

FRANCESCO LAMPERTI

Researcher unique identifier(s): ORCID: 0000-0003-4862-646X
Date of birth: 18/11/1988
Nationality: Italian
URL for website: Personal (<http://www.francescolamperti.eu>)
Google Scholar (<https://bit.ly/3qaUg6w>)

• CURRENT POSITION(S)

- **Associate Professor** - Institute of Economics and L'EMbeDS, Scuola Superiore Sant'Anna (Pisa, Italy)
- **Scientist** - RFF-CMCC European Institute on Economics and the Environment (Milan, Italy)
- **Member of the Expert Group on Climate Change and Price Stability**, European Central Bank (Frankfurt, Germany)

• NATIONAL HABILITATION(S)

- 13/A2 Politica Economica - Prima Fascia (Full Professor) - from 06/12/23
- 13/A1 Economia Politica - Prima Fascia (Full Professor) - from 01/12/23

• EDUCATION

2016 *Ph.D. in Economics*
Institute of Economics, Sant'Anna School of Advanced Studies, Pisa, Italy
Dissertation: "Climate Change and Macroeconomic Dynamics: An Agent Based Perspective"
Advisor(s): Prof. Giovanni Dosi and Prof. Andrea Roventini

2012 *Master of Science in Economics and Social Sciences*
Department of Economics, Bocconi University, Milan, Italy
Dissertation: "Robust Risk Analysis in System Safety"

2010 *Bachelor of Science in Economics and Business Administration*
Department of Economics, Bocconi University, Milan, Italy
Dissertation: "The CAPM: an analysis through regime switching models"

• PREVIOUS POSITIONS

2020 – 2023 *Assistant Professor (with tenure track)*
Institute of Economics and EMbeDS, Sant'Anna School of Advanced Studies, Pisa, Italy

2018 – 2022 *Junior Scientist*
RFF-CMCC European Institute on Economics and the Environment, Milan, Italy

2019 – 2020 *Assistant Professor (without tenure track)*
Institute of Economics, Sant'Anna School of Advanced Studies, Pisa, Italy

2016 – 2018 *Junior Researcher*
Fondazione Eni Enrico Mattei (FEEM), Milan, Italy

2016 – 2019 *Research Fellow*
Institute of Economics, Sant'Anna School of Advanced Studies, Pisa, Italy

2015 – 2016 *Visiting Scholar*
Centre d'Economie de la Sorbonne, Sorbonne University, Paris, France

2015 *Visiting Scholar*
OFCE Sciences Po, Nice, France

- **PROJECTS AND FUNDRAISING**

- I am unit leader in the tender project financed by the World Bank “Willingness-to-pay for climate mitigation” (2024)
- I am principal investigator of the ERC StG 2023 project “FIND – Finance and Innovation to couple Negative Emission technologies and sustainable Development” (2024-2028); funded by the European Research Council.
- I am principal investigator of the PRIN 2023 project “NEWS - steering fiNancE toWards green technologieS” (2023-2025); funded by the Italian Ministry of University and Research (MUR).
- I am unit leader for Sant’Anna in the PRIN 2022 project “Ecliptic – Evaluating climate physical and transition risks in Italy” (2023-2025); funded by the Italian Ministry of University and Research (MUR).
- I am unit leader for the Institute of Economics of the research project “TALISMAN - InTerdisciplinAry knowLedge to promote food Security and an equItable society in Niger in the context of cliMate change” (2023-2024); funded by the Italian Ministry of Foreign Affairs and Italian Cooperation (MAECI).
- I am co-unit leader for the Institute of Economics of the research project “PRISMA - Promoting Resilient, Inclusive and Safe CoMmunities in the Horn of Africa” (2021-2025); funded by Scuola Superiore Sant’Anna.
- I am unit member of the research project “GREEN-DIGIT – When green meets digital: understanding the ‘twin’ transition in the economy and society” (2022-2024); Italian Ministry of University and Research (MUR) – PRO3 program.
- I was principal investigator of the project “Coupled agricultural production agent-based model” (2021-2022); financed by the JRC of the European Commission.
- I was principal investigator project “Building - Building a macro-financial integrated-assessment model for ordered transitions and fiscal-monetary policy interactions” (2021-2023); financed by Climateworks foundation/INSPIRE.
- I was co- investigator of the project “EEIST - Economics of Energy Innovation and System Transition” (2023-2023) financed by The Secretary of State for Business, Energy and Industrial Strategy – UK.
- I have been contributing, both scientifically (as project member) and through managing activities, to the following projects: GROWINPRO (H2020); PENNY (H2020); IMPRESSIONS (FP7); ISIGROWTH (H2020); DOLFINS (H2020); AEGIS (FP7); CRE8TV (FP7).
- I have been project member of the ERC project “COBHAM - The role of consumer behavior and heterogeneity in the integrated assessment of energy and climate policies” awarded to prof. Massimo Tavoni and of the ERC project “SMOOTH - Sustainable finance for a smooth low-carbon transition” awarded to prof. Emanuele Campiglio. Within these projects, I was responsible for the evaluation of financial impacts from climate change, the relationship between financial stability and climate change, and the design of policies aimed at directing investments towards low-carbon technologies.
- I have written, as Principal Investigator, the project CRES - Climate Risks and Economic Stability for the AXA Research Fund Post-Doctoral Campaign (not selected for funding in the final evaluation round).ù

