

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

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 Econometric Institute, Erasmus University Rotterdam, Rotterdam Seminar in Business Analytics and Quantitative Marketing	<i>2021 - Present</i>
Lecturer Department of Management and Law, Tor Vergata University of Rome, Rome Applied multivariate analysis with SAS	<i>2021</i>
Lecturer Econometric Institute, Erasmus University Rotterdam, Rotterdam Seminar Data Science for Marketing Analytics	<i>2020 - Present</i>
Lecturer 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>	<i>2020 - 2021</i>
Lecturer 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>	<i>2020 - 2021</i>
Teaching assistant Department of Business and Management, LUISS, Rome Statistics (Prof. M. Perone Pacifico)	<i>2020</i>
Teaching assistant Department of Management and Law, Tor Vergata University of Rome, Rome SAS Lab - Business Statistics (Prof. S. Borra)	<i>2020</i>
Subject Expert and Teaching Assistant Department of Law and Economics, University of Rome UnitelmaSapienza, Rome Statistics	<i>2019 - Present</i>
Teaching assistant School of Economics, Tor Vergata University of Rome, Rome Statistics (Dr. M. Ranalli), <i>Master of Science in Development Economics and International Cooperation</i>	<i>2019 - 2020</i>
Student Assistant Department of Law and Economics, University of Rome UnitelmaSapienza, Rome Statistics and maths	<i>2019 - 2020</i>
Lecturer School of Economics, Tor Vergata University of Rome, Rome Statistics, <i>Master of Science in European Economy and Business Law</i>	<i>2019</i>
Teaching assistant Department of Medicine, University of Rome La Sapienza, Rome Statistics (Prof. M. Vichi)	<i>2018 - 2020</i>
Teaching assistant Department of Political Sciences, Roma Tre University of Rome, Rome Statistics (Prof. F. Lagona and Dr. M. Ranalli)	<i>2017 - 2018</i>
Teaching assistant Department of Statistical Sciences, University of Rome La Sapienza, Rome Advances in Data Analysis and Statistical Modelling (Prof. M. Vichi)	<i>2016 - 2020</i>
Teaching assistant Department of Statistical Sciences, University of Rome La Sapienza, Rome Multivariate Statistics (Prof. M. Vichi)	<i>2016 - 2020</i>

ACADEMIC AND EDITORIAL SERVICES

Member of the scientific programme committee of SIS 2022	<i>2022</i>
Member of the scientific programme committee of IES 2022	<i>2022</i>
Member of the local organizing committee of DSSV-ECDA 2021	<i>2021</i>
Chair of y-SIS	<i>2021 - Present</i>

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