Andrea Gilardi | Curriculum Vitae

– Milan, Italy

✉ andrea.gilardi@unimib.it   •   🌐 agila5.github.io   •   ⑦ agila5   •   ⑤ agila

Summary

I am a research fellow in Statistics at the University of Milano - Bicocca, Department of Economics, Management and Statistics (DEMS). My main research interests are spatial and spatiotemporal models on road networks.

Education

University of Milan - Bicocca
PhD in Statistics and Mathematical Finance   *NOV.17–APR.21*

University of Milan - Bicocca
Master Degree in Statistics   *SET.15–OTT.17*
Final mark: 110/110 e lode (Magna cum laude)

Università of Milan - Bicocca
Bachelor Degree in Statistics   *SET.12–SET.15*
Final mark: 110/110 e lode (Magna cum laude)

Teaching

Teaching Assistant: Introduction to Statistical Inference, University of Milano - Bicocca   *SEP.17–FEB.22*
Teaching Assistant: Lab Data Challanges, University of Milano - Bicocca   *FEB.21–MAY.21*
Teaching Assistant: R for Road Safety. RAC Foundation. Program and Materials.   *OCT.19–OCT.19*
Tutor: Introduction to R, University of Milano - Bicocca. Materials.   *MAR.19–APR.19*
Tutor: Introduction to *tidyverse* and *plumber*, University of Turin - Master in Data Science *OCT.18–OCT.18*
Teaching Assistant: Economic Statistics, University of Milano - Bicocca   *APR.18–JUL.18*
Teaching Assistant: Informatics, University of Milano - Bicocca   *MAY.17–SEP.17*

Working Experience

University of Milano - Bicocca   **Milan (Italy)**
Research fellow   *JAN.21–Present*

Catholic University of the Sacred Heart, Milan   **Milan (Italy)**
Consultant   *OCT.20–NOV.20*
I worked on a project named *Black Box and Big Data per la stima e la previsione dei sinistri* under the supervision of Prof. Diego Zappa.

GR & Partner S.A.S   **Milan (Italy)**
Consultant   *APR.18–OCT.18*
I developed a User Interface using R and Shiny.

PhD Thesis

Title: *Statistical Models and Data Structures for Spatial Data on Road Networks*

Supervisor: Prof. Riccardo Borgoni and Prof. Jorge Mateu

Summary: The thesis summarises data structures, vital pre-processing steps, and statistical models to analyse spatial data lying on road networks using point-pattern and network-lattice approaches.

Master Degree Thesis

Title: *Previsione spaziotemporale per gli interventi in emergenza delle ambulanze nel comune di Milano*
Supervisor: Prof. Riccardo Borgoni
Summary: We developed a spatiotemporal model to predict the distribution of the emergency medical interventions in Milan.

Visiting Periods

- I spent seven months in Castellón de la Plana (ES), from February 2020 to June 2020 and May 2021 to July 2021, working with Prof. Jorge Mateu on statistical models for events on road networks.
- I stayed in Leeds (UK) for three months, from September 2019 to November 2019, working with Prof. Robin Lovelace on R packages and classes for road networks. Final presentation.

