

CARLO CAVICCHIA

PERSONAL DATA

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CURRENT POSITION

Assistant Professor of Statistics

May 2020 - Present

Econometric Institute, Erasmus School of Economics, Erasmus Rotterdam University, Rotterdam

EDUCATION

Dutch University Teaching Qualification UTQ-BKO

January 2022 - (expected) June 2022

Risbo, Erasmus University Rotterdam, Rotterdam

Ph.D. in Statistics

November 2016 - February 2020

Department of Statistical Sciences, University of Rome La Sapienza, Rome

Thesis title: *Hierarchical latent variable models for dimensionality reduction: an application on composite indicators*; Supervisor: Prof. M. Vichi

MSc Degree in Statistics and Decision Science

November 2013 - January 2016

University of Rome La Sapienza, Rome

110/110 with honors

BSc Degree in Statistics

November 2009 - July 2013

University of Rome La Sapienza, Rome

105/110

RESEARCH AND TEACHING INTERESTS

Hierarchical Models

Non-parametric Statistics

Data Science

Latent Variable Models

Composite Indicators

Unsupervised Classification

RESEARCH EXPERIENCES

Research visit

November 2019 – December 2019

Econometric Institute, Erasmus School of Economics, Erasmus Rotterdam University, Rotterdam

Supervisor: Prof. P.J.F. Groenen

Research fellowship

May 2019 – April 2020

Department of Law and Economics, University of Rome UnitelmaSapienza, Rome

Supervisor: Prof. P. Sarnacchiaro

Researcher on a project

March 2016 – November 2018

Department of Statistical Sciences, University of Rome La Sapienza, Rome

Title: *Development of a procedure to detect and manage outliers for big data*

Supervisor: Prof. M. Vichi and ENEA

Researcher on a project

March 2016 – January 2017

Department of Statistical Sciences, University of Rome La Sapienza, Rome

Title: *Construction of a hierarchical non-negative and disjoint composite indicator for a set of quantitative variables*

Supervisor: Prof. M. Vichi

AWARDS AND GRANTS

Research Grant for Junior Researchers

August 2017

University of Rome La Sapienza, Rome

Best report of Stats under the stars³

June 2017

Italian Statistical Society (SIS)

FEATURED PUBLICATIONS

Cavicchia, C., M. Vichi, and G. Zaccaria: *Gaussian Mixture Model with an extended ultrametric covariance structure*. In: *Advances in Data Analysis and Classification* (2022). DOI: [10.1007/s11634-021-00488-x](https://doi.org/10.1007/s11634-021-00488-x).

Cavicchia, C. and M. Vichi: *Second-order disjoint factor analysis*. In: *Psychometrika* 87.1 (2022), pp. 289–309. DOI: [10.1007/s11336-021-09799-6](https://doi.org/10.1007/s11336-021-09799-6).

Cavicchia, C. and P. Sarnacchiaro: *A multi-group higher-order factor analysis for studying the gender-effect in teacher job satisfaction*. In: *METRON* 80.1 (2022), pp. 23–38. DOI: [10.1007/s40300-021-00204-x](https://doi.org/10.1007/s40300-021-00204-x).

Cavicchia, C. and P. Sarnacchiaro: *The effect of a new e-tivity on students' performance and satisfaction in an online course*. In: *Statistica Applicata - Italian Journal of Applied Statistics* 33.2 (2021), pp. 163–175. DOI: [10.26398/IJAS.0033-009](https://doi.org/10.26398/IJAS.0033-009).

Cavicchia, C., P. Sarnacchiaro, and M. Vichi: *A composite indicator for the waste management in the EU via hierarchical disjoint non-negative factor analysis*. In: *Socio-Economic Planning Sciences* 73 (2021), p. 100832. DOI: [10.1016/j.seps.2020.100832](https://doi.org/10.1016/j.seps.2020.100832).

Cavicchia, C. and M. Vichi: *Statistical model-based composite indicators for tracking coherent policy conclusions*. In: *Social Indicators Research* 156.2 (2021), pp. 449–479. DOI: [10.1007/s11205-020-02318-7](https://doi.org/10.1007/s11205-020-02318-7).

Cavicchia, C., M. Vichi, and G. Zaccaria: *The ultrametric correlation matrix for modelling hierarchical latent concepts*. In: *Advances in Data Analysis and Classification* 14.4 (2020), pp. 837–853. DOI: [10.1007/s11634-020-00400-z](https://doi.org/10.1007/s11634-020-00400-z).

INVITED TALKS AND SEMINARS

IFCS 2022 - 17th Conference of the International Federation of Classification Societies
July 2022

Porto, Portugal

Invited Session

EcoSta 2022 - 5th International Conference on Econometrics and Statistics *June 2022*

Virtual conference

Invited Session

Seminar series “Introduction to Statistics” *February 2022*

Hospitality Management - Federico II University of Naples

Invited Seminar Series

ISI 2021 - 63rd International Statistical Institute World Statistics Congress “Statistics and Data Science for a Better World” *July 2021*

Virtual conference

Invited Session

EconJobMarket *December 2019*

Erasmus University Rotterdam - Econometric Institute, Rotterdam

Invited Seminar

ASA 2019 Scientific Conference on Statistics for Health and Well-Being *September 2019*

University of Brescia, Brescia

Invited Session

12nd Scientific Meeting of Classification and Data Analysis Group*September 2019*

