François Lafond

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CONTACT
francois.lafond *at* inet.ox.ac.uk
https://francoislafond.info
INET, Manor Road Building, Manor Road, Oxford, OX1 3UQ

CURRENT POSITION

2019- Lead researcher, Institute for New Economic Thinking at the Oxford Martin School and Mathematical Institute, University of Oxford.

2017- Associate member, Nuffield College, Oxford.

2014- Oxford Martin fellow, Oxford Martin School, University of Oxford.

PREVIOUS POSITIONS

2018-2019: Senior Research Officer, Institute for New Economic Thinking at the Oxford Martin School and Smith School for Enterprise and the Environment, University of Oxford.

2017-2019: Associate researcher, Oxford Martin School Programme on Technological and Economic Change

2014-2018: Research officer, Institute for New Economic Thinking at the Oxford Martin School and London Institute for Mathematical Sciences.

2014-2016: Postdoctoral researcher, London Institute for Mathematical Sciences.

EDUCATION

2009-2014: PhD in "Economics and Policy Studies of Technical Change", UNU-MERIT, Maastricht University. PhD thesis: "*The evolution of knowledge systems*" (supervisor: Robin Cowan).

2008-2009: Research Master in economics, "Industrial Organization and the Economics of Knowledge", University of Strasbourg.

2002-2007: Bachelor and (Professional) Master in economics, Université d'Auvergne.

PUBLICATIONS

Peer-reviewed publications

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 and 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 and 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 and Control*, 52, 150-165.

Working papers

Goldin, I., Koutroumpis, P., Lafond, F., & Winkler, J. (2019). Why is productivity slowing down?. Working Paper, Oxford Martin School, University of Oxford, *Revise and 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 Working paper*.

Lafond, F., Farmer J.D. & Greenwald, D. (2019) Can stimulating demand drive costs down? World War II as a natural experiment, *Draft manuscript.*

del Rio-Chanona, R. M., Mealy, P., Beguerisse-Díaz, M., Lafond, F., & Farmer, J. D. (2019). Automation and occupational mobility: A data-driven network model. *arXiv:1906.04086.*

Disruptive technologies and regional innovation policy (with Pantelis Koutroumpis), *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.

WORK IN PROGRESS

Predicting innovation dynamics in technological ecosystems (with Anton Pichler and J. Doyne Farmer)

Origins and evolution of technological domains (with Vilhelm Verendel and J. Doyne Farmer)

Input-Output Linkages and Economic Growth (with Jangho Yang, Advait Rajagopal, Luis Daniel Torres Gonzalez, and J. Doyne Farmer)

Uncovering technological eras (with Yuki Asano, Simon Vary, Mariano Beguerisse Díaz and J. Doyne Farmer)

CONFERENCES, WORKSHOPS AND SEMINARS

04/2019 (scheduled), Royal Economic Society Conference, *Can stimulating demand drive costs down? World War II as a natural experiment*.

12/2019, INET seminar, *Measuring productivity dispersion: a parametric approach using the Lévy alpha-stable distribution*

10/2019, INET Young Scholar Initiative Workshop on Tracking innovation trajectories in the complex economy, *Using technological interdependencies to predict innovation dynamics*.

09/2019, JRC-CONCORDi conference, *Can stimulating demand drive costs down? World War II as a natural experiment*.

09/2019, OECD NAEC, *What can we learn from the long-run evolution of technological systems?*

08/2019, European Economic Association conference, *Does stimulating drive costs down? World War II as a natural experiment*.

07/2019, IOP London workshop on Complexity in the 21st century, *What can we learn from the long-run evolution of technological systems?*

07/2019, LSE Sticerd workshop on Accelerating technological and systemic change to drive sustainable growth in a changing world, *What can we learn from the long-run evolution of technological systems?*

06/2019, Harvard CID seminar, *Automation and bottlenecks in occupational mobility: a data-driven network model*

06/2019: Georges Mason Computational Social Sciences seminar, *Towards sufficient statistics for productivity dispersion?*

05/2019: MIT IDC group meeting, *The economics of innovation from a complex system perspective*

04/2019: OECD NAEC conference, *Automation and bottlenecks in occupational mobility: a data-driven network model*

03/2019: INET seminar, *Does stimulating drive costs down? World War II as a natural experiment*.

11/2018: OECD seminar, Managing disruptive technologies, *Disruptive technologies and regional innovation policy*.

10/2018: Complex Systems Conference, Satellite on Cultural Evolution, Thessaloniki *The evolution of patent classification systems as indicator of cultural evolution*.

10/2018: Complex Systems Conference, Thessaloniki. *The origins of new technological domains*,

10/2018: 5th Asian Modelling Workshop, Singapore. *Time series forecasting of technological progress in renewable energy technologies*,

04/2018: Flame University Seminar, Pune, India. *Long-run dynamics of the US patent classification system*,

04/2018: Economic History Society annual conference, *The effects of experience on costs: Comprehensive evidence from WWII as a natural experiment*

03/2018: OECD seminar. *The Productivity Paradox: Reconciling Technological Change with Slowing Productivity*

01/2017: INET seminar. *Long-run dynamics of the US patent classification system*.