- **PUBLICATIONS (ONLY PEER REVIEWED WORKS)**

2024

Pasqualino, R., Ben Hinder, Yaroslav Melekh, Laura Anadon Diaz, Penasco Cristina, Sergey Kolesnikov, Sarah Hafner, Francesco Lamperti, Simon Sharpe, Pete Barbrook-Johnson, Fernanda Senra De Moura, Timothy M. Lenton, Michael Grubb (2024). Modelling induced innovation for the low-carbon energy transition: a menu of options. *Environmental Research Letters* (accepted; forthcoming).

Amendola, M., Lamperti, F., Roventini, A., & Sapio, A. (2024). Energy efficiency policies in an agent-based macroeconomic model. *Structural Change and Economic Dynamics*, 68, 116-132.

DOI: <https://doi.org/10.1016/j.strueco.2023.10.003>

Ameli, N., Chenet, H., Falkenberg, M., Kothari, S., Rickman, J., & Lamperti, F. (2024). Driving sustainability transitions through financial tipping points. *Earth System Dynamics*, 2024, 1-13. (closed for discussion)

DOI: <https://doi.org/10.5194/egusphere-2023-1750>

2023

Ameli, N., Chenet, H., Falkenberg, M., Kothari, S., Rickman, J., & Lamperti, F. (2023). In: Global Tipping Points Report, section 4, Positive tipping points in technology, economy and society. *Financial Systems*, 56-60. Link: <https://global-tipping-points.org/section4/4-0-positive-tipping-points-in-technology-economy-and-society/>

Coronese, M., Occelli, M., Lamperti, F., & Roventini, A. (2023). AgriLOVE: agriculture, land-use and technical change in an evolutionary, agent-based model. *Ecological Economics*, 208, 107756.

DOI: <https://doi.org/10.1016/j.ecolecon.2023.107756>

Dosi, G., Lamperti, F., Mazzucato, M., Napoletano, M., & Roventini, A. (2023). Mission-oriented policies and the “Entrepreneurial State” at work: An agent-based exploration. *Journal of Economic Dynamics and Control*, 151, 104650.

DOI: <https://doi.org/10.1016/j.jedc.2023.104650>

Ferraresi, T., Ghezzi, L., Vanni, F., Caiani, A., Guerini, M., Lamperti, F., ... & Roventini, A. (2023). On the employment and health impact of the COVID-19 shock on Italian regions: a value chain approach. *Regional Studies*, 1-17.

DOI: <https://doi.org/10.1080/00343404.2023.2189508>

Reissl, S., Caiani, A., Lamperti, F., Ferraresi, T., & Ghezzi, L. (2023). A regional input-output model of the COVID-19 crisis in Italy: decomposing demand and supply factors. *Economic Systems Research*, 1-31.

