

Marika D'Agostini | CURRICULUM VITAE

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Education

- **PhD in Statistical Sciences**, University of Bologna Nov 2023 – Present
 - Research Topic: *Bayesian hierarchical modelling for urban vulnerability assessment*
 - Supervisors: Prof. Massimo Ventrucchi, Prof. Andrea Ranzi
- **Second Level Master Degree in Geostatistics for Human, Animal and Environmental Health**, University of Padova Nov 2021 – Sept 2022
 - Final grade: Excellent
 - Thesis: *Data analysis of air quality sensors: the case study of Villa Revedin-Bolasco*
 - Supervisor: Prof. Francesco Pirotti
- **MSc in Statistical Sciences** (curr. Data Science), University of Bologna Sept 2018 – Dec 2020
 - Final grade: 110/110 cum Laude
 - Thesis: *Quantifying land fragmentation: an entropy-based approach*
 - Supervisor: Prof. Daniela Cocchi
 - Co-supervisors: Dr. Angela Ferruzza, Dr. Giovanna Tagliacozzo
- **BSc in Statistical Sciences** (curr. Stats & Maths), University of Bologna Sept 2015 – July 2018
 - Final grade: 110/110 cum Laude
 - Thesis: *Features of the Italian population according to the DEGURBA classification*
 - Supervisor: Prof. Daniela Cocchi

Research Experience

- **Visiting PhD Student**, Department of Epidemiology of Lazio Regional Health Service (DEPL), Rome, Italy Sept – Nov 2025
 - Research Topic: *Building a spatial indicator of environmental and climatic vulnerability*
 - Supervisor: Dr. Francesca de'Donato
- **Research Fellow**, Department of Medical and Surgical Sciences (DIMEC) of the University of Bologna, Bologna, Italy Feb – Nov 2023
 - Research Topic: *Data management and analysis for WP5 of ORCHESTRA Cohort project*
 - Supervisor: Prof. Paolo Boffetta

- **Data Scientist**, GeoSmart.Lab by SIS-TER s.r.l. SB, Imola (BO), Italy Jan 2021 – Jan 2023
 - Research Topic: *Deep Learning algorithms for smart waste management*
 - Supervisor: Dr. Arch. Alessandro Serravalli
- **Intern**, Italian National Institute of Statistics (ISTAT), Rome, Italy Apr – July 2020
 - Research Topic: *Statistics for climate change, extreme events and disasters*
 - Supervisors: Dr. Angela Ferruzza, Dr. Giovanna Tagliacozzo
- **Erasmus+ Student**, Department of Mathematics, Aarhus University, Denmark Jan – June 2019
- **Intern**, Dolomiti Bellunesi National Park Authority, Feltre (BL), Italy Jan – Mar 2018
 - Research Topic: *Implementation of a WebGIS for flora and fauna monitoring*
 - Supervisor: Dr. Enrico Vettorazzo

Publications

Journal Articles

1. **D'Agostini M**, Collatuzzo G, Teglia F, Boffetta P. (2024) **Risk of gynecological and breast cancers in workers exposed to diesel exhaust: a systematic review and meta-analysis of cohort studies.** *La Medicina Del Lavoro | Work, Environment and Health.* 115(3):e2024011. doi: [10.23749/mdl.v115i3.15568](https://doi.org/10.23749/mdl.v115i3.15568)
2. **D'Agostini M**, Collatuzzo G, Teglia F, Boffetta P (2024) **Risk of skin cancer in workers exposed to diesel exhaust: a systematic review and meta-analysis of cohort studies.** *La Medicina Del Lavoro | Work, Environment and Health.* 115(2):e2024010. doi: [10.23749/mdl.v115i2.15569](https://doi.org/10.23749/mdl.v115i2.15569)
3. Spiteri G, **D'Agostini M**, Abedini M, Ditano G, Collatuzzo G, Boffetta P, Vimercati L, Sansone E, De Palma G, Modenese A, Gobba F, Liviero F, Moretto A, dell'Omo M, Fiordi T, Larese Filon F, Mauro M, Violán C, Mates D, Oravec Běrešová J, Monaco MGL, Carta A, Verlatto G, Porru S. (2024) **Protective role of SARS-CoV-2 anti-S IgG against breakthrough infections among European healthcare workers during pre and post-Omicron surge – ORCHESTRA Project.** *Infection.* doi: [10.1007/s15010-024-02189-x](https://doi.org/10.1007/s15010-024-02189-x)
4. Pirotti F, Piragnolo M, **D'Agostini M**, Cavalli R. (2022) **Information technologies for real-time mapping of human well-being indicators in an urban historical garden.** *Future Internet.* 14(10):280. doi: [10.3390/fi14100280](https://doi.org/10.3390/fi14100280)

