

Davide Samuele Luzzati

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Google Scholar: [link](#)

Nationalities: Italian and Argentinian

Development Economics Vice Presidency

World Bank Group

Paris, France

Professional Experience

World Bank, Paris, France

Apr. 2025–June 2026

Postdoctoral Research Fellow

- Lead economic research within the Market and Economic Research Unit in IFC (now part of DEC, World Bank), designing empirical and theoretical methodologies to analyze production networks, trade patterns, and spatial development.
- Co-lead a large-scale project on firm-to-firm linkages: design and implement harmonization framework for heterogeneous datasets across 10+ countries, manage external consultants, and develop analytical frameworks in R, Python, STATA and GitHub.
- Contribute to flagship reports and several research notes.

European Central Bank, Frankfurt, Germany

Apr. 2024–Dec. 2025

PhD Trainee/Academic Researcher

- Designed and maintained data infrastructure for EMIR derivatives database (the Bank's largest and most complex dataset), implementing data pipeline solutions using Python, SQL, and PySpark.
- Successfully migrated the data infrastructure from SQL to PySpark, improving processing efficiency and manageability.
- Produced analytical notes and briefings on market developments for senior management and team members, translating complex data into actionable insights for macroprudential policy decisions.

World Bank, Washington, DC, USA (remote)

2024–2025

STC Consultant

- Co-led research project on climate resilience of transport and trade infrastructure in East and Central Asia, developing novel economic impact assessment frameworks using heterogeneous data sources.
- Integrated geospatial and trade data and firm-level surveys to calibrate a large-scale computational economic model; pioneered methodology for quantifying supply-chain disruptions and economic losses from natural disasters.
- Research output currently informs infrastructure investment decisions and cost-benefit analyses for regional development projects.

Weizmann Institute of Science, Rehovot, Israel

Mar.–Aug. 2020

Research Fellow

- Applied machine learning and network analysis techniques to study ants' behavior, using Python and MATLAB for image recognition and statistical analysis.

Education

Sant'Anna School of Advanced Studies, Pisa, Italy

Sept. 2020–Jan. 2025

PhD in Economics (cum Laude)

Dissertation: "Four Essays on Economic Networks" under the supervision of Giorgio Fagiolo (Sant'Anna).

Visits: Complexity Science Hub, Vienna (Mar.–Aug. 2023).

Dissertation committee: Daria Taglioni (World Bank), Francois Lafond (Oxford), and Francesco Lamperti (Sant'Anna).

ETH Zürich, Zurich, Switzerland

Sept. 2018–Sept. 2020

MSc in Statistics

University of Leeds, Leeds, UK

Sept. 2015–Jun. 2018

BSc in Mathematics and Economics

Publications

Journal Articles

Fagiolo, G., Luzzati, D., and Zema, M. S. (2026). Link or Languish? A Long-Run Empirical Analysis of Production Network Positioning, Embeddedness, and Growth. Accepted at *The World Economy*.

Fagiolo, G. and Luzzati, D. (2023). Centrality in the Macroeconomic Multi-Network Explains the Spatio-Temporal Evolution of Country Per-Capita Income. *Applied Network Science*, 8(59).

Moran, J., Fosset, A., Luzzati, D., Bouchaud, J.-P., and Benzaquen, M. (2020). By Force of Habit: Self-Trapping in a Dynamical Utility Landscape. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 30(5).

Spaiser, V., Luzzati, D., Gregoriou, A. (2018). Advancing sustainability: Using smartphones to study environmental behavior in a field-experimental setup. *Data Science: Methods, Infrastructure, and Applications*, 2(1).

Chapters

Coronese, M. and Luzzati, D. (2022). Economic impacts of natural hazards and complexity science: a critical review. *Handbook of Complexity Economics*. London, New York: Routledge.

Hynes, W., Kirman, A., Latini, C., and Luzzati, D. (2022). A Systemic Approach to Economic Resilience. In *The Routledge Handbook of Comparative Economic Systems*.

Selected research projects

Maritime Chokepoints and Energy Security. (with Chiara Criscuolo and Piyush Panigrahi).

When Tails Wag the World: Extreme Shocks in Global Production Networks. (with Chiara Criscuolo and Piyush Panigrahi).

Propagation of shocks in reconstructed firm-to-firm networks from Input-Output tables: A maximum entropy approach. (with Giorgio Fagiolo, Leonardo Ialongo and Diego Garlaschelli). *Draft available upon request*

Temporal Production Networks. (with Andras Borsos and Anton Pichler).

Selected Conferences and Seminars

World Bank BBL (2026); Network Science in Economics, Miami (2026); 4th Workshop on Supply Chains, Vienna (2024); CES Seminar Sorbonne, Paris (2024); ENF Workshop, Lucca (2024); Computing in Economics and Finance, Nice (2023); NetSci, Vienna (2023); Complexity Science Hub, Vienna (2023); Complex Networks and their Applications, Palermo (2022); Chair of Econophysics and Complex Systems, Paris (2020); OECD, Paris (2020).

Grants

Research Support Budget, World Bank Group (co-PI, 29.000 \$)

4-year PhD Scholarship, Sant'Anna School of Advanced Studies

INET Young Scholar Event Grants x2

Extended Problem Solving, The Fields Institute for Research in Mathematical Sciences and NAEC-OECD

QStep Fellowship, University of Leeds

Refereeing Activity

npj Urban Sustainability; Nature Communications; Nature Scientific Reports; Advances in Complex Systems; Physica A; Journal of Economic Interaction and Coordination; The Journal of International Trade & Economic Development.

Languages and Software Skills

Languages: Italian (Mother tongue); English (Fluent); French (Intermediate); Hebrew (Intermediate).

Software and Programming: Python (Advanced); R (Advanced); Mathematica (Intermediate); SQL (Intermediate); git (Intermediate); MATLAB (Intermediate); Stata (Intermediate).