

Chiara Ghiringhelli

Curriculum Vitae

Education

- Feb 2017-
Dec 2020 **PhD in Economics, minor Quantitative Methods**, *Università della Svizzera Italiana*, Lugano, Thesis: Statistical solutions for regression-type model with big dataset.
Advisors: Giuseppe Arbia, Antonietta Mira
- Feb 2019-
Mar 2019 **Visiting researcher**, *The Catholic University of America*, Washington.
- Mar 2014-
Jul 2016 **Mathematical Engineering MSc, specialisation in Applied Statistics**, *Politecnico di Milano*, Thesis: 'A Bayesian analysis of population density over time: how spatial correlation matters'. Advisors: Ilenia Epifani, Alessandra Guglielmi.
- Jan 2015-
Jul 2015 **Erasmus programme**, *Universidad Autonoma de Madrid*, Madrid.
- Sep 2010-
Feb 2014 **Mathematical Engineering BSc**, *Politecnico di Milano*, Reading Course: 'Analysis of risk discount factor', Advisor: Daniele Marazzina.
- Sep 2009-
Sep 2010 **Science of Architecture**, *Politecnico di Milano*.
- Sep 2004-
Jun 2009 **Scientific High School**, *Liceo Scientifico Galileo Ferraris*, Varese.

Research

- 2022 **Estimating Uncertainty in Epidemic Models: An Application to COVID-19 Pandemic in Italy**, *The Economics of COVID-19*, G.Arbia, V.Nadelli, C.Ghiringhelli.
- 2022 **A recursive estimator for a spatial regression model to handle streaming of geo-located data**, *Journal of Geographical Analysis*, C. Ghiringhelli, G. Piras, G. Arbia, A. Mira.
- 2021 **Modelling Nonstationary Spatial Lag Models with Hidden Markov Random Field**, *Spatial Statistics*,44, C. Ghiringhelli, F. Bartolucci, A. Mira, G. Arbia.
- 2020 **Population distribution over time: modelling local spatial dependence with a CAR process**, *Spatial Economic Analysis*,15 ,120-144, I. Epifani, C.Ghiringhelli, R. Nicolini.

- 2019 **How web scraped data impact the car sharing mobility analysis**, *Conference of Statistic Italian Society 'Smart Statistics for Smart Applications'*, V. Nardelli, C. Ghiringhelli.
- 2019 **Estimation of spatial econometric linear models with large datasets: How big can be spatial Big Data?**, *Regional Science and Urban Econometrics*, volume 76, pages 67-73, G. Arbia, C. Ghiringhelli, A. Mira.

Unpublished papers

- 2022 **spFlows: an R package for spatial interaction models**, *Manuscript*.
- 2022 **Variational inference of spatial models with hidden Markov layer**, *Manuscript*, Co-author: F. Bartolucci.
- 2021 **An application of Hidden Markov Random Field to Intrinsic Dimension analysis**, *Manuscript*, C. Ghiringhelli, F. Denti, A. Mira.
- 2020 **On the efficiency of estimators of the Spatial Error Model**, *under revision at Statistic and Probability letters*, C. Ghiringhelli, G. Piras, G. Arbia, A. Mira.

Professional Experience

- Oct 2020-
current **researcher**, *Università Cattolica del Sacro cuore*, Roma.
- Feb 2022 **visiting researcher**, *Eawag - Swiss Federal Institute of Aquatic Science and Technology*, Zurich.
- Oct 2021-
Dec 2021 **FAO**, *Rome*, consulence: automation of reports and data collection .
- Sep 2021-
Dec 2021 **Fondimpresa**, *Rome*, consulence: analysis of the impact of subsidised activities (courses and training) of companies.
- Jul 2021-
current **Tim**, *Rome*, consulence: analysis and validation of the survey process, analysis of missing answers and calibration of the survey results., Project in collaboration with Università La Sapienza.
- Jul 2020 **Humanitas**, *Milan*, Short term consulence: analysis and prevision for Covid cases.
- Aug 2019-
Sep 2019 **Bgp consulting**, *Milan*, Short term consulence: forecasting sales for Ferrero.
- Oct 2018 **World Bank**, *Washington*, Short term consulence: collaboration to the project 'Rapid appraisal methodology to determine employment opportunity areas in african cities'.
- Nov 2016-
Jan 2017 **Accenture**, *Milan*, Stage.
- Sep 2016-
Oct 2016 **Bgp consulting**, *Milan*, Stage.

Awards

- 2021 **Best Student/Postdoc Contributed Paper Award** , at the ISBA 2021 World Meeting.
- 2018 **Stat under the stars 4** , *Università di Palermo*, team competition: winner of the prize 'best objective predictions'.
- 2017 **Swiss National Foundation grant**, *Università della Svizzera Italiana*, title of the project: 'Statistical solutions for regressions-type models with big spatial data'.

Teaching Activity

Professor, *Python Lab: advanced in Statistics for Finance*, Master of finance: instrument, market and sustainability, Università Cattolica del Sacro Cuore (Milan).

Professor, *The Spatial Econometrics Advanced Institute summer school (editions: XII, XIII, XIV)*, Rome.

Teaching Assistant, *Mathematics and statistical methods for engineering*, bachelor of Environmental Engineering, Università dell'Insubria (Varese) .

Teaching Assistant, *Statistics* , master of finance, Università della Svizzera Italiana (Lugano).

Teaching Assistant, *Elementi di Statistica*, bachelor of communication, Università della Svizzera Italiana (Lugano).

Teaching Assistant, *Advanced Statistics* , master of finance, Università della Svizzera Italiana (Lugano).

Teaching Assistant, *Probability and Statistics for informatics* , bachelor of Informatics Engineering, Politecnico di Milano (Milan).

Computer skills

Basic	C++, SAP, AutoCAD
Intermediate	Julia, PYTHON, Matlab
Advanced	R, L ^A T _E X, Office tools

Languages

Italian	Mothertongue
English	Proficient (C)
Spanish	Intermediate (B)
Portuguese	Basic (A)