

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 - 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

Vichi, M., C. Cavicchia, and P.J.F. Groenen: *Hierarchical Means Clustering*. In: *Journal of Classification* (2022). DOI: [10.1007/s00357-022-09419-7](https://doi.org/10.1007/s00357-022-09419-7).

Cavicchia, C., M. Vichi, and G. Zaccaria: *Hierarchical Disjoint Principal Component Analysis*. In: *Advances in Statistical Analysis* (2022). DOI: [10.1007/s10182-022-00458-4](https://doi.org/10.1007/s10182-022-00458-4).

Cavicchia, C., M. Vichi, and G. Zaccaria: *Gaussian Mixture Model with an extended ultrametric covariance structure*. In: *Advances in Data Analysis and Classification* 16.2 (2022), pp. 399–427. 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

ISI 2023 - 64th International Statistical Institute World Statistics Congress July 2023
Ottawa, Canada

CMStatistics 2022 - 15th International Conference of the ERCIM WG on Computational and Methodological Statistics December 2022
London, UK (Virtual)

IFCS 2022 - 17th Conference of the IFCS July 2022
Porto, Portugal

EcoSta 2022 - 5th International Conference on Econometrics and Statistics June 2022
Kyoto, Japan (Virtual)

Seminar series “Introduction to Statistics” February 2022
Hospitality Management - Federico II University of Naples (Virtual)

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

EconJobMarket December 2019
Rotterdam, Netherlands

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| ASA 2019 Scientific Conference on Statistics for Health and Well-Being Brescia, Italy | <i>September 2019</i> |
| 12th Scientific Meeting of Classification and Data Analysis Group Cassino, Italy | <i>September 2019</i> |
| 49th Scientific meeting of the Italian Statistical Society Palermo, Italy | <i>June 2018</i> |
| Workshop: Selection and Synthesis of Indicators for Sustainable Development Goals: Methodologies and Applications Rome, Italy | <i>October 2017</i> |

SUPERVISION

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| MSc theses – as second reader – (2) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Econometrics and Management Science, Quantitative Finance | <i>2022 - Present</i> |
| MSc theses (2) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Econometrics and Management Science, Econometrics | <i>2021 - Present</i> |
| MSc theses (5) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Econometrics and Management Science, Business Analytics and Quantitative Marketing | <i>2021 - Present</i> |
| MSc theses (6) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Economics and Business, Data Science and Marketing Analytics | <i>2021 - Present</i> |
| MSc theses – as second reader – (2) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Econometrics and Management Science, Business Analytics and Quantitative Marketing | <i>2021 - Present</i> |
| MSc theses – as second reader – (5) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Economics and Business, Data Science and Marketing Analytics | <i>2021 - Present</i> |
| BSc theses (19) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Econometrics and Operational Research | <i>2020 - Present</i> |
| BSc theses – as second reader – (19) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Econometrics and Operational Research | <i>2020 - Present</i> |

TEACHING AS COORDINATOR OR LECTURER

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| Applied Statistics 2 Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Economics and Business Economics | <i>2022 - Present</i> |
| Toegepaste Statistiek 2 Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Economics and Business Economics | <i>2022 - Present</i> |
| Seminar Case Studies in Business Analytics and Quantitative Marketing Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Econometrics and Management Science, Business Analytics and Quantitative Marketing | <i>2022</i> |
| Multivariate Statistics Department of Law and Economics, University of Rome UnitelmaSapienza, Rome I level master: “Analysis and modelling of data and processes: methods and models” | <i>2022</i> |

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| Seminar in Business Analytics and Quantitative Marketing | 2021 |
| Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam | |
| BSc Econometrics and Operational Research | |
| Seminar Data Science for Marketing Analytics | 2020 - 2022 |
| Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam | |
| MSc Economics and Business, Data Science and Marketing Analytics | |
| Statistical Methods for Composite Indicators Construction | 2020 - 2021 |
| Department of Law and Economics, University of Rome UnitelmaSapienza, Rome | |
| II level master: “Quantitative methods and models for decision support” | |
| R Lab - Statistics | 2020 - 2021 |
| Department of Law and Economics, University of Rome UnitelmaSapienza, Rome | |
| II level master: “Quantitative methods and models for decision support” | |
| Statistics | 2019 |
| School of Economics, Tor Vergata University of Rome, Rome | |
| Master of Science in European Economy and Business Law | |

ACADEMIC AND EDITORIAL SERVICES

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| Member of the scientific programme committee of CLADAG 2023 | 2023 |
| Member of the scientific programme committee of IES 2023 | 2023 |
| Organizer of an invited session of CMStatistics 2022 | 2022 |
| Co-organizer for the Econometrics internal seminars at Econometric Institute, Erasmus University Rotterdam | 2022 - Present |
| Organizer of an invited session of ECDA 2022 | 2022 |
| Member of the scientific programme committee of HackTheGene 2022 | 2022 |
| Co-guest-editor of a special issue of METRON | 2022 |
| Member of the committee of the prize “Premio TStat Training” | 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 |
| – in alphabetic order – Advances in Data Analysis and Classification; Annals of Operations Research; BMC Psychology; Computational Statistics; Journal of Data Science, Statistics and Visualisation; Journal of Statistical Computation and Simulation; METRON; PLOS ONE; SAGE Open; SN Business & Economics | |

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

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)