12/2016: Conference on “What’s new in the economics of innovation?”, Grenoble, *Forecasting with experience curves.*

09/2016: Conference on Complex Systems, Amsterdam, *Analysis, prediction and control of technological progress.*

12/2015: Uppsala University, invited workshop on Social Change as a Dynamical System. *Analysis, prediction and control of technological progress.*

11/2015: Oxford Mathematical Institute. *Analysis, prediction and control of technological progress.*

10/2015: University of Warwick, (Maths Dept). *Analysis, prediction and control of technological progress.*

04/2015: University of Strasbourg (BETA). *Knowledge diffusion and the structure of citation networks.*

03/2015: Science, Technology and Innovation Workshop (Campinas, Brazil). *How predictable is technological progress?* and *Sustainable energy transitions in Brazil.*

02/2015: Copernicus Institute (Utrecht): *How predictable is technological progress?*

02/2015: Institute for new Economic Thinking (Oxford): *How predictable is technological progress?*

11/2014: UNU-MERIT 25th anniversary conference (Maastricht): *New perspectives on learning curves.*

08/2014: Workshop of the Management History Research Group (London): *Using long-run business and economic data to forecast technological progress.*

07/2014: Santa Fe Institute: *The evolution of knowledge systems.*

06/2014: Hangzhou University: *Technological ecosystem theory, technological forecasting and optimal investment portfolios.*

06/2014: University of Oxford (CabDyn): *The evolution of knowledge systems.*

12/2013: University of Bordeaux (GREThA): *Knowledge diffusion and the structure of citation networks.*

11/2013: Institute for New Economic Thinking (Oxford): *The evolution of knowledge systems.*

06/2013: WEHIA conference (Reikjavik): *Self-organization of knowledge economies*

05/2013: INSNA Sunbelt (Hamburg): *Learning and the structure of citation networks.*

10/2012, Eindhoven ECIS seminar, *Learning and the structure of citation networks.*

02/2012, Internal PhD seminar, UNU-MERIT: *Preferential learning and scale free citation networks.*

11/2011: 10th Workshop on Networks in Economics and Sociology: *The evolution of knowledge systems.* Utrecht.

RESEARCH VISITS

MIT International Design Center (Prof. Christopher Magee), Spring 2019

University of Fribourg (Prof. Yi-Chen Zhang), Department of Theoretical Physics, Summer 2015

Santa Fe Institute, Summer 2014

TEACHING

Lecturing:

Networks in the economics of innovation, Oxford Summer School on Economic Networks (2018, 2019).

Introduction to network theory (Oxford Summer School on Economic Networks (2017, 2018)

Technological forecasting (GROWTHCOM complex systems summer school, Lipari, 2015)

Quantitative methods and Microeconomics (2012 and 2013, UNU-MERIT PhD program).

Tutoring:

Network Economics (2011, Bachelor in Economics);

Basic Microeconomics (2011, UNU-MERIT PhD program).

Introduction to complex networks analysis and simulation using igraph (2011, 2012, and 2013).

SMALL GRANTS/FELLOWSHIPS

2016: Ogden grant for a summer intern, working summer intern on “Comparing time series and expert forecasts of the world energy mix”.

2014: Travel and accommodation grant for the Science, Technology and Innovation Workshop, Campinas, Brazil

2009-2013: PhD fellowship, UNU-MERIT and GSBE, Maastricht University

PROFESSIONAL SERVICE

Refereeing: *Research Policy (3), Technological Forecasting and Social Change (2), Journal of Economic Interaction and Coordination (2), Plos One(2), World Patent Information (4), Physica A, Scientometrics, R&D Management, Advances in Complex Systems, International Journal of Microsimulation, International Journal of Work and Innovation, IEEE or other engineering journals (3).*

Invited comments: *Economics E-journal* (2)

Reviewer: *American Mathematical Society MathSciNet*

Books: Palgrave

PhD thesis evaluation committee: 1 (Economics, Australian National University)

Supervision: Doctoral students (all in progress at INET):

Maria Del Rio Chanona, Mathematical Institute, University of Oxford, in progress

Andrea Bacilieri, School of Geography and the Environment, University of Oxford

Luca Mungo, Mathematical Institute, University of Oxford

Events

Co-organizer, Oxford Summer school on Economic Networks, 2017-2020

Co-organizer, Satellite to the European Conference on Complex Systems on "Quantitative Methods for Predicting, Explaining and Describing Technological Change", 2015

Hiring committees

Hiring committee, INET Oxford, 2019

Hiring committees (3 positions), Oxford Martin School, 2017-2018

Hiring committee, INET Oxford, 2014

PhD application pre-selection committee, UNU-MERIT PhD program, 2012