

CARLO CAVICCHIA

PERSONAL DATA

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CURRENT POSITION

Erasmus Rotterdam University, Rotterdam *May 2020 - Present*
Assistant Professor of Statistics
Econometric Institute, Erasmus School of Economics

EDUCATION

University of Rome La Sapienza, Rome *November 2016 - February 2020*
Ph.D. *Methodological Statistics - Scuola di Scienze Statistiche*
Department of Statistical Sciences
Thesis title: *Hierarchical latent variable models for dimensionality reduction: an application on composite indicators*; Supervisor: Prof. Maurizio Vichi
University of Rome La Sapienza, Rome *November 2013 - January 2016*
Master of Science Degree in Statistics and Decision Science *Final score: 110/110 cum laude*
University of Rome La Sapienza, Rome *November 2009 - July 2013*
Bachelor's Degree in Statistics *Final score: 105/110*

RESEARCH AND TEACHING INTERESTS

Multivariate Statistics	Non-parametric Statistics	Data Science
Latent Variable Models	Composite Indicators	Unsupervised Classification

GRANTS

University of Rome La Sapienza, Rome *August 2017*
Research Grant for Junior Researcher, Avvio alla ricerca
Stats under the stars³, Florence *June 2017*
Award in Italian Statistical Society (SIS) competition, Best report

RESEARCH EXPERIENCES

University of Rome UnitelmaSapienza, Rome *May 2019 – April 2020*
Research fellowship
Department of Law and Economics
Supervisor: Prof. P. Sarnacchiaro
University of Rome La Sapienza, Rome *March 2016 – November 2018*
Researcher on the project: *Development of a procedure to detect and manage outliers for big data*
Department of Statistical Sciences
Supervisor: Prof. M. Vichi and ENEA
University of Rome La Sapienza, Rome *March 2016 – January 2017*
Researcher on the project: *Construction of a hierarchical non-negative and disjoint composite indicator for a set of quantitative variables*
Department of Statistical Sciences
Supervisor: Prof. M. Vichi

RESEARCH VISITS

Erasmus Rotterdam University, Rotterdam
Econometric Institute, Erasmus School of Economics
Supervisor: Prof. P.J.F. Groenen

November 15 – December 17, 2019

PUBLICATIONS

Cavicchia, C. and P. Sarnacchiaro: *A multi-group higher-order factor analysis for studying the gender-effect in Teacher Job Satisfaction*. In: *METRON* (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). 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* (2020). DOI: [10.1007/s11205-020-02318-7](https://doi.org/10.1007/s11205-020-02318-7).

Cavicchia, C., M. Vichi, and G. Zaccaria: “Exploring Hierarchical Concepts: Theoretical and Application Comparisons”. In: *Advanced Studies in Behaviormetrics and Data Science: Essays in Honor of Akinori Okada*. Ed. by T. Imaizumi, A. Nakayama, and S. Yokoyama. Singapore: Springer Singapore, 2020, pp. 315–328. ISBN: 978-981-15-2700-5. DOI: [10.1007/978-981-15-2700-5_19](https://doi.org/10.1007/978-981-15-2700-5_19).

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).

Cavicchia, C., P. Sarnacchiaro, and M. Vichi: “A composite indicator via hierarchical disjoint factor analysis for measuring the Italian football teams’ performances”. In: *ASA Conference 2019. Statistics for Health and Well-being. Book of short papers*. 2019, pp. 65–68. https://iris.uniroma1.it/retrieve/handle/11573/1321345/1267423/Cavicchia_composite-indicator-football_2019.pdf.

Cavicchia, C., P. Sarnacchiaro, and M. Vichi: “Hierarchical Disjoint Non-Negative Factor Analysis: environment and waste management in the EU.” In: *Statistical methods for service quality evaluation. Book of short papers of IES 2019*. 2019, pp. 154–157. https://iris.uniroma1.it/retrieve/handle/11573/1302687/1220976/Cavicchia_hierarchical-factor-waste_2019.pdf.

Cavicchia, C., M. Vichi, and G. Zaccaria: “A new hierarchical model-based composite indicator on climate change.” In: *Statistical methods for service quality evaluation. Book of short papers of IES 2019*. 2019, pp. 346–349. https://iris.uniroma1.it/retrieve/handle/11573/1302650/1220871/Cavicchia_composite-indicator-climate_2019.pdf.

Cavicchia, C., M. Vichi, and G. Zaccaria: “Dimensionality reduction via hierarchical factorial structure.” In: *CLADAG 2019. Book of Short Papers*. 2019, pp. 116–119. https://iris.uniroma1.it/retrieve/handle/11573/1341564/1311963/Cavicchia_reduction-hierarchical-factorial_2019_articolo.pdf.

Cavicchia, C., M. Vichi, and G. Zaccaria: “Hierarchical clustering and dimensionality reduction for big data.” In: *Smart statistics for smart applications. Book of short paper SIS2019*. 2019, pp. 173–180. https://iris.uniroma1.it/retrieve/handle/11573/1292036/1186946/Cavicchia_Hierarchical-Clustering_2019.pdf.

