

# François Lafond

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## Research Interests

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Economics of innovation and productivity

Environmental, energy and climate change economics

Networks and complex systems

Applied econometrics and forecasting

## Current positions

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### University of Oxford

2020- Deputy director of the Complexity Economics group, INET

2019- Lead researcher, INET and Mathematical Institute

2017- Associate member, Nuffield College

2014- Oxford Martin fellow, Oxford Martin School

## Past positions

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### University of Oxford

2018-2019 Senior Research Officer, INET

2017-2019 Associate Researcher, Oxford Martin School

2014-2018 Research Officer, INET

### London Institute for Mathematical Sciences

2014-2016 Postdoctoral researcher

## Education

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### Maastricht University

2009-2014 PhD in Economics

PhD program *Economics and Policy Studies of Technical Change*, UNU-MERIT

Thesis: *The evolution of knowledge systems*

Supervisor: Robin Cowan

### University of Strasbourg

2008-2009 Research Master in the Economics of knowledge

### University of Clermont-Ferrand

2002-2007 Bachelor and Professional Master in Economics

## Publications

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### In peer reviewed journals

Goldin, I., Koutroumpis, P., Lafond, F., & Winkler, J. Why Is Productivity Slowing Down?. *Journal of Economic Literature*, accepted.

Pichler, A., Pangallo, M., del Rio-Chanona, R. M., Lafond, F., & Farmer, J. D. (2022). Forecasting the propagation of pandemic shocks with a dynamic input-output model. *Journal of Economic Dynamics & Control*, 144, 104527.

Lafond, F., Greenwald, D. and Farmer, J. D. (forthcoming), Can stimulating demand drive costs down? World War II as a natural experiment *Journal of Economic History* 82(3), 727-764.

Hötte, K., Pichler, A. & Lafond, F. (2021), The rise of science in low-carbon energy technologies, *Renewable & Sustainable Energy Reviews* 139, 110654.

del Rio-Chanona, R.M, Mealy, P., Beguerisse, M., Lafond, F. & Farmer, J. D. (2021), Automation and occupational mobility: a data-driven network model. *Journal of the Royal Society Interface* 18(174).

del Rio-Chanona, R.M, Mealy, P., Pichler, A., Lafond, F. & Farmer, J. D. (2020), Supply and demand shocks in the COVID-19 pandemic: An industry and occupation perspective. *Oxford Review of Economic Policy* 36, Supp 1, S94--S137.

Mariani, M. S., Medo, M., & Lafond, F. (2019). Early identification of important patents: Design and validation of citation network metrics. *Technological Forecasting and Social Change* 146, 644-654.

Way, R., Lafond, F., Lillo, F., Panchenko, V., & Farmer, J. D. (2019). Wright meets Markowitz: How standard portfolio theory changes when assets are technologies following experience curves. *Journal of Economic Dynamics & Control* 101, 211- 238.

Lafond, F., & Kim, D. (2019). Long-run dynamics of the US patent classification system. *Journal of Evolutionary Economics* 29(2), 631-664.

Lafond, F., Bailey, A. G., Bakker, J. D., Rebois, D., Zadourian, R., McSharry, P., & Farmer, J. D. (2018). How well do experience curves predict technological progress? A method for making distributional forecasts. *Technological Forecasting & Social Change* 128, 104-117.

Farmer, J. D., & Lafond, F. (2016). How predictable is technological progress? *Research Policy* 45(3), 647-665.

Lafond, F. (2015). Self-organization of knowledge economies. *Journal of Economic Dynamics & Control* 52, 150-165.

### Working papers

Mungo, L. , Lafond, F., Estudillo, P., & Farmer, J. D., Reconstructing production networks using machine learning, *INET Working Paper* No. 2022-02, Revise & Resubmit.

Yang, J., Heinrich, T., Winkler, J., Lafond, F., Koutroumpis, P., & Farmer, J. D. (2019). Measuring productivity dispersion: a parametric approach using the Lévy alpha-stable distribution, *INET Oxford WP* 2019-04, resubmitted.

Pichler, A., Lafond, F & Farmer, J. D. (2020) Technological interdependencies predict innovation dynamics, *INET Oxford WP* No. 2020-04.