DOI: <https://doi.org/10.1080/09535314.2023.2213394>

2022

Lamperti, F., & Roventini, A. (2022). Beyond climate economics orthodoxy: impacts and policies in the agent-based integrated-assessment DSK model. *European Journal of Economics and Economic Policies: Intervention*, 19(3), 357-380.

DOI: <https://doi.org/10.4337/ejeep.2022.0096>

Vandin, A., Giachini, D., Lamperti, F., & Chiaromonte, F. (2022). Automated and distributed statistical analysis of economic agent-based models. *Journal of Economic Dynamics and Control*, 143, 104458.

DOI: <https://doi.org/10.1016/j.jedc.2022.104458>

Reissl, S., Caiani, A., Lamperti, F., Guerini, M., Vanni, F., Fagiolo, G., ... & Roventini, A. (2022). Assessing the economic effects of lockdowns in Italy: a dynamic input-output approach. *Industrial and Corporate Change*, 31 (2), 358-409.

DOI: <https://doi.org/10.1093/icc/dtac003>

Guerini, M., Lamperti, F., Napoletano, M., Roventini, A., & Treibich, T. (2022). Unconventional monetary policies in an agent-based model with mark-to-market standards. *Review of Evolutionary Political Economy*, 3(1), 73-107.

DOI: <https://doi.org/10.1007/s43253-022-00065-8>

2021

Lamperti, F., Bosetti V., Roventini, A., Tavoni, M. & Treibich, T. (2021). Three green financial policies to address climate risks, *Journal of Financial Stability*, 54, 100875.

DOI: <https://doi.org/10.1016/j.jfs.2021.100875>

Batini, N., Lamperti, F., & Roventini, A. (2020). Reducing Risk While Sharing It: A Fiscal Recipe for The EU at the Time of COVID-19 (No. 2020/181). International Monetary Fund, *IMF Working Papers*. [peer review by IMF internal procedure] ISBN/ISSN:9781513551920/1018-59.

2020

Coronese, M., Lamperti, F., Keller, K., Chiaromonte, F., & Roventini, A. (2020). Reply to Geiger and Stomper: On capital intensity and observed increases in the economic damages of extreme natural disasters. *Proceedings of the National Academy of Sciences*, 117(12), 6314-6315.

DOI: <https://doi.org/10.1073/pnas.1922722117>

Lamperti, F., Dosi, G., Napoletano, M., Roventini, A., & Sapio, A. (2020). Climate change and green transitions in an agent-based integrated assessment model. *Technological Forecasting and Social Change*, 153, 119806.

DOI: <http://10.1016/j.techfore.2019.119806>

2019

Lamperti, F., Mazzucato, M., Roventini, A., & Semieniuk, G. (2019). The green transition: public policy, finance and the role of the State. *Quarterly Journal of Economic Research*, 88(2), 73-88.

DOI: <http://dx.doi.org/10.3790/vjh.88.2.73>

Lamperti, F., Bosetti V., Roventini, A. & Tavoni, M. The public costs of climate-induced financial instability, *Nature Climate Change*, 9, 829-833.

DOI: <https://doi.org/10.1038/s41558-019-0607-5>

Coronese, M., Lamperti, F., Keller, K., Chiaromonte, F., & Roventini, A. (2019). Evidence for sharp increase in the economic damages of extreme natural disasters. *Proceedings of the National Academy of Sciences* (PNAS), 116 (43), 21450-21455.

DOI: <https://doi.org/10.1073/pnas.1907826116>

Corrocher, N., Lamperti, F., & Mavilia, R. (2019). Do science parks sustain or trigger innovation? Empirical evidence from Italy. *Technological Forecasting and Social Change*, 147, 140-151.

DOI: <https://doi.org/10.1016/j.techfore.2019.07.005>

Lamperti, F., Malerba, F., Mavilia, R. & Tripodi, G. (2019) Does the position in the inter-sectoral knowledge space affect the international competitiveness of industries? *Economics of Innovation and New Technology* (forthcoming, available online).

