Emanuele Guidotti

Postdoctoral researcher, University of Lugano (USI), Switzerland
emanuele.guidotti@usi.ch - https://eguidotti.com

EDUCATION

Postdoc in Finance - **USI Lugano**   Since August 2023
Supervisor: L. Fresard

PhD in Finance, **University of Neuchâtel**   2019 — 2023
Supervisor: T.A. Kroencke   Co-supervisor: D. Ardia

MSc in Finance, **University of Milan**   2015 — 2017
Final evaluation: *summa cum laude.* Supervisor: S.M. Iacus

BSc in Physics, **University of Milan**   2012 — 2015
Final evaluation: *summa cum laude.* Supervisor: S.M. Iacus and A. Vicini

RESEARCH INTERESTS

Financial markets, Data science, Artificial intelligence.

PUBLISHED PAPERS

"Efficient Estimation of Bid-Ask Spreads from Open, High, Low, and Close Prices"
D. Ardia, E. Guidotti, T.A. Kroencke
Journal of Financial Economics, vol. 161, pag. 103916, 2024 [link]

"Text Classification with Born's Rule"
E. Guidotti, A. Ferrara
Advances in Neural Information Processing Systems, vol. 35, pag. 30990-31001, 2022 [link]

"calculus: High Dimensional Numerical and Symbolic Calculus in R"
E. Guidotti
Journal of Statistical Software, vol. 104(5), pag. 1-37, 2022. [link]

"A worldwide epidemiological database for COVID-19 at fine-grained spatial resolution"
E. Guidotti
Scientific Data, vol. 9(1), pag. 1-7. Nature Publishing Group, 2022. [link]

"COVID-19 Data Hub"
E. Guidotti, D. Ardia
Journal of Open Source Software, vol. 5(51), pag. 2376, 2020. [link]

"Are official confirmed cases and fatalities counts good enough to study the COVID–19 pandemic dynamics? A critical assessment through the case of Italy"
K. Bartoszek, E. Guidotti, S. Iacus, M. Okrój.
Nonlinear Dynamics, vol. 101(3), pag. 1951-1979. Springer, 2020. [link]

"A Model of Price Formation in Frictionless Markets"
E. Guidotti
SSRN, preprint. [link]

"Liquidity Premia and Bid-Ask Spreads: Evidence from 94 Years in the U.S. Stock Market"
D. Ardia, E. Guidotti, T.A. Kroencke

"Asymptotic expansion formulas for diffusion processes based on the perturbation method"
E. Guidotti, N. Yoshida

CONFERENCES AND SEMINARS

2024
 Institute for Mathematical Statistics - Asia-Pacific Rim Meeting (IMS-APRM)

2023
 Seminar at EPFL, Swiss Finance Institute
 Seminar at Linköping University, Machine Learning Series (IDA)
 Seminar at OST, Interdisciplinary Center for Artificial Intelligence (ICAI)
 Seminar at University of Milan, Information Systems and Knowledge Management (ISLab)

2022
 Conference on Neural Information Processing Systems (NeurIPS)
 Annual Meeting of the Financial Management Association (FMA)
 Annual Meeting of the European Finance Association (EFA)
 International Conference on Quantitative Finance and Financial Econometrics (QFFE)
 Seminar at HEC Montréal, Department of Finance

2021
 International Conference on Computational and Methodological Statistics (CMStatistics)
 Annual Financial Market Liquidity Conference (AFML)
 International Risk Management Conference (IRMC)
 Annual Meeting of the German Finance Association (DGF)
 IUPAP Conference on Computational Physics (CCP)
 Quantact Seminar

2020
 International Conference on Computational and Methodological Statistics (CMStatistics)
 Next Einstein Forum Global Gathering
 European R Users Meeting (eRum)

2019
 International Conference on Computational and Methodological Statistics (CMStatistics)
 European Meeting of Statisticians (EMS)

2018
 Seminar at the University of Tokyo, Graduate School of Mathematical Sciences

2017
 International Conference on Computational and Methodological Statistics (CMStatistics)
 Annual Meeting of the Association for Mathematics Applied to Social and Economic Sciences
 R/Finance Conference
 Seminar at the University of Tokyo, Graduate School of Mathematical Sciences

ACADEMIC VISITS

VISITING SCHOLAR, **HEC Montréal**, Department of Decision Sciences — May 2022
Host: D. Ardia

VISITING SCHOLAR, **University of Tokyo**, Mathematical Sciences — Non-consecutive 4 months
Host: N. Yoshida — period between 2017 — 2018

RESEARCH SOFTWARE

"COVID-19 Data Hub"
Total downloads: 260,000+. Data downloads: 6,230,000+. Links: [GitHub] [CRAN] [PyPI]

"bidask: Efficient Estimation of Bid-Ask Spreads from Open, High, Low, and Close Prices"
Total downloads: 16,000+. Links: [GitHub] [CRAN] [PyPI]

"bornrule: Classification with Born's Rule"
Total downloads: 11,000+. Links [PyPI]

"calculus: High Dimensional Numerical and Symbolic Calculus in R"
Total downloads: 52,000+. Links: [GitHub] [CRAN]

"RblDataLicense: R Interface to Bloomberg Data License"
Total downloads: 52,000+. Links [GitHub] [CRAN]

"yuimaGUI: A Graphical User Interface for the yuima Package"
Total downloads: 29,000+. Links: [CRAN]

TEACHING

Corporate Finance (Teaching) — 2024 — 2025
— *Master* in Finance, University of Lugano

Deploying Machine Learning Models on Google Cloud Platform (Teaching) — 2022 — 2024
— *Master* in Data Science for Economics, University of Milan

Data Acquisition, Management, and Visualization (Teaching) — 2020 — 2022
— *Master* in Data Science for Economics, University of Milan

Coding for Data Science and Data Management (Co-Teaching), — 2019 — 2020
Text Mining and Sentiment Analysis (Co-Teaching)
— *Master* in Data Science for Economics, University of Milan

Asset Pricing (Teaching Assistant),   2020 — 2023
Portfolio Management (Teaching Assistant),
Quantitative Methods for Finance (Teaching Assistant),
Research in Financial Analysis (Teaching Assistant)
— *Master* in Finance, University of Neuchâtel

GRANTS AND AWARDS

2024 — USI Research Grant in Open Research Data (CHF 50'000)
2022 — Neural Information Processing Systems (NeurIPS) Scholar Award
2022 — Mobility Scholarship of the University of Neuchâtel
2022 — Fonds Gold Open Access of the University of Neuchâtel
2021 — Google Cloud Research Credits
2020 — R Consortium ISC Grant Program
2020 — Institute for Data Valorization (IVADO) Research Grant

ACADEMIC SERVICE

Referee: The R Journal (2023); Scientific Data, Nature Publishing Group (2022).

OTHER EMPLOYMENT AND ADDITIONAL AFFILIATIONS

Japan Science and Technology Agency CREST   2017 — present

Partner at Algo Finance Sagl   2017 — present

PROGRAMMING

Proficient in Python, R, SQL, C++ / Shell scripting / Cloud computing / WRDS HPC

LANGUAGES

Italian (native), English (C1).