Mirko Armillotta

Vrije Universiteit Amsterdam
Department of Econometrics & Data Science
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Amsterdam, Netherlands
Date of Birth: January 29, 1993
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Research Interests

Count time series	Econometrics
Discrete-valued processes	Network time series
Observation-driven models	Time Series Analysis

Education

- Ph.D. in Statistical Sciences, University of Bologna, Italy, 5/2021
  - Dissertation Title: *Essays on discrete valued time series models*, available at http://amsdottorato.unibo.it/9838/
  - Thesis Advisors: *Alessandra Luati, Monia Lupparelli*.
  - External Advisor: *Konstantinos Fokianos.*
  - External Reviewers: *David Matteson, Christian Francq*.
- M.A. in Statistical Sciences (cum laude), University of Bologna, Italy, 9/2017
  - Dissertation Title: *Analisi delle serie economiche e finanziarie con i modelli Markov-Switching Vector Autoregressive*.
  - Thesis Advisor: *Giuseppe Cavaliere*.
- B.Sc. in Statistical Sciences (cum laude), University of Bologna, Italy, 7/2015
  - Dissertation Title: *La previsione della volatilità con dati a diverse frequenze: I modelli MIDAS*.
  - Thesis Advisor: *Luca De Angelis*.

Professional Experience

- Vrije Universiteit Amsterdam, Netherlands
  - Research Fellow, Department of Econometrics & Data Science 9/2022–present

- University of Cyprus, Cyprus
  - Postdoctoral Researcher, Department of Mathematics & Statistics 11/2020–8/2022
- Lancaster University, UK
  - Visiting Researcher, Department of Mathematics & Statistics 2/2020–5/2020

Awards & Fellowships

- Marie Skłodowska-Curie Individual Fellowship financed by the European Commission (4/2023–present)
- Award for the Best Ph.D. thesis in Statistics, 2021, Italian Statistical Society.
- Selected for oral presentation in invited session at NBER-NSF Time Series Conference, Rice University, 2021.
- Marco Polo Ph.D. fellowship to Lancaster University, 2020, University of Bologna.
- Erasmus fellowship to Alexandru Ioan Cuza University, 2017, University of Bologna.
- Award for the best students, 2014-2015, University of Bologna.

Peer Reviewed Articles

1. M. Armillotta, A. Luati and M. Lupparelli: "Observation-driven models for discrete-valued time series", *Electronic Journal of Statistics*, 16(1): 1393–1433, 2022. `(Link)`

Articles under Review

1. M. Armillotta and K. Fokianos: "Testing Linearity for Network Autoregressive Models", 2022, `ArXiv`.
2. M. Armillotta and K. Fokianos: "Poisson Network Autoregression", 2022, `ArXiv`.

Submitted Articles

1. M. Armillotta, K. Fokianos, and A. Guizzardi: "Unveiling Venice's hotels competition networks from dynamic pricing digital market", 2022.
2. M. Armillotta, M. Tsagris, and K. Fokianos: "The R-package PNAR for modelling count network time series", 2022.

Peer Reviewed Articles in Conference Proceedings

1. M. Armillotta, K. Fokianos and I. Krikidis: "Generalized Linear Models Network Autoregression", *Network Science*, Springer, 2022, pp. 112–125, ISBN: 9783030972400.
2. M. Armillotta, A. Luati and M. Lupparelli: "Observation-driven models for storm counts", in: *Book of short Papers SIS 2020*, Pearson, 2020, pp. 863–868, ISBN: 9788891910776.
3. M. Armillotta, A. Luati and M. Lupparelli: "Stationarity of a general class of observation driven models for discrete valued processes", in: *Book of short Papers SIS 2019*, Pearson, 2019, pp. 31–39, ISBN: 9788891915108.

Book Chapters

1. M. Armillotta, K. Fokianos and I. Krikidis: "Bootstrapping Network Autoregressive Models for Testing Linearity", *Data Science in Applications*, Springer, 2023, pp. 99–116.
2. M. Armillotta, A. Luati and M. Lupparelli: "An overview of ARMA-like models for count and binary data", *Trends and Challenges in Categorical Data Analysis*, Springer (In press), 2022.

Software

- M. Tsagris, M. Armillotta and K. Fokianos: "R Package PNAR: Poisson Network Autoregressive Models" (2022). (`Link`)

Invited Conference Presentations

- Statistical Methods on Networks, University of Leipzig, Germany, September 2022.
- SIS 2022 - 51st scientific meeting of the Italian Statistical Society, University of Campania "Luigi Vanvitelli", Caserta, Italy, June 2022.
- International Symposium on Nonparametric Statistics (ISNPS), Paphos, Cyprus, June 2022.
- Challenges for Categorical Data Analysis (CCDA), University of Perugia, Italy, May 2022.
- NBER-NSF Time Series Conference, Rice University, Houston, USA, October 2021.

Contributed Conference Presentations

- International Conference on Network Science (NetSci-X), Porto, Portugal, February 2022.
- RCEA Time Series Workshop, University of Milano-Bicocca, Milan, Italy, June 2021.
- Data Research Camp, University of Padova, Venice, Italy, July 2019.
- SIS 2019 - Smart Statistics for Smart Applications, Catholic University, Milan, Italy, June 2019.

Invited Seminar Presentations

- Department of Statistics and Data Science, Research Center in Mathematics (CIMAT), Mexico, February 2022.
- Department of Econometrics and Data Science, Vrije Universiteit Amsterdam, January 2022.

Professional Society Membership

- Italian Society of Statistics (SIS).
- Italian Biometric Society (SIB).

Skills

- Software: R, Matlab, Stata, EViews, SPSS, LaTeX, Microsoft Office.
- Languages: English (fluent) and Italian (native).

Teaching Experience

Vrije Universiteit Amsterdam

- Econometrics II. Teacher, 24 hours. 2023 – present

University of Bologna

- Statistics, SECS-S/01. Tutor and teaching staff, 30 hours. 2018 – 2019
- Survey and Data Analysis, SECS-S/01. Tutor, 20 hours. 2018 – 2019
- Market Analysis, SECS-S/03. Tutor, 10 hours. 2017 – 2019

Supervising and Mentoring Activities

- Bachelor and Master theses supervision, Vrije Universiteit Amsterdam 9/2022 – present
  - Supervised $\approx$ 9 Master theses as the first supervisor
  - Supervised $\approx$ 3 Bachelor theses as the first supervisor

Referee Activity

- Computational Statistics and Data Analysis 2022 – present

April 27, 2023