

FRANCESCA MARTELLA

Curriculum Vitae

General Information

Full Name	Francesca Martella
Date of Birth	22/10/1979
Place of Birth	Rome
Citizenship	Italiana
E-mail	francesca.martella@uniroma1.it
Spoken Languages	English, Spanish, basic French

Education

Type	Year	Institution	Notes
PhD Degree in Statistica Metodologica	2003-2007	Dipartimento di Statistica, Probabilità e Statistiche Applicate, Sapienza Università di Roma	Supervisor: Prof. M. Vichi. Thesis title: Model-based double clustering for high dimensional data
University graduation in STATISTICA	1998-2003	Dipartimento di Statistica, Probabilità e Statistiche Applicate, Sapienza Università di Roma	Supervisor: Prof. R. Coppi. Thesis title: Model-based approach to clustering Microarray Data. GPA: 110/110 summa cum laude
High School Degree	1998	Liceo Scientifico G. Piazzi, Morlupo, (Rome)	

Attended Courses and Schools

Since 2001, I have attended numerous advanced courses and summer schools, including the following major ones: SAS (CASPUR, taught by M. Scarnò and E. Ferraro); Fractional Differential Calculus (Department of Statistics, Probability and Applied Statistics, Sapienza University of Rome, taught by Prof. E. Orsingher); Applied Bayesian Statistics School (Trento, taught by Prof. M. West, Duke University); Fractional Processes and Motions on Fractals (Department of Statistics, Probability and Applied Statistics, Sapienza University of Rome, taught by Prof. E. Orsingher); Asymptotic Theory (Department of Statistics, Probability and Applied Statistics, Sapienza University of Rome, taught by Prof. P. Conti); Multivariate Analysis with Fewer Observations than Dimensions (University of Milano-Bicocca); Genetic Association Analysis (postdoctoral course: *Platform Integrated Data Analysis in Epidemiology and Bioinformatics*, University Medical Centre, Leiden, The Netherlands).

Appointments

Academic Appointments

Start	End	Institution	Position
2019	now	Dipartimento di Scienze Statistiche, Facoltà di Ingegneria dell'Informazione,	Associate Professor (Ricercatore Universitario confermato, settore

		Informatica e Statistica. Sapienza Università di Roma	scientifico disciplinare SECS-S/01)
2015	2019	Dipartimento di Scienze Statistiche, Facoltà di Ingegneria dell'Informazione, Informatica e Statistica. Sapienza Università di Roma	Senior Assistant Professor (Ricercatore Universitario confermato, settore scientifico disciplinare SECS-S/01)
2012	2015	Dipartimento di Scienze Statistiche, Facoltà di Ingegneria dell'Informazione, Informatica e Statistica. Sapienza Università di Roma	Assistant Professor (Ricercatore Universitario, settore scientifico disciplinare SECS-S/01)
2010	2012	Dipartimento di Scienze Statistiche, Facoltà di Ingegneria dell'Informazione, Informatica e Statistica. Sapienza Università di Roma	Assegnista di Ricerca. Supervisor: Prof. M. Vichi. Project title: Metodologia Statistica relativa alle tecniche di analisi esplorative e inferenziali
2008	2010	Department of Medical Statistics and Bioinformatics, Leiden University Medical Center, Leiden (The Netherlands)	Post-Doctoral position. Supervisor: Prof. J. Houwing-Duistermaat
2007	2008	Department Electrical Engineering (ESAT), Katholieke Universiteit Leuven, Leuven (Belgium)	Post-Doctoral position. Supervisor: Prof. Y. Moreau and Prof. J. Vermeesch

Other Appointments

Peer Review and Editorial Activities

- Referee for major international journals and conferences, including: Statistical Modelling, Statistics in Medicine, Statistics and Computing, Bioinformatics, BCM Bioinformatics, Advances in Data Analysis and Classification (ADAC), Journal of Classification, SMA, The International Journal of Biostatistics, Computational Statistics and Data Analysis, Journal of Applied Statistics, SIS, CLADAG, IFCS (2006 – present)
- Associate Editor, Metron, Springer (2024 – present)