Folcara Campus of the University of Cassino and Southern Lazio, Cassino

Invited Session

49th Scientific meeting of the Italian Statistical Society*June 2018*

University of Palermo, Palermo

Invited Session

Workshop: Selection and Synthesis of Indicators for Sustainable Development Goals: Methodologies and Applications*October 2017*

University of Rome La Sapienza, Rome

Invited Session

TEACHING

Lecturer*2022 - Present*

Econometric Institute, Erasmus University Rotterdam, Rotterdam

Seminar Case Studies in Business Analytics and Quantitative Marketing

Lecturer*2022 - Present*

Department of Law and Economics, University of Rome UnitelmaSapienza, Rome

Multivariate Statistics, *I level master: "Analysis and modelling of data and processes: methods and models"***Lecturer***2021*

Econometric Institute, Erasmus University Rotterdam, Rotterdam

Seminar in Business Analytics and Quantitative Marketing

Lecturer*2020 - Present*

Econometric Institute, Erasmus University Rotterdam, Rotterdam

Seminar Data Science for Marketing Analytics

Lecturer*2020 - 2021*

Department of Law and Economics, University of Rome UnitelmaSapienza, Rome

Statistical Methods for Composite Indicators Construction, *II level master: "Quantitative methods and models for decision support"***Lecturer***2020 - 2021*

Department of Law and Economics, University of Rome UnitelmaSapienza, Rome

R Lab - Statistics, *II level master: "Quantitative methods and models for decision support"***Teaching assistant***2020*

Department of Business and Management, LUISS, Rome

Statistics (Prof. M. Perone Pacifico)

Lecturer*2020 - 2022*

Department of Management and Law, Tor Vergata University of Rome, Rome

Applied multivariate analysis with SAS

Subject Expert and Teaching Assistant*2019 - Present*

Department of Law and Economics, University of Rome UnitelmaSapienza, Rome

Statistics

Teaching assistant*2019 - 2020*

School of Economics, Tor Vergata University of Rome, Rome

Statistics (Dr. M. Ranalli), *Master of Science in Development Economics and International Cooperation***Student Assistant***2019 - 2020*

Department of Law and Economics, University of Rome UnitelmaSapienza, Rome

Statistics and maths

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| Lecturer | 2019 |
| School of Economics, Tor Vergata University of Rome, Rome Statistics, <i>Master of Science in European Economy and Business Law</i> | |
| Teaching assistant | 2018 - 2020 |
| Department of Medicine, University of Rome La Sapienza, Rome Statistics (Prof. M. Vichi) | |
| Teaching assistant | 2017 - 2018 |
| Department of Political Sciences, Roma Tre University of Rome, Rome Statistics (Prof. F. Lagona and Dr. M. Ranalli) | |
| Teaching assistant | 2016 - 2020 |
| Department of Statistical Sciences, University of Rome La Sapienza, Rome Advances in Data Analysis and Statistical Modelling (Prof. M. Vichi) | |
| Teaching assistant | 2016 - 2020 |
| Department of Statistical Sciences, University of Rome La Sapienza, Rome Multivariate Statistics (Prof. M. Vichi) | |

ACADEMIC AND EDITORIAL SERVICES

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| Member of the scientific programme committee of CLADAG 2023 | 2023 |
| Organizer of an invited session of CMStatistics 2022 | 2022 |
| Organizer of an invited session of ECDA 2022 | 2022 |
| Co-editor of "Book of Short Papers of SIS 2022" | 2022 |
| National coordinator of y-SIS | 2022 |
| Member of the scientific programme committee of SIS 2022 | 2022 |
| Member of the scientific programme committee of IES 2022 | 2022 |
| Member of the national board of y-SIS | 2021 - 2022 |
| Member of the organizing committee of DSSV-ECDA 2021 | 2021 |
| Member of the organizing committee of DSSV 2020 | 2020 |
| Member of the admission committee of II level master: "Quantitative methods and models for decision support", University of Rome UnitelmaSapienza | 2020 |
| Organizer of an invited session of SIS 2020 | 2020 |
| Reviewer for a number of scientific journals in Statistics: | 2018 - Present |
| Journal of Data Science, Statistics and Visualisation; PLOS ONE; Annals of Operations Research; Computational Statistics; METRON; SN Business & Economics; Journal of Statistical Computation and Simulation; Advances in Data Analysis and Classification | |

WORK EXPERIENCES

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| Consultant as Lead Statistician | October - December 2019 |
| Project: <i>Survey in Zanzibar on community socio-economic conditions</i> , ARS Progetti S.P.A., Rome | |
| Consultant as Supervisor | July - October 2019 |
| Project: <i>Survey in Zanzibar on environmental cleanliness, public service perception and tourism competitiveness</i> , NGO Fondazione ACRA, Rome | |
| Consultant as Lead Statistician | June - August 2018 |
| Project: <i>Survey within the framework of the "Consultancy Services to support community engagement and awareness within the Urban Municipal Council"</i> , NGO Fondazione ACRA, Zanzibar, Tanzania | |

LANGUAGES

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| Italian | Native language |
| English | Speaking: C1 Writing: C2 |

EXTRA-CURRICULAR

- President and Co-Founder “ASD Valcanneto Futsal” (Cerveteri, 2018 - 2021)
- Attended the 1st International Summer School on Classification and Data Analysis (Rimini, 2017)
- Attended a Erasmus semester at University College of Dublin (Dublin, 2012)