

# CARLO CAVICCHIA

## PERSONAL DATA

---

✉ cavicchia@ese.eur.nl   ◇   carlo.cavicchia@unitelmasapienza.it  
🌐 Institutional Page   ◇   Personal Page   ◇   Google Scholar   ◇   Research Gate   ◇   ORCID

## 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 stars<sup>3</sup>, 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

## RESEARCH VISITS

---

Erasmus Rotterdam University, Rotterdam

November 15 – December 17, 2019

Econometric Institute, Erasmus School of Economics

Supervisor: Prof. P.J.F. Groenen

## PUBLICATIONS

---

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* (2020). 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* (2020). 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](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](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](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](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](https://iris.uniroma1.it/retrieve/handle/11573/1292036/1186946/Cavicchia_Hierarchical-Clustering_2019.pdf).

## INVITED PRESENTATIONS AND SEMINARS

---

<b>EconJobMarket</b> Erasmus University Rotterdam - Econometric Institute Invited Seminar	<i>December 2019</i>
<b>ASA 2019 Scientific Conference on Statistics for Health and Well-Being</b> University of Brescia, Brescia Invited Session	<i>September 2019</i>
<b>12<sup>nd</sup> Scientific Meeting of Classification and Data Analysis Group</b> Folcara Campus of the University of Cassino and Southern Lazio, Cassino Invited Session	<i>September 2019</i>
<b>49<sup>th</sup> Scientific meeting of the Italian Statistical Society</b> University of Palermo, Palermo Invited Session	<i>June 2018</i>
<b>Workshop: Selection and Synthesis of Indicators for Sustainable Development Goals: Methodologies and Applications</b> University of Rome La Sapienza, Rome Invited Session	<i>October 2017</i>

## TEACHING

---

<b>Erasmus University Rotterdam, Rotterdam</b> Econometric Institute Lecturer Seminar Data Science for Marketing Analytics	<i>2020</i>
<b>University of Rome UnitelmaSapienza, Rome</b> Department of Law and Economics Lecturer R Lab - Statistics, <i>II level master: "Quantitative methods and models for decision support"</i>	<i>2020</i>
<b>University of Rome UnitelmaSapienza, Rome</b> Department of Law and Economics Lecturer Statistical Methods for Composite Indicators Construction, <i>II level master: "Quantitative methods and models for decision support"</i>	<i>2020</i>
<b>University of Rome UnitelmaSapienza, Rome</b> Department of Law and Economics Lecturer Statistical Methods for Socio-Economic Analysis, <i>II level master: "Quantitative methods and models for decision support"</i>	<i>2020</i>
<b>Libera Università Internazionale degli Studi Sociali, Rome</b> Department of Business and Management Teaching assistant for Prof. M. Perone Pacifico Statistics	<i>2020</i>
<b>Università degli studi Roma Tor Vergata, Rome</b> Department of Management and Law Teaching assistant for Prof. S. Borra SAS Lab - Business Statistics	<i>2020</i>
<b>University of Rome UnitelmaSapienza, Rome</b> Department of Law and Economics Subject Expert and Teaching Assistant ("Cultore della Materia") Statistics	<i>2019 - 2020</i>

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

## ACADEMIC SERVICES

---

<b>DSSV 2021: "Data Science, Statistics and Visualisation"</b>	<i>2021</i>
Local Organizing Committee member	
<b>IES 2021: "Innovation and Society 5.0: Statistical and Economic Models and Techniques for Quality Assessment"</b>	<i>2021</i>
Scientific Programme Committee Member	
<b>METRON</b>	<i>2020 - Present</i>
Reviewer	
<b>DSSV 2020: "Data Science, Statistics and Visualisation"</b>	<i>2020</i>
Organizing Member	
<b>II level master: "Quantitative methods and models for decision support"</b>	<i>2020</i>
Admission Committee Member ( <i>University of Rome UnitelmaSapienza</i> )	
<b>50<sup>th</sup> edition of the Scientific Meeting of the Italian Statistical Society</b>	<i>2020</i>
Session Organizer: <i>Factorial and dimensional reduction methods for the construction of indicators for evaluation</i>	
<b>Journal of Statistical Computation and Simulation</b>	<i>2019 - Present</i>
Reviewer	
<b>Advances in Data Analysis and Classification</b>	<i>2018 - Present</i>
Reviewer	

## TECHNICAL STRENGTHS

---

### Languages and Software Certifications

MATLAB, R, L<sup>A</sup>T<sub>E</sub>X, MySQL, SAS, Java  
SAS Certified Predictive Modeller Using SAS Enterprise Miner 13  
(SAS Institute, 2016)

## WORK EXPERIENCES

---

### ARS Progetti S.P.A., Rome

*October - December 2019*

Consultant as Lead Statistician

Project: *Survey in Zanzibar on community socio-economic conditions*

### NGO Fondazione ACRA, Rome

*July - October 2019*

Consultant as Supervisor

Project: *Survey in Zanzibar on environmental cleanliness, public service perception and tourism competitiveness*

### NGO Fondazione ACRA, Zanzibar, Tanzania

*June - August 2018*

Consultant as Lead Statistician

Project: *Survey within the framework of the "Consultancy Services to support community engagement and awareness within the Urban Municipal Council"*

## LANGUAGES

---

**Italian**      Mother-tongue

**English**     Fluent

## EXTRA-CIRRICULAR

---

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

Attended the 1<sup>st</sup> 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.