Luca Mingarelli, PhD

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My website and professional page

Research interests

I am interested in banking and financial networks, in the role interconnections play in giving rise to systemic risk, in the evaluation and design of macroprudential regulation, and in its implications for financial stability.

Policy Experience

Based in the *Systemic Risk and Financial Institutions* division. Actively collaborated in cross-divisional and cross-institution projects: most notably with the *Stress Test Modelling* division within the *System Wide Stress Test* group as part of the FSC-WGST3; with the ESRB as part of a ESRB-WS3 *Top-down assessment of a mass bond downgrade scenario* project; with the SRB on a *Optimised bail-in strategies* project; as part of the ATC-FSC-WS1 Climate Risk project team. Experience in leading and managing small teams.

Employment

European Central Bank: Financial Stability Expert, 2020-Present
European Central Bank: PhD Trainee, 2019-2020
Imperial College London: Research Fellow, 2018

Education

Imperial College London
Ph.D., Mathematics, 2014-2018.
MRes, Mathematical Sciences, 2013-2014.
King's College London
MSc, Theoretical Physics, 2012-2013 .
Universitá di Bologna
BSc, Physics, 2009-2012 (*cum laude).*

Teaching

DG-MF, European Central Bank
(2019-2020) Taught courses micro-structural and network models of financial contagion, python, git, big data and high performance computing.
Department of Mathematics, Imperial College London
(2014-2018) Graduate teaching assistant in: Probability and Statistics, Statistical Modelling, Time Series, Analysis, Mathematical Methods I and II, Differential Equations, Mechanics, Python, Matlab, Maple, Computing in C++, Mathematics and Physics courses for the Chemistry, Physics, and Aerospace departments.

Technical Skills

Big Data, Python, R, C++, UNIX, Matlab, Mathematica, Maple
SQL, Hadoop, PySpark, Q/Kdb+ (*basic: work in progress*)

Consultancy

CVING, JinnCapital, Outsmart Insight, BAE Systems, ABACE Group.

Sofware dev.

CryptPandas, PyOracleClient

Publications

Financial contagion and resolution strategies, with P. Bochmann, L. Kuitunen, J. Metzler, M. Montagna, and M. Spaeth, working paper (*forthcoming*);

Market impact contagion: a European perspective, with M. Kaijser and M. Sydow, working paper (*forthcoming*);

EA system-wide scenario analysis of large scale corporate bond downgrades, with A. Bouveret, C. Christophersen, G. Coppins, M. Ferrari, C. Fricke, C. Graciani, S. Hack, P. Jakubik, M. Kaijser, M. Ludwig, A. Monzon, S. Pasqualini, D. Pérez, E. Rancoita, E. Schaanning, M. Sydow, A. Vinci, *ESRB Technical Notes*, 2020;

Euro area banks' sensitivity to corporate decarbonisation, with M. Belloni, R.M. Porcel, and P. Radulova, *ECB Financial Stability Review*, 2020;

Assessing the systemic footprint of euro area banks, with M. Adam, P. Bochmann, M. Grodzicki, M. Montagna, C. Rodriguez d'Acri, and M. Spaggiari, *ECB Financial Stability Review*, 2019;

Exotic vortex lattices in binary repulsive superfluids, with Ryan Barnett, *Physical Review Letters*, 2019, (*arXiv*);

Vortex lattices in binary mixtures of repulsive superfluids, with Eric Keaveny, Ryan Barnett, *Physical Review A*, 2018, (*arXiv*);

Simulating infinite vortex lattices in superfluids, with Eric Keaveny, Ryan Barnett, *IOP-Journal of Physics: Condensed Matter*, 2016, (*arXiv*); featured on JPhys+;

Fellowships Awards and other experiences

Member of Mathematics Research committee (Imperial College, 2014-2017)
Member of Teaching Strategy committee (Imperial College, 2013-2017)
Representative of Mathematics PhD students (Imperial College, 2014-2017)
APS Travel grant (New Orleans, 2017)
HAIRS Grant for MBP-SQS Conference (Cape Town, 2016)
Global Fellow at Massachusetts Institute of Technology (Boston, 2015)
International School of Physics Grant (Varenna, 2014)
King's Leadership Award (2013)

Conferences and Seminars

- Economics & Complex Systems Journal Club (Invited speaker) — École Polytechnique, Paris, 2020 (France)
- Joint ECB-Oxford Workshop on Financial Interconnectedness (Organiser) — Frankfurt am Main 2020 (Germany)
- INET Complexity Economics Seminar (Invited speaker) — Oxford 2019 (UK)
- *Financial Stability Committee - Workstream 3 Conference* — Frankfurt am Main 2019 (Germany)
- *APS March Meeting* — New Orleans 2017 (US)
- *Joint Quantum Center, Multicomponent Atomic Condensates and Rotational Dynamics* — Newcastle 2016 (UK)
- *Theory of Condensed Matter Group Annual Meeting* — Warwick 2016 (UK)
- *Many-body physics in Synthetic Quantum Systems* — Stellenbosch 2016 (South Africa)
- *Quantum Matter at Ultralow Temperature* — Varenna 2014 (Italy)

References

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