

Paola Zuccolotto

RESEARCH ACTIVITY

- Methodological and empirical aspects of data mining and data analysis. From a methodological point of view, I am interested to algorithmic techniques such as decision trees and learning ensembles, with special attention the problem of variable selection, for which I have developed some innovative proposals that have been implemented by the developers of a well-known R package for ensemble learning. In addition, I have proposed some novel techniques for missing data treatment in Principal Component Analysis and two new models for rating data coming from surveys about human perceptions. From an empirical point of view, I have been concerned with several case studies in the framework of perceptions measurement, quality evaluation, prediction and risk factors identification within different contexts (medicine, genetics, job, marketing, sensory analysis). At the moment, the main application context is sports analytics, for which I have published a book and developed a R package.
- Time series analysis, with special attention to financial data. In this framework I carried out researches on vector time series, models for the volatility of financial data, models for changes in regime and I have proposed an innovative model for ultra-high-frequency data. At the moment I am extending data mining techniques to econometrics, with a special link to the theory of copula functions from the perspective of investment risk management and I have proposed a new time series clustering method.

I published more than 60 peer-reviewed papers on national and international journals and books, two books and more than 30 working papers and conference proceedings (Google Scholar: https://scholar.google.com/citations?hl=it&user=9T9kmfcAAAAJ). I participated to more than 50 international conferences, as keynote speaker, invited speaker, contributed speaker or invited discussant. I am and have been involved in several research projects, granted by national (PRIN), international (European Union) and local (Fondazione Cariplo) funds, as member or principal investigator.

MAIN PROFESSIONAL POSITIONS

- Full Professor of Statistics at the Department of Economics and Management of the University of Brescia (since 2018).
- Main lecturer of Statistics, Statistics for Marketing, Business Statistics, Data Analysis, Neural Networks (University of Brescia), tutor of more than 100 bachelor and master degree theses
- Member of the Doctoral Advisory Committee for the PhD project "Computer intensive Statistical Methods" of Hans Van Eetvelde, Doctoral Schools of Ghent University, Belgium (since 2018).
- Member of the Committee of the PhD "Analytics for Economics and Management" of the University of Brescia (since 2017) and Internationalization Lead of the PhD (since 2021).
- Member of the Committee of the PhD "Analytics for Economics and Business" of the Universities of Bergamo-Brescia (2013-2017)
- Member of the Committee of the PhD "Methodological and Applied Statistics" of the University of Milano-Bicocca (2005-2013)
- Previously Associate Professor (2005-2018) and Assistant Professor (1999-2005) of Statistics at the Department of Quantitative Methods of the University of Brescia
- Director of the Big&Open Data Innovation Laboratory (BODal-Lab, bodai.unibs.it).
- Scientific coordinator, with Marica Manisera, of the international project BDsports (Big Data Analytics in sports, bdsports.unibs.it).
- Elected Member of the International Statistical Institute (ISI) and member of the SIG in Sports Statistics.
- · Member of Italian Statistical Society (SIS).
- Member of International Association for Statistical Computing (IASC).
- Associate Editor of Heliyon, section Sports Medicine, subsection Sports Statistics, Cell Press; PubMed, Scopus, Thomson Reuters WoS, Online ISSN: 2405-8440.
- Member of the Editorial Advisory Board of the Journal of Sports Sciences, Medline and Thomson Reuters WoS, ISSN: 0264-0414 (2017-2020).
- Member of the Editorial Committee of the scientific journal "Statistics & Applications".
- Guest Editor of Special Issues of Electronic Journal of Applied Statistics, Statistical Modelling, Metron, Computational Statistics.
- Reviewer for more than 30 scientific journals and for Springer, McGraw-Hill and CRC Press books.
- Involved in several activieties for the public dissemination of scientific research.



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MAIN PROJECTS

BODal-Lab (Big&Open Data Innovation Laboratory) bodai.unibs.it

BDsports (Big Data analytics in **sports**) bdsports.unibs.it

STUDY DEGREES

1995

Master of Science in Economics and Commerce (summa cum laude) *University of Verona* Italy

1998
Phd in Methodological Statistics *University of Trento*Italy