DOI: <https://doi.org/10.1080/10438599.2019.1633113>

Lamperti, F., Napoletano, M., & Roventini, A. (2019) Green transitions and the prevention of environmental disasters: market-based vs. command-and-control policies. *Macroeconomic Dynamics* (forthcoming, available online).

DOI: <https://doi.org/10.1017/S1365100518001001>

Guerini, M., Lamperti, F. & Mazzocchetti, A. (2019). Unconventional Monetary Policy in the USA and in Europe. In Vlachos V., Bitzenis A. (eds) *European Union* (pp. 37-61). Palgrave Macmillan, Cham. DOI: https://doi.org/10.1007/978-3-030-18103-1_3

Fagiolo, G., Guerini, M., Lamperti, F., Moneta, A., & Roventini, A. (2019). Validation of agent-based models in economics and finance. In Beisbart C., Saam N. (eds) *Computer Simulation Validation* (pp. 763-787). Springer, Cham.

DOI: https://doi.org/10.1007/978-3-319-70766-2_31

Lamperti, F., Mandel, A., Napoletano, M., Sapio, A., Roventini, A., Balint, T., & Khorenzhenko, I. (2019). Towards agent-based integrated assessment models: examples, challenges, and future developments. *Regional environmental change*, 19(3), 747-762.

DOI: <https://doi.org/10.1007/s10113-018-1287-9>

Lamperti, F., Monasterolo, I., & Roventini, A. (2019). Climate Risks, Economics and Finance: Insights from Complex Systems. In Urbani Ulivi L. (eds.) *The Systemic Turn in Human and Natural Sciences* (pp. 97-119). Springer, Cham.

DOI: https://doi.org/10.1007/978-3-030-00725-6_6

2018

Lamperti, F., Dosi, G., Napoletano, M., Roventini, A., & Sapio, A. (2018). Faraway, so close: coupled climate and economic dynamics in an agent-based integrated assessment model. *Ecological Economics*, 150, 315-339.

DOI: <https://doi.org/10.1016/j.ecolecon.2018.03.023>

Lamperti, F., Roventini, A., & Sani, A. (2018). Agent-based model calibration using machine learning surrogates. *Journal of Economic Dynamics and Control*, 90, 366-389.

DOI: <https://doi.org/10.1016/j.jedc.2018.03.011>

Lamperti, F. (2018). Empirical validation of simulated models through the GSL-div: an illustrative application. *Journal of Economic Interaction and Coordination*, 13(1), 143-171.

DOI: <https://doi.org/10.1007/s11403-017-0206-3>

Tàbara, J. D., Frantzeskaki, N., Hölscher, K., Pedde, S., Kok, K., Lamperti, F., Christensen, J.H., Jager, J. & Berry, P. (2018). Positive tipping points in a rapidly warming world. *Current Opinion in Environmental Sustainability*, 31, 120-129.

DOI: <https://doi.org/10.1016/j.cosust.2018.01.012>

Lamperti, F., & Mattei, C. E. (2018). Going up and down: Rethinking the empirics of growth in the developing and newly industrialized world. *Journal of Evolutionary Economics*, 28(4), 749-784.

DOI: <https://doi.org/10.1007/s00191-018-0551-y>

Guerini, M., Lamperti, F., & Mazzocchetti, A. (2018). Unconventional monetary policy: between the past and future of monetary economics. *European Journal of Economics and Economic Policies*, 15(2), 122-131.

DOI: <https://doi.org/10.4337/ejeep.2018.0036>

Lamperti, F. (2018). An information theoretic criterion for empirical validation of simulation models. *Econometrics and Statistics*, 5, 83-106.

DOI: <https://doi.org/10.1016/j.ecosta.2017.01.006>

2017

Balint, T., Lamperti, F., Mandel, A., Napoletano, M., Roventini, A., & Sapio, A. (2017). Complexity and the economics of climate change: a survey and a look forward. *Ecological Economics*, 138, 252-265.

DOI: <https://doi.org/10.1016/j.ecolecon.2017.03.032>

Lamperti, F., Mavilia, R., & Castellini, S. (2017). The role of Science Parks: a puzzle of growth, innovation and R&D investments. *The Journal of Technology Transfer*, 42(1), 158-183.