Scientific and Academic Committees

- Member, Scientific Committee, PhD in SCUOLA DI SCIENZE STATISTICHE, Sapienza University of Rome (01/06/2017 – 2023)
- Member, Scientific Committee, Università degli Studi Europea di Roma. 28 Ciclo (3 years) PhD in Statistica Applicata. Coordinator: Prof. Bini Matilde (01/01/2012 – 01/01/2015)
- Member, State Examination – Statistics Profession, I and II session 2012 (20–22 Nov 2012)
- President, TOLC-E Entrance Test Commission (05/09/2018)
- Expert, Final Examination for Initial Teacher Training Courses (Class A47), LUMSA, Rome, 3–12 June 2024
- Member, PhD Admission Examination Committee, 40th Cycle, PhD in Statistical Sciences – Methodological Statistics curriculum, Sapienza University of Rome (8–12 July 2024)

Thesis Supervision and Examination

- Thesis advisor and co-advisor for multiple Bachelor's and Master's theses, Department of Statistical Sciences, Sapienza University of Rome
- External examiner, Master's thesis: *Clustering methods for fraud detection: a comparison*, University of Bergen, Norway (Feb 2021)
- First Opponent, PhD thesis evaluation: *Efficient optimization for Hidden Markov Models using Template Mode*, Department of Mathematics, Faculty of Mathematics and Natural Sciences, University of Bergen, Norway (31/10/2023 – 02/11/2023)

Research Evaluation and PRIN Projects

- Member, Technical-Scientific Committee (CTS) for evaluating PRIN 2022 and PRIN 2022 PNRR reports (2022 – present)

Departmental Leadership

- Head, Orientation Commission, MSc Statistical Sciences, Sapienza University of Rome (2016 – 2023)
- Head, Placement Commission, MSc Statistical Sciences, Sapienza University of Rome (2022 – present)

Data Protection

- Appointed Data Protection Officer under Articles 29 and 32 of EU GDPR 679/2016, Sapienza University of Rome (26/11/2024 - today)

Organizational Activities

Conference and Meeting Organization

- President, Local Organizing Committee, *The Joint Meeting SIS-FENStatS 2026*, Sapienza University of Rome, 22–25 June 2026
- Member, Scientific Committee, *The Joint Meeting SIS-FENStatS 2026*
- Member, Organizing Committee:
 - Conference of European Statistics Stakeholders, Rome, 24–25 Nov 2014
 - 46th Scientific Meeting, Italian Statistical Society, Rome, 20–22 June 2012
 - COMPSTAT2006, 17th Conference of the International Association for Statistical Computing, Rome, 28 Aug – 1 Sep 2006

Academic Program Management

- Person in charge of the Cyclical Review Report 2023. Master’s Degree Programme in Scienze Statistiche. Degree Class: LM-82. Department of Statistical Sciences, Facoltà: Ingegneria dell’Informazione, Informatica e Statistica. Sapienza (17/05/2023)
- Person in charge of the Annual Monitoring Sheet. Degree Programme: Scienze Statistiche. Degree Class: LM-82. Department of Statistical Sciences, Facoltà: Ingegneria dell’Informazione, Informatica e Statistica. Sapienza (2022 – present)
- Person in charge of the Cyclical Review Report 2025. Master’s Degree Programme in *Statistical Sciences*. Degree Class: LM-82. Department of Statistical Sciences, Facoltà: Ingegneria dell’Informazione, Informatica e Statistica. Sapienza
- Member of the editorial board for the Monitoring and Reporting of the 2023–2025 Three-Year Strategic Plan (Department of Statistical Sciences, Facoltà: Ingegneria dell’Informazione, Informatica e Statistica. Sapienza)

Public Service

- City Councillor, Comune di Fiano Romano (Oct 2021 – Dec 2024), delegations: Culture and Equal Opportunities

Teaching experience

Instructor	Institution	Lecture/Course
2025/2026	Facoltà di Ingegneria dell’Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Modelli statistici corso avanzato (9CFU, 72h) Corso di Laurea magistrale in Scienze Statistiche.
2025/2026	Facoltà di Ingegneria dell’Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2024/2025	Facoltà di Ingegneria dell’Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Modelli statistici corso avanzato (9CFU, 72h) Corso di Laurea magistrale in Scienze Statistiche.
2024/2025	Facoltà di Ingegneria dell’Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2023/2024	Facoltà di Ingegneria	Prof. of the Course entitled Metodi statistici per

	dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2022/2023	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2021/2022	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Modelli statistici corso avanzato (9CFU, 72h) Corso di Laurea magistrale in Scienze Statistiche.
2021/2022	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2020/2021	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Finite Mixture Models - II (8h) PhD Students.
2020/2021	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Modelli statistici corso avanzato (9CFU, 72h) Corso di Laurea magistrale in Scienze Statistiche.
2020/2021	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2019/2020	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Modelli statistici corso avanzato (9CFU, 72h) Corso di Laurea magistrale in Scienze Statistiche.
2019/2020	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2018/2019	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodi statistici per la genetica (6CFU, 48h) Corso di Laurea magistrale in Scienze Statistiche.
2018/2019	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled Metodologia statistica avanzata (9CFU, 72h) Corso di Laurea magistrale in Statistical methods and applications.
2017/2018	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled <i>Analysis of complex data structures</i> (6CFU, 48h) Corso di Laurea in Statistica Gestionale.
2016/2017	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled <i>Analysis of complex data structures</i> (6CFU, 48h) Corso di Laurea in Statistica Gestionale.
2014/2015	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled <i>Analysis of complex data structures</i> (6CFU, 48h) Corso di Laurea in Statistica Gestionale.
2012/2013	Facoltà di Ingegneria dell'Informazione, Informatica e Statistica, Sapienza Università di Roma	Prof. of the Course entitled <i>Analisi delle strutture complesse</i> (9CFU, 72h) Corso di Laurea in Statistica Gestionale.

Teaching Assistant

Year	Institution	Lecture/Course
2011/2012	Facoltà di Scienze Politiche, Università degli Studi Roma Tre	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica</i> given by Prof. F. Lagona.
2011/2012	Dipartimento di Scienze Statistiche,	Didactic Activity (exercises, exam committee

	Sapienza Università di Roma	member) of the course entitled <i>Inferenza Statistica</i> given by Prof. Vichi.
2011/2012	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 1</i> given by Prof. Vichi.
2011/2012	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 2</i> given by Prof. Vichi.
2010/2011	Facoltà di Scienze Politiche, Università degli Studi Roma Tre	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica</i> given by Prof. F. Lagona.
2010/2011	Dipartimento di Scienze Statistiche, Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Metodi statistici per la genetica</i> given Prof. L. Tardella. Topics: "I metodi di classificazione non supervisionata".
2010/2011	Dipartimento di Scienze Statistiche, Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Inferenza Statistica</i> given by Prof. Vichi.
2010/2011	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 1</i> given by Prof. Vichi.
2010/2011	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 2</i> given by Prof. Vichi.
2009/2010	Dipartimento di Scienze Statistiche, Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Inferenza Statistica</i> given by Prof. Vichi.
2009/2010	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 1</i> given by Prof. Vichi.
2009/2010	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 2</i> given by Prof. Vichi.
2009/2010	Facoltà di Scienze Politiche, Università degli Studi Roma Tre	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica</i> given by Prof. F. Lagona.
2006/2007	Dipartimento di Scienze Statistiche, Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Inferenza Statistica</i> given by Prof. Vichi.
2006/2007	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 1</i> given by Prof. Vichi.
2006/2007	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 2</i> given by Prof. Vichi.
2005/2006	Dipartimento di Scienze Statistiche, Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Inferenza Statistica</i> given by Prof. Vichi.
2005/2006	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 1</i> given by Prof. Vichi.

2005/2006	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 2</i> given by Prof. Vichi.
2004/2005	Dipartimento di Scienze Statistiche, Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Inferenza Statistica</i> given by Prof. Vichi.
2004/2005	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 1</i> given by Prof. Vichi.
2004/2005	Facoltà di Medicina e Chirurgia Sapienza Università di Roma	Didactic Activity (exercises, exam committee member) of the course entitled <i>Statistica Medica 2</i> given by Prof. Vichi.