### Policy reports

Koutroumpis, P. and Lafond, F. (2018), Disruptive technologies and regional innovation policy, Background paper for an OECD/EC Workshop on 22 November 2018 within the workshop series “Broadening innovation policy: New insights for regions and cities”, Paris.

### Blog posts

Goldin, I., Koutroumpis, P., Lafond, F., & Winkler, J. (2021). Re-evaluating the sources of the productivity slow down. VoxEU.

Pichler, A., Pangallo, M., del Rio-Chanona, R.M, Lafond, F. & Farmer, J. D. (2020), Production networks and epidemic spreading: Re-opening the UK economy, VoxEU.

del Rio-Chanona, R.M, Mealy, P., Pichler, A., Lafond, F. & Farmer, J. D. (2020), An industry and occupation perspective on the effects of COVID-19, VoxEU.

### Teaching

#### Courses

*University of Oxford, MSc in Sustainability, Enterprise and the Environment*

2021 Co-designing one lecture, Introduction to complexity and network science for environmental economics.

*UNU-MERIT PhD program*

2012, 2013 Lecturing and tutoring, Introduction to quantitative methods and microeconomics.

*Maastricht University, Bachelor in Economics*

2011 Tutoring, Network economics.

#### Summer schools

*Oxford Summer School in Economic Networks*

2018, 2019 Networks in the economics of innovation.

2017, 2018 Introduction to network theory.

*EU project “GROWTHCOM” complex systems summer school*

2015 Technology forecasting.

## Co-supervision of doctoral students

- CURRENT Andrea Bacilieri, School of Geography and the Environment, Oxford; Luca Mungo, Mathematical Institute, Oxford; Xiyu Ren, School of Geography and the Environment, Oxford.  
PAST Maria del Rio Chanona, Mathematical Institute, Oxford, 2021; Anton Pichler, Mathematical Institute, Oxford, 2021.

**Other supervision:** 1 Master student (Mathematical Institute, Oxford, 2020), multiple RAs, 1 intern.

## Grants and awards

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### Projects

- 2022-2025 Co-Investigator, ESRC project “Productive and Inclusive Net Zero (PRINZ) - Opportunities and barriers in the transition to sustainable and equitable growth”.  
2021-2023 Co-Investigator, ONS - Alan Turing Institute project “Understanding production networks”.

### Prizes

- 2021 Rebuilding Macro “Complexity and macroeconomics” third prize for Pichler et al. (2020) “In and out of lockdown: Propagation of supply and demand shocks in a dynamic input-output model”.

## Professional service

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### University of Oxford

- 2020-2021 Transfer of status or Confirmation of status committees (3 Geography, 2 Maths).  
2020-2022 Second marker on essays for the MSc course on *Networks*, Mathematical Institute.

### PhD thesis committees

- 2020 Utrecht University, Economic geography.  
2018 Australian National University, Economics.

### Events (Co-organizer)

- 2022 1<sup>st</sup> Interdisciplinary Workshop on Firm-Level Supply Networks: Reconstruction and Dynamics  
2019- INET Complexity Economics seminar series.  
2022 The Future of Complexity Economics, 3 days Conference, Santa Fe.  
2020 The Global Production Networks and the COVID-19 Pandemic, Rebuilding Macro workshop. [video]  
2017-2019 Oxford Summer School in Economic Networks.  
2015 Satellite to the European Conference on Complex Systems on “Quantitative Methods for Predicting, Explaining and Describing Technological Change”.

**Hiring committees:** Postdocs & doctoral students (~ 10).

**Refereeing:** (~ 30).

## Impact and outreach

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**Press coverage:** e.g *BBC News* (web), *The Guardian*, and *Bloomberg* for our work on renewables costs, *Financial Times* (twice) for our work on productivity, and *Los Angeles Times* for our work on Covid-19.

## Popular science books, Blogs and Government reports

### Occasional consulting

## Research visits

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- SPRING 2019 MIT International Design Center (Prof. Chris Magee).  
SUMMER 2015 University of Fribourg (Prof. Yi-Chen Zhang).  
SUMMER 2014 Santa-Fe Institute.

## Languages

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- COMPUTER *Proficient:* R.  
*Rare or occasional user:* Python, Java, Amazon and Google clouds, Linux servers, Stata, Matlab.  
HUMAN French (mother tongue), English.