

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

Cavicchia, C., M. Vichi, and G. Zaccaria: *Hierarchical Disjoint Principal Component Analysis*. In: *Advances in Statistical Analysis* (2022). Accepted.

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

ASA 2019 Scientific Conference on Statistics for Health and Well-Being September 2019
Brescia, Italy

12nd 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

MSc theses (8) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Econometrics and Management Science, Business Analytics and Quantitative Marketing	<i>2020 - Present</i>
MSc theses (6) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Economics and Business, Data Science and Marketing Analytics	<i>2020 - Present</i>
BSc theses (19) Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Econometrics and Operational Research	<i>2020 - Present</i>

TEACHING AS COORDINATOR OR LECTURER

Applied Statistics 2 Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Economics and Business Economics	<i>2022 - Present</i>
Toegepast 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>
Seminar in Business Analytics and Quantitative Marketing Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam BSc Econometrics and Operational Research	<i>2021</i>
Seminar Data Science for Marketing Analytics Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam MSc Economics and Business, Data Science and Marketing Analytics	<i>2020 - 2022</i>
Statistical Methods for Composite Indicators Construction Department of Law and Economics, University of Rome UnitelmaSapienza, Rome II level master: "Quantitative methods and models for decision support"	<i>2020 - 2021</i>
R Lab - Statistics Department of Law and Economics, University of Rome UnitelmaSapienza, Rome II level master: "Quantitative methods and models for decision support"	<i>2020 - 2021</i>
Statistics School of Economics, Tor Vergata University of Rome, Rome Master of Science in European Economy and Business Law	<i>2019</i>

ACADEMIC AND EDITORIAL SERVICES

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
Member of the scientific programme committee of HackTheGene 2022	2022
Co-guest-editor of a special issue of METRON	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; 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

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)