Teaching in foreign Universities

Year	Institution	Lecture/Course
2023/2024	University of Bergen	Prof. of the Course entitled An introduction to Finite Mixture Models (2.5, 16h) PhD student course.
2008/2009	Leiden University (The Netherlands)	Didactic Activity for master students in Biostatistics for Biomedical Science
2008/2009	Leiden University (The Netherlands)	Didactic Activity for PhD students about Analysis of Repeated Measurements

Society memberships, Awards and Honors

Year	Title
2017	Abilitazione Scientifica Nazionale for Associate Professor “settore concorsuale 13/D1, STATISTICA”, from 31 March 2017 to 31 March 2023.
Since 2012	Socio ordinario della Società Italiana di Statistica, SIS.
01/2010-12/2010	Member of The Netherlands Organisation for Scientific Research (NWO), The Netherlands.
Since 2008	Member of ERCIM (European Research Consortium for Informatics and Mathematics) for the Working group on Mixture Models.
Since 2005	Member of CLADAG (Classification and Data Analysis Group).
11/2006	Sapienza Università di Roma Scholarship winner (13/11/2006) “concorso per titoli ed esami di una borsa di n. 12 mensilità per lo studio e per la frequenza di corsi o attività di perfezionamento all'esterno”.
2003	Università di Roma la Sapienza PhD Scholarship winner (3 years, Dipartimento di Statistica, Probabilità e Statistiche Applicate)

Funding Information (grants as PI-principal investigators or I-investigator)

Year	Name	Description/Grant Value
2024	Progetto di ricerca di Ateneo 2024 (I)	Title: New parsimonious statistical models for the unsupervised learning of complex data/ 55.800 Roberto Rocci

2023	Progetto di ricerca di Ateneo 2023 (I)	Title: <i>Advancing Precision Public Health Medicine: High-Performance Computing for Efficient Solutions to Bioinformatics and Biostatistical Challenges</i> /50.000 + 20.000 assegno
2021	Progetto di ricerca di Ateneo 2021 (PI)	Title: <i>Clustering rows and columns in a categorical and mixed-type data matrix</i> /12000 euro
2020	Progetto di ricerca di Ateneo 2020 (I)	Title: <i>New statistical learning methods for the mode-based unsupervised classification of complex data</i> / Coordinator: Marco Alfò / 45000 euro
2020	Progetto competitivo per i ricercatori del DISIA - Dipartimenti Eccellenti 2020 (I)	Title: <i>Model based bi-clustering methods for high-dimensional longitudinal data</i> / 15000 euro
2018	Progetto di ricerca di Ateneo 2018 (I)	Title: <i>Clustering methods for complex, high-dimensional, data.</i> Coordinator: Marco Alfò / 15000 euro
2017	Progetto di ricerca di Ateneo 2017 (PI)	Title: <i>Model-based dimensionality reduction techniques for high-dimensional data.</i> / 3000 euro
2015	Progetto di ricerca di Ateneo 2015 (I)	Title: <i>Multimode methods for Classification, Clustering and Dimensionality Reduction.</i> Coordinator: Prof. M. Vichi.
2012	Progetto di ricerca di Ateneo 2012 (PI)	Title: <i>Nuove metodologie multivariate per l'analisi di struttura latente per dati a tre vie e longitudinali.</i> / 9000 euro
2011	Progetto di ricerca di Ateneo 2011 (I)	Title: <i>Modelli di classificazione congiunta di consumatori e prodotti.</i> Coordinator: Prof. M. Vicari /10000 euro
2011	Progetto di ricerca PRIN 2011 (I)	Title: <i>Multivariate Statistical Models for Risk Assessment.</i> National Coordinator: Prof. P. Giudici. Local Coordinator: Prof. M. Vichi. / ~ 20000 euro
2010	Innovation Oriented Research Program (IOP) on Genomics. SenterNovem (IGE01014), The Netherlands. (I)	
2008	GEHA Project (Genetics of Healthy Aging), European study 2008/2010 (I)	The aim of this project is to identify genes involved in healthy aging and longevity. This project is supported through Priority 1 (Life Sciences, Genomics and Biotechnology for Health) of European Union's FP6, and it is the largest project ever financed in Europe to study the genetic determinants of human longevity. The GEHA consortium clusters 25 partners coming from 11 European countries, and China.
2007	Genome variation studies Project 2007/2008 (I)	The research project of "SymBioSys" which is a consortium of computational scientists and molecular biologists. It brings together top expertise in

