economics*  
*Dissertation: Essays on Firm Innovation*

Paris, France  
2016 – Present

**Paris School of Economics**  
*M.Sc., M2: Analysis and Policy in Economics*  
*M1: Quantitative Economics and Finance (at Ecole Polytechnique)*

Paris, France  
2016

**Columbia University**  
*B.Sc., Operations Research: Financial Engineering*  
*Minor in Computer Science*

New York, USA  
2014

## Research Interests

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Innovation, entrepreneurship, industrial organization

## Working Papers

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### “Buyouts and Innovation Incentives”

Abstract: This paper examines the interactions between large incumbent firms and new entrants on innovation decisions in the context of the 2008 financial crisis. Using the asymmetric effect of the crisis on firm access to financing between new entrants and large firms, I infer a likelihood of getting bought out for entrants. I then investigate how an increase in the likelihood of getting acquired for a new entrant affects their innovation choices with respect to the existing firms. I construct a novel measure of innovation proximity and show that new firms innovate "closer" to their potential acquirers.

### “Firm R&D Inertia”

Abstract: Firm R&D decisions are likely to have lasting consequences. Here I will document patterns of firm technological position over its life cycle. Using patent data, I build a measure to compare the similarity between an innovative firm's technological contents over time with its technological position when it enters. I find that new entrants are likely to continue patenting in areas similar to their initial invention for multiple years – they exhibit inertia. I then describe how the degree of inertia is affected by initial conditions. The heterogeneous firm size distribution is also explored as is the effect of technology sector concentration.

### “Regulation Timing on Green Innovation: The Case of Vehicle Emissions”, joint with Matthieu Glachant and Antoine Dechezlepretre

Abstract: Does regulatory leadership lead to more innovation? Here we study this question through the case of vehicle emission regulations. There have been multiple rounds of increasingly stringent vehicle emission regulations that

require firms to innovate in order to continue selling in those markets. Through the use of patent data, we identify the related technologies and firms and measure the quality of the innovation. We then use the staggered implementation of different levels of regulation to determine leader and laggard countries. The findings show that there are decreasing returns to late regulation implementation. Additionally, we provide evidence that firms with home countries that are regulatory leaders increase their innovation globally significantly.

## Conference Presentations

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- 2020 Dauphine Doctoral Workshop in Paris, France
- 2019 RCEA Growth, Innovation, and Entrepreneurship Conference in Waterloo, Canada  
Comparative Analysis of Enterprise Data (CAED) Conference in Ann Arbor, USA  
R&D Management Conference at Ecole Polytechnique in Paris, France  
CERNA Doctoral Seminar at Mines Paristech in Paris, France  
ZEW-Leibniz Seminar in Mannheim, Germany  
Young Economists Seminar, Telecom Paris in Paris, France
- 2018 i3 Conference on “The Regulation and Innovation Nexus: New Issues, New Perspectives” in Paris, France  
Druid Academy in Odense, Denmark  
SAEE student Workshop in Zurich, Switzerland
- 2017 FAEE Student Workshop in Paris, France  
CERNA Doctoral Seminar at Mines Paristech in Paris, France

## Teaching Experience

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| Mathematics for Economists (Undergraduate level), Teaching Assistant | 2019 & 2020 |
| Professor: Thierry Lafay, Sorbonne University                        |             |

## Fellowships

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| Mines Paristech PhD Fellowship              | 2016 - 2019 |
| Ecole Polytechnique Full Master Scholarship | 2013 - 2015 |

## Other Experiences

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| <b>College de France</b>  | Paris, France |
| Research Assistant to Professor Philippe Aghion, Centre de l'économie de l'innovation | 2017 – 2018   |
| <b>Agence Française de Développement</b>  | Paris, France |
| Research Assistant to Professor Gael Giraud, Chair on Energy Prosperity               | 2017          |
| <b>Altai Consulting</b>   | Paris, France |
| Consultant and Data Science Intern, Masae Analytics Team                              | 2016          |
| <b>Columbia University</b>  | New York, USA |
| Research Assistant to Professor Tim Leung, IEOR                                       | 2014          |
| <b>Millennium Partners</b>  | New York, USA |
| Quantitative Analyst Intern, Commodities Team   | 2014          |
| <b>Citi</b>   | New York, USA |
| Business Analyst Intern, Citi Velocity Team   | 2013          |

## **Additional**

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**References:** Available upon request

**Refereeing Service:** Journal of the Economics of Transition

**Computer Skills:** Python, STATA, Matlab, R, C, C++, Unix, SQL, VBA  
some experience with: Java, SAS, Ruby on Rails

**Languages:** English (native), French (working knowledge), Chinese (working knowledge)

**Hobbies:** Rock climbing, gardening, piano