DOI: <https://doi.org/10.1007/s10961-015-9455-2>

2016

Ferrara, M., Lamperti, F., & Mavilia, R. (2016). Looking for best performers: a pilot study towards the evaluation of science parks. *Scientometrics*, 106(2), 717-750.

DOI: <https://doi.org/10.1007/s11192-015-1804-2>

Lamperti, F., Mavilia, R., & Giometti, M. (2016). Persistence of innovation and knowledge flows in Africa: an empirical investigation. *Innovation and Development*, 6(2), 235-257.

DOI: <https://doi.org/10.1080/2157930X.2016.1196547>

2014

Ferrara, M., Lamperti, F., & Mavilia, R. (2014). The impact of technopoles and science parks on the regional and local innovation systems. In Schirillò, D. (eds) *Design a Pattern of Sustainable Growth.*, 51-75.

DOI: <http://dx.doi.org/10.14505/despag.2014.ch3>

• FELLOWSHIPS AND AWARDS

- 2020 *Kapp Prize* - awarded by the European Association for Evolutionary Political Economy to the best paper published in 2019 (for the paper “The public costs of climate induced-financial instability” published in *Nature Climate Change*)
Outstanding research quality and productivity prize – awarded by the Sant’Anna School of Advanced Studies, Pisa, Italy (based on comparisons with peers in the Italian academia)
- 2018 – today *Fellow of the “Economics and Management in the Era of Data Science” Department of Excellence* at Sant’Anna School of Advanced Studies - awarded by the Italian Ministry of University and Research, Rome, Italy
- 2012 – 2015 *Full doctoral scholarship* (on competitive basis) - awarded by the Institute of Economics, Sant’Anna School of Advanced Studies, Pisa, Italy
- 2008 – 2012 *Bocconi-ISU tuition waiver and scholarship* (on income and competitive bases) - awarded from Bocconi University, Milan, Italy

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2019 – today *Supervision of 5 Postdocs, 3 Ph.D. Students, 2 Pre-docs and 3 M.Sc. Students* at the Institute of Economics, Sant’Anna School of Advanced Studies, Pisa, Italy

2019 – today *Supervision of 2 Postdocs and 1 M.Sc. Student* at the RFF-CMM European Institute on Economics and the Environment, Milan, Italy

• TEACHING ACTIVITIES

- 2019 – today Lecturer, Sant'Anna School of Advanced Studies, Pisa, Italy
Advanced Macroeconomics (M.Sc. & PhD); *Climate Change Economics* (B.Sc. & M.Sc.);
Unconventional Monetary Policy (B.Sc. and M. Sc.).
- 2016 – 2018 Lecturer, University of Insubria, Varese, Italy
Economics of Innovation (M.Sc.); *Industrial Dynamics and Evolution* (M.Sc.)
- 2015 – 2017 Teaching Assistant, Sant'Anna School of Advanced Studies, Pisa, Italy
Advanced Macroeconomics (M.Sc.); *Computational Economics* (M. Sc.)

• ORGANISATION OF SCIENTIFIC MEETINGS

- 2022 *Data-Driven Economic Agent-Based Modelling Workshop*, sponsored by the Institute for New Economic Thinking (INET) and James McDonnell Foundation, 40 people, Pisa, Italy
- 2019 *Special Session on Agent-Based Modelling in Macroeconomics and Finance: issues, problems and possible futures*, EAEPE Annual Conference, 15 people, Warsaw, Poland
- 2018 *Special Session on Credit Markets and the Effects on the Real Economy*, EAEPE Annual Conference, 15 people, Nice, France
- 2017 *Special Session on Unconventional Monetary Policy and Sustainable Finance*, EAEPE Annual Conference, 20 people, Budapest, Hungary
- 2016 *Freewheeling Econometrics Workshop*, co-sponsored by the Institute for New Economic Thinking (INET) and Sant'Anna School of Advanced Studies, 35 people, Pisa, Italy