		bioinformatics, statistics, and life sciences from 7 K.U.Leuven partners. It is the biggest European project of the topic “genome variation studies”.
2007	Project in the “Biostatistic Area” 2007/2008 (PI)	Project with the collaboration of Prof. J.K. Vermunt (Department of Methodology and Statistics, Tilburg University - The Netherlands), Prof. Y. Moreau and Prof. J. Vermeesch (Department of Electrical Engineering ESAT, Katholieke Universiteit, Leuven - Belgium). Thanks to the win of Sapienza Università di Roma Scholarship “concorso per titoli ed esami di una borsa di n. 12 mensilità per lo studio e per la frequenza di corsi o attività di perfezionamento all'esterno”. / 15000 euro
2006	Progetto di ricerca PRIN 2006 (I)	Title: <i>Metodi statistici multivariati per la valutazione integrata della qualità dei servizi di pubblica utilità: efficacia-efficienza, rischio del fornitore, soddisfazione degli utenti</i> . National Coordinator P.S. Giudici. Local Coordinator: Prof. M. Vichi.
2004	Progetto di ricerca PRIN 2004 (I)	Title: <i>Nuovi metodi statistici multivariati di classificazione e riduzione dimensionale per la customer satisfaction nei servizi</i> . National and Local Coordinator: Prof. M. Vichi.
2003	Progetto di ricerca di Ateneo 2003 (I)	Title: <i>Metodologie multivariate per l'analisi statistica di profili di espressione genica</i> . Coordinator: Prof. M. Vichi.

Research Activities

Research Interests

I am primarily interested in the development of new model-based methodologies for the analysis of high-dimensional data. In particular, my recent work focuses on model-based methods for simultaneous clustering and dimensionality reduction, model-based biclustering for longitudinal and continuous, categorical, and ordinal data.

Visiting in foreign Universities

Type	Year	Institution	Notes
Visiting Researcher	2007-2008	Department of Methodology and Statistics, Tilburg University, Tilburg (The Netherlands)	Collaboration with Prof. J.K. Vermunt. (12 months)

Visiting Researcher	2004-2005	Departement of mathematics Equipe Probabilities, Statistique et Modelisation", Université de Paris-Sud, Orsay CEDEX (France)	Collaboration with Prof. G. Celeux (6 months)
Visiting Researcher	2004-2005	INAPG (Institut national agronomique Paris-Grignon-France), Paris (France)	Collaboration with Prof. J.-J. Daudin. (6 months)

Publications

Book

P. Giordani, M.B. Ferraro, F. **Martella** *An Introduction to Clustering with R*. ISBN 978-981-13-0552-8 Springer, Singapore, 2020.

Main International Journals

- X. Qin, F. **Martella**, S. Subedi. *Extending Cluster-Weighted Factor Analyzers for multivariate prediction and high-dimensional interpretability*. *Journal of Classification*, <https://doi.org/10.1007/s00357-025-09526-1> arXiv:2411.03388 2025
- D. Failli, M.F. Marino, F. **Martella**. *A Novel Approach for Biclustering Bipartite Networks: An Extension of Finite Mixtures of Latent Trait Analyzers*. **Journal of Classification**, <https://doi.org/10.1007/s00357-025-09500-x>, 2025.
- D. Failli, M.F. Marino, F. **Martella**. *Finite mixtures of latent trait analyzers with concomitant variables for bipartite networks: An analysis of COVID-19 data*. **Multivariate Behavioral Research**, 59 (4): 801-817, 2024.
- M. Alfò, M.F. Marino, F. **Martella**. *Biclustering multivariate discrete longitudinal data*. **Statistics and Computing**, 34:42, (2024). <https://doi.org/10.1007/s11222-023-10292-6>.
- P. Giordani, M.B. Ferraro, F. **Martella** datasetsICR: Datasets from the Book “An Introduction to Clustering with R”. R package version 1.0 (2020) <https://CRAN.R-project.org/package=datasetsICR>
- C. Ferrara, F. **Martella**, M. Vichi *Probabilistic Disjoint Principal Component Analysis*. **Multivariate Behavioral Research**, doi: 10.1080/00273171.2018.1485006, 2018. Impact factor 2017: 3.691.
- A. Maruotti, J. Bulla, F. Lagona, M. Picone, F. **Martella** *Dynamic mixtures of factor analyzers to characterize multivariate air pollutant exposures*, **The Annals of Applied Statistics**, 11(3):1617-1648, DOI: 10.1214/17-AOAS1049, 2017. Impact factor 2016: 1.578
- F. Martella, M. Alfò *A finite mixture approach to joint clustering of individuals and multivariate discrete outcomes*, **Journal of Statistical Computation and Simulation**, 2017. ISSN: 0094-9655 (Print) 1563-5163 (Online), doi: 10.1080/00949655.2017.1322593. Impact factor 2016: 0.749
- V. Raponi, F. **Martella**, A. Maruotti *A Biclustering approach to university performances: an Italian case study*, **Journal of applied statistics**, 43, 31-45, 2016. ISSN: 0266-4763, doi:10.1080/02664763.2015.1009005. Impact factor 2014: 0.417, Citations 4 (Google Scholar)
- A. Musarò, M. Pelosi, M. Alfò, E. Pappalardo, F. **Martella** *Finite mixture clustering of human tissues with different levels of IGF-1 splice variants mRNA transcripts*, **BMC Bioinformatics**, 16:289, 2015. ISSN: 1471-2105, doi: 10.1186/s12859-015-0689-7. Impact factor 2016: 2.435 Citations 3 (Google Scholar), 2 (Scopus)
- F. **Martella**, D. Vicari D., M. Vichi *Partitioning predictors in multivariate regression models*. **Statistics and Computing**, 25(2), 261-272, 2015. ISSN: 0960-3174, doi: 10.1007/s11222-013-9430-4. Impact factor 2016: 1.786, Citations 3 (Google Scholar)
- F. Attorre, F. Francesconi, M. De Sanctis, M. Alfò, F. **Martella**, R. Valenti, M. Vitale *Classifying and mapping potential distribution of forest types using a finite mixture model*. **Folia Geobotanica**, 49(3), 313-335, 2014. ISSN: 1211-9520, DOI 10.1007/s12224-012-9139-8. Impact factor 2015: 1.433, Citations 10 (Google Scholar), 6 (Scopus)