Conference Proceedings

5. Spiteri G, Monaco MGL, Carta A, **D'Agostini M**, Abedini M, Liviero F, Scapellato ML, Porru S. (2024). **O-015 Protective role of anti-S IgG against SARS-CoV-2 during the Omicron variant wave among healthcare workers: results from two large Italian university hospitals – ORCHESTRA project.** In: Abstract Book ICOH2024 Congress Proceedings - April 28 to May 3, 2024. *Occupational Medicine (Oxford, England)*, 74(Supplement_1). doi:[10.1093/occmed/kqae023.0451](https://doi.org/10.1093/occmed/kqae023.0451)
6. **D'Agostini M**, Venturi S, Vigo E. (2022) **Smart urban waste management system: the case study of Delft, Netherlands.** In: *Geomatics for Green and Digital Transition, ASITA 2022.* Communications in computer and information science. Springer International Publishing; 178-192. doi: [10.1007/978-3-031-17439-1_13](https://doi.org/10.1007/978-3-031-17439-1_13)

Conference Presentations

(Works presented by the first author)

Oral Presentations

1. **D'Agostini M, Ventrucci M, de'Donato F, Ranzi A. (2026) Measuring the thermal effects of urban transformation: a fine-scale analysis of land surface temperature**
Sustainability in a Global Perspective: a Trilateral Forum, University of Bologna, Italy
2. **D'Agostini M, Ventrucci M, Fondriest M, Vaccari L, Vaccari M, Bortone G, Ferretti F, Fiorentino C, Perlangeli V, Pandolfi P, Ranzi A. (2025) L'uso di modelli Bayesiani nella previsione spaziale del virus SARS-CoV-2: un caso studio di wastewater-based epidemiology nell'area di Bologna.**
AIE 2025 - 49th National Congress of the Italian Association of Epidemiology, Salerno, Italy.

Posters

3. **D'Agostini M, Ventrucci M, Ranzi A. (2025) Spatio-temporal analysis of surface urban heat islands using high-resolution remote sensing and SPDE-INLA: the case study of Bologna, Italy.**
GRASPA-SIS Conference 2025, Rome, Italy.
4. **D'Agostini M, Ventrucci M, Fondriest M, Vaccari L, Ranzi A. (2025) Spatio-temporal prediction of SARS-CoV-2 using INLA: a wastewater-based epidemiology case study in Bologna, Italy.**
Second Edition of the Workshop "INLA: Past, Present, and Future", Glasgow, UK.

Co-authored Presentations

5. Costanzucci Paolino MV, Collatuzzo G, Renieri T, Danilevskaia N, Astolfi L, Zafeiratou M, Magni L, Violante FS, Vaira B, **D'Agostini M**, Pavoni M, Fiorini G, Boffetta P. (2023)
Screening for Helicobacter pylori infection in Italian health care workers – HPOS [Poster].
SIML 2023 - 85th National Congress of Occupational Medicine, Turin, Italy.

Invited Talks & Seminars

1. *From IID to SVC: Spatial Structure in Areal Data with R-INLA*
(2026) University of Oviedo, Oviedo, Spain
2. *Uncovering local urban heat patterns: a Bayesian hierarchical approach*
(2025) Department of Epidemiology, Lazio Regional Health Service, Rome, Italy

Teaching Experience

Teaching Tutor

- **Bayesian Inference** (SECS-S/01, 6 CFU, 15 hours)
MSc in Statistical Sciences, University of Bologna since A.Y. 2023/24

Science Communication & Outreach

- Public talk at *GenerAzioni 2026 – Muoversi, nutrirsi, prevenire: la rivoluzione delle scelte consapevoli*, Biblioteca Salaborsa, Bologna, Italy. [[link](#)] Mar 2026
- Article on the Italian Union of Scientific Journalists (UGIS) Website. [[link](#)] July 2025

Academic Service

- **PhD Students Representative**
Department of Statistical Sciences “Paolo Fortunati”, University of Bologna 2023 – 2026

Society Memberships and Research Networks

- **Women+ in Geospatial** since 2021
- **SIS** - Italian Statistical Society since 2024
- **ISBA** - International Society for Bayesian Analysis since 2025
- **AIE** - Italian Association of Epidemiology since 2025

Awards and Scholarships

- 39th Cycle PhD Scholarship 2023 – 2026
- Scholarship "*Welfare Luxottica - XII Edition*" 2023
- Scholarship "*Welfare Luxottica - X Edition*" 2021
- Scholarship "*Welfare Luxottica - IX Edition*" 2020
- Erasmus+ Grant 2019
- Scholarship "*Welfare Luxottica - VIII Edition*" 2019
- Scholarship "*Welfare Luxottica - VII Edition*" 2018

Additional Academic Training

- **Applied Bayesian Statistics Summer School (ABS25)** by IMATI CNR, Genova, Italy
Spatio-temporal Methods in Environmental Epidemiology June 2025
- **PhD Storytelling Lab**, University of Bologna, Italy
Storytelling in Scientific Writing May 2025
- **Academy for PhD Training in Statistics (APTS)**, University of Durham, UK
High-dimensional & Computer Intensive Statistics July 2024

Competences

Languages

- Italian (*Native*)
- English (*Advanced*)

Technical Skills

- ■ ■ R, QGIS, L^AT_EX, Microsoft Office
- ■ □ Python, STATA, Google Earth Engine, Wolfram Mathematica
- □ □ ArcGIS, OpenBUGS, MATLAB, Tableau

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Bologna - March 13, 2026