Publications

1. **Gilardi, A.**, Borgoni, R., Mateu, J., A non-separable first-order spatio-temporal intensity for events on linear networks: an application to ambulance interventions. Under review. Preprint;
2. **Gilardi, A.**, Mateu, J., Borgoni, R., Lovelace, R., Multivariate hierarchical analysis of car crashes data considering a spatial network lattice. Under review. Preprint;
3. **Gilardi, A.**, Lovelace, R., Padgham, M., Data structures and methods for reproducible street network analysis: overview and implementations in R. Under review. Preprint;
4. **Gilardi, A.**, Borgoni, R., Presicce, L., & Mateu, J., Measurement error models on spatial network lattices: car crashes in Leeds in BOOK OF ABSTRACTS AND SHORT PAPERS 13th Scientific Meeting of the Classification and Data Analysis Group Firenze, September 9-11, 2021;
5. **Gilardi, A.**, Borgoni, R., & Mateu, J. (2021). A spatio-temporal model for events on road networks: an application to ambulance interventions in Milan. Preface XIX 1 Plenary Sessions, 702.
6. Borgoni, R., **Gilardi, A.**, & Zappa, D. (2020). Assessing the Risk of Car Crashes in Road Networks. Social Indicators Research, 1-19;
7. Borgoni, R., **Gilardi, A.**, & Zappa, D. (2020). Spatial modelling of driver crash risk using georeferenced data. In NESPUTT 2019-New Economic & Statistical Perspectives on Urban & Territorial Themes;
8. **Gilardi, A.**, Borgoni, R., & Zappa, D. (2020). Assessing the Risk of Car Accidents in Road Networks. In NESPUTT 2019-New Economic & Statistical Perspectives on Urban & Territorial Themes;
9. **Gilardi, A.**, Borgoni, R., & Zappa, D. (2019). Spatial Logistic Regression for Events Lying on a Network: Car Crashes in Milan. In Smart Statistics for smart applications (pp. 1165-1170). Pearson Italia;
10. **Gilardi, A.**, Borgoni, R., Pagliosa, A., & Bonora, R. (2018). Spatiotemporal Prevision for Emergency Medical System Events in Milan. In Scientific meeting of the Italian Statistical Society.

Summer Schools and Workshops

- Tidyverse developer day, Tolouse (FR), July 2019.
- Robust Statistics : Foundations and Recent Developments, University of Milano-Bicocca, March 2019
- CLADAG, Summer School on Clustering and Classification, University of Catania - May 2018

Conferences

Invited
- OpenGeoHub Summer School 2021, 1-3 September 2021, Online Event

Contributed
- CLADAG 2021, 13th Scientific Meeting Classification and Data Analysis Group, Online, September 9-11, 2021
- UseR! 2021 Meeting, 5-9 July 2021, Online event.

- 50th meeting of the Italian Statistical Society, 21-25 June 2021, Online event.
- OpenGeoHub 2020, 16-23 August 2020, Wageningen (Netherlands)
- Nesputt 2019: New Economic & Statistical Perspective, 21-22 November 2019, Milan (Italy).
- Meeting of the Italian Statistical Society, 18-21 June 2019, Milan (Italy).
- 49th Meeting of the Italian Statistical Society, 20-22 June 2018, Palermo (Italy).

Attended

- e-Rum 2020: European R User Meeting, 17-20 June 2020, Online event.
- UseR! 2019 Meeting, 9-12 July 2019, Tolouse (France).
- Statalk, March 29th, 2019, University of Bologna (Italy).
- Statalk, November 17th, 2017, University of Padova (Italy).

Organized Conferences

- I organized an online Webinar and Hackathon related to the R package sfnetworks as official satellite events of the e-Rum 2020 Conference. Materials, slides and recordings.
- I was a member of the Local Organizing Committee of Nesputt 2019: New Economic & Statistical Perspective conference, Milan (Italy).

Grants

- Tidy Spatial Networks in R funded by the R Consortium. 9000$

Awards

- Scolarship for the OpenGeoHub 2020 - Summer School. Project: *plotKML functionality to support sf and stars objects*. Final presentation.
- SIS award for the best poster at the SIS-2019 conference.
- Young-SIS award for the best poster at the SIS-2018 conference.

Community activities

Referee service

Spatial Statistics; rOpenSci

Affiliations

Società Italiana di Statistica (SIS); rOpenSci

Software

I am a proficient R user, with a particular interest in the r-spatial world and the tidyverse environment. I am the author of two R packages, namely osmextract (reviewed by rOpenSci foundation and now on CRAN) and sfnetworks (also on CRAN). I contributed to several R packages like ggplot2, recipes, sf, stplanr and osmdata. I attended the *Tidyverse Developer Day* in Tolouse during the UseR! 2019 conference.

I can write scientific documents and presentations using LaTeX and I have a basic knowledge of SQLite, GDAL, POSTGIS, SAS, Python, and STATA

Badges

SAS: SAS Certified Base Programmer for SAS 9

SAS: SAS Certified Predictive Modeler Using SAS Enterprise Miner 7

Additional Information

Associazioni: Volunteer at Volontari del Soccorso di Calolziocorte from July 2016

Notes

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".