- M. Beekman, H. Blanché, M. Perola, A. Hervonen, V. Bezrukov, E. Sikora, F. Flachsbart, L. Christiansen, A. J.M. De Craen, T. B.L. Kirkwood, I. M. Rea, M. Poulain, J.-M. Robine, M.A. Stazi, G. Passarino, L. Deiana, E.S. Gonos, S. Valensin, L. Paternoster, T. I.A. Sørensen, Q. Tan, Q. Helmer, E. B. Van den Akker, J. Deelen, F. **Martella**, H. J. Cordell, K. L. Ayers, J. W. Vaupel, O. Törnwall, S. Schreiber, M. Lathrop, A. Skytthe, R. G.J. Westendorp, K. Christensen, J. Gampe, A. Nebel, J. J. Houwing-Duistermaat, P.E. Slagboom, C. Franceschi *Genome-wide linkage analysis for human longevity: Genetics of Healthy Ageing Study*. **Aging Cell**, 12(2):184-93, 2013. ISSN: 1474-9718, DOI:10.1111/accel.12039, Supplementary info: <http://onlinelibrary.wiley.com/doi/10.1111/accel.12039/supinfo>). Impact factor 2016: 5.76, Citations 115 (Google Scholar), 83 (Scopus)
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- D. Failli, M.F. Marino, F. **Martella**. *Mixture of Experts Latent Trait Analyzers* In: D'Ambrosio, A., de Rooij, M., De Roover, K., Iorio, C., La Rocca, M. (eds) Supervised and Unsupervised Statistical Data Analysis. CLADAG-VOC 2025. Studies in Classification, Data Analysis, and Knowledge Organization. Springer, Cham. https://doi.org/10.1007/978-3-032-03042-9_24 ISBN [Print ISBN 978-3-032-03041-2](https://doi.org/10.1007/978-3-032-03041-2), p. 272-280. Online ISBN 978-3-032-03042-9.
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- D. Failli, M.F. Marino, F. **Martella**. Mixture-Based Latent Trait Modeling for Biclustering Overdispersed Counts (IFCS 2026, submitted)
- F. **Martella** and M. Ranalli A URV-based Biclustering to uncover Glioblastoma Molecular Signatures. (IFCS 2026, submitted)
- D. Failli, M.F. Marino, F. **Martella**. Approximate inference for mixtures of latent trait analyzers (IFCS 2026, submitted)
- D. Failli, M.F. Marino, F. **Martella**. *Capturing static and dynamic heterogeneity in a Hidden Markov model for binary data*. (Invited talk) Organized Session: Recent advances in hidden Markov models. Book of abstracts of the 19th International Joint Conference CFE-CMStatistics, Birkbeck, University of London, UK 13/12/2025