INVITED PRESENTATIONS AND SEMINARS

EconJobMarket
Erasmus University Rotterdam - Econometric Institute
Invited Seminar

December 2019

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

Erasmus University Rotterdam, Rotterdam

2021 - Present

Econometric Institute

Lecturer

Seminar in Business Analytics and Quantitative Marketing

Università degli studi Roma Tor Vergata, Rome

2021

Department of Management and Law

Lecturer

Applied multivariate analysis with SAS

Erasmus University Rotterdam, Rotterdam

2020 - Present

Econometric Institute

Lecturer

Seminar Data Science for Marketing Analytics

University of Rome UnitelmaSapienza, Rome

2020 - 2021

Department of Law and Economics

Lecturer

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

University of Rome UnitelmaSapienza, Rome

2020 - 2021

Department of Law and Economics

Lecturer

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

University of Rome UnitelmaSapienza, Rome

2020 - 2021

Department of Law and Economics

Lecturer

Statistical Methods for Socio-Economic Analysis, *II level master: "Quantitative methods and models for decision support"*

Libera Università Internazionale degli Studi Sociali, Rome

2020

Department of Business and Management

Teaching assistant for Prof. M. Perone Pacifico

Statistics

Università degli studi Roma Tor Vergata, Rome

2020

Department of Management and Law

Teaching assistant for Prof. S. Borra

SAS Lab - Business Statistics

University of Rome UnitelmaSapienza, Rome

2019 - 2020

Department of Law and Economics

Subject Expert and Teaching Assistant ("Cultore della Materia")

Statistics
Università degli studi Roma Tor Vergata, Rome *2019 - 2020*
 School of Economics
 Teaching assistant for Dr. M. Ranalli
 Statistics, *Master of Science in Development Economics and International Cooperation*
University of Rome UnitelmaSapienza, Rome *2019 - 2020*
 Department of Law and Economics
 Student Tutor
 Statistics and maths
Università degli studi Roma Tor Vergata, Rome *2019*
 School of Economics
 Lecturer
 Statistics, *Master of Science in European Economy and Business Law*
University of Rome La Sapienza, Rome *2018 - 2020*
 Department of Medicine
 Teaching assistant for Prof. M. Vichi
 Statistics
Università degli studi Roma Tre, Rome *2017 - 2018*
 Department of Political Sciences
 Teaching assistant for Prof. F. Lagona and Dr. M. Ranalli
 Statistics
University of Rome La Sapienza, Rome *2016 - 2020*
 Department of Statistical Science
 Teaching assistant for Prof. M. Vichi
 Advances in Data Analysis and Statistical Modelling
University of Rome La Sapienza, Rome *2016 - 2020*
 Department of Statistical Science
 Teaching assistant for Prof. M. Vichi
 Multivariate Statistics

ACADEMIC SERVICES

DSSV-ECDA 2021: "Data Science Statistics and Visualisation and European Conference on Data Analysis" *2021*
 Local Organizing Committee Member
IES 2021: "Innovation and Society 5.0: Statistical and Economic Models and Techniques for Quality Assessment" *2021*
 Scientific Programme Committee Member
y-SIS: The young group of the Italian Statistical Society *2021 - Present*
 National Board Member
DSSV 2020: "Data Science, Statistics and Visualisation" *2020*
 Organizing Committee Member
II level master: "Quantitative methods and models for decision support" *2020*
 Admission Committee Member (*University of Rome UnitelmaSapienza*)
50th edition of the Scientific Meeting of the Italian Statistical Society *2020*
 Session Organizer: *Factorial and dimensional reduction methods for the construction of indicators for evaluation*

EDITORIAL SERVICES

Computational Statistics	<i>2021 - Present</i>
Reviewer	
METRON	<i>2020 - Present</i>
Reviewer	
SN Business & Economics	<i>2020 - Present</i>
Reviewer	
Journal of Statistical Computation and Simulation	<i>2019 - Present</i>
Reviewer	
Advances in Data Analysis and Classification	<i>2018 - Present</i>
Reviewer	

TECHNICAL STRENGTHS

Languages and Software	MATLAB, R, L ^A T _E X, MySQL, SAS, Java
Certifications	SAS Certified Predictive Modeller Using SAS Enterprise Miner 13 (SAS Institute, 2016)

WORK EXPERIENCES

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

LANGUAGES

Italian	Mother-tongue
English	Fluent

EXTRA-CURRICULAR

President and Co-Founder "[ASD Valcanneto Futsal](#)" - the futsal club of Valcanneto village (Cerveteri, 2018 - Present)

Attended the 1st International Summer School on Classification and Data Analysis at University of Bologna, Rimini Campus (Rimini, May 2017)

Attended a Erasmus semester at University College of Dublin (Dublin, January - May 2012)

In compliance with the GDPR and Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned Decree.