• INSTITUTIONAL RESPONSIBILITIES

- 2023 – today *Member of the “Commissione Paritetica” of Sant'Anna School of Advanced Studies*
- 2021 – today *Member of the Managing Board of the EMbeDS and L'EMbeDS departments of Excellence*
Sant'Anna School of Advanced Studies, Pisa, Italy
- 2020 – today *Coordinator of the Complexity Modellers Society (CoMoS)*
Sant'Anna School of Advanced Studies and L'EMbeDS, Pisa, Italy
- 2019 – today *Organizer of the Internal Seminar Series (LEM Seminars)*
Institute of Economics, Sant'Anna School of Advanced Studies, Pisa, Italy
- 2018 – 2021 *Responsible of the Focus Area “Economics of Climate Change”, Inter-University Centre for Climate Change studies and Sustainable Actions (3CSA), Italy*

• EDITORIAL and REVIEWING ACTIVITIES

Editorial activities:

- Associate Editor of *Industrial and Corporate Change* (Macro and Development track);
- Associate Editor of *Italian Economic Journal* (the journal of the Italian Economic Association)

Reviewer activities:

- *Selected journals:* *Nature Energy*, *Nature Communications*, *Nature Sustainability*; *Global Environmental Change*, *Climatic Change*, *International Journal of Disaster Risk Reduction*, *Journal of Economic Dynamics and Control*, *Ecological Economics*, *Journal of Economic Behaviour and Organization*, *Journal of Evolutionary Economics*, *Technological Forecasting and Social Change*, *Energy Policy*, *Macroeconomic Dynamics*, *Journal of Environmental Management*, *Advances in Complex Systems*, *Mind and Society*, *Journal of Financial Stability*, *Industrial and Corporate Change*.
- *Grant-making institutions:* Leibniz Association, National Science Center Poland, Swiss National Science Foundation (SNFS).

• MEMBERSHIPS OF SCIENTIFIC SOCIETIES

Society for Computational Economics (SCE), European Association for Evolutionary Political Economy (EAEPE), Society for Economic Studies with Heterogeneous Interacting Agents (ESHIA), European Association of

Environmental and Resource Economists.

- **MAJOR COLLABORATIONS**

- *Climate hazards, natural disasters, and economic impacts*: Penn State University (US), Columbia University (US), TU Delft (NL), Istituto Universitario di Studi Superiori – IUSS (IT),
- *Climate finance*: World Bank (US), IMF (US), Bocconi University (IT), Polytechnic University of Milan (IT), University of Bologna (IT), Bank of Italy (IT), UCL (UK)
- *Sustainable agriculture and climate impacts*: Joint Research Centre – JRC (IT)
- *Innovation policy and sustainable transitions*: UCL (UK), University of Exeter (UK), Oxford University (UK), SPRU (UK), SOAS (UK), Campinas University (BR), Federal University of Rio de Janeiro (BR), Utrecht University (NL)
- *Agent-based modelling*: Sciences-Po (FR), Sorbonne University (FR), Bielefeld University (DE), University of Technology Sydney (AU), TU Delft (NL), Maastricht University (NL)
- *Network modelling*: Scuola Normale Superiore (IT), Sorbonne University (FR)
- *Input-Output analysis*: Data Driven-Economic Impact Group on the Covid-19 Emergency, Italian Ministry for Technological Innovation and Digitization.

- **COMPUTER SKILLS**

<i>Basic</i>	JAVA, Gretl
<i>Intermediate</i>	Stata, Eviews , Latex, Python
<i>Advanced</i>	C++, R, Matlab

- **ADDITIONAL INFORMATION**

<i>Languages</i>	ITALIAN · Mother tongue
	ENGLISH · Fluent
	FRENCH · Intermediate
<i>Interests</i>	Photography · Cooking · Chess · Running & Hiking

April 4th, 2024

Autorizzo il trattamento dei miei dati personali, ai sensi del D.lgs. 196 del 30 giugno 2003. Dichiaro inoltre che le informazioni inserite nel presente documento corrispondono a verità ai sensi delle norme in materia di dichiarazioni sostitutive di cui all'art. 46 e ss. del D.P.R. 445/2000.