

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

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. Maurizio 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

Multivariate Statistics

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

GRANTS AND AWARDS

Research Grant for Junior Researcher

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* (2021, forthcoming).

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* (2021, forthcoming).

Cavicchia, C. and M. Vichi: *Second-order disjoint factor analysis*. In: *Psychometrika* (2021). 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: *METRION* (2021). DOI: [10.1007/s40300-021-00204-x](https://doi.org/10.1007/s40300-021-00204-x).

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 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>I level master: "Analysis and modelling of data and processes: methods and models"</i>	
Lecturer	2021
Econometric Institute, Erasmus University Rotterdam, Rotterdam	
Seminar in Business Analytics and Quantitative Marketing	
Lecturer	2021
Department of Management and Law, Tor Vergata University of Rome, Rome	
Applied multivariate analysis with SAS	
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, <i>II level master: "Quantitative methods and models for decision support"</i>	
Lecturer	2020 - 2021
Department of Law and Economics, University of Rome UnitelmaSapienza, Rome	
R Lab - Statistics, <i>II level master: "Quantitative methods and models for decision support"</i>	
Teaching assistant	2020
Department of Business and Management, LUISS, Rome	
Statistics (Prof. M. Perone Pacifico)	
Teaching assistant	2020
Department of Management and Law, Tor Vergata University of Rome, Rome	
SAS Lab - Business Statistics (Prof. S. Borra)	
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), <i>Master of Science in Development Economics and International Cooperation</i>	
Student Assistant	2019 - 2020
Department of Law and Economics, University of Rome UnitelmaSapienza, Rome	
Statistics and maths	
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

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 local organizing committee of DSSV-ECDA 2021	2021
Member of the national board of y-SIS	2021 - Present
Member of the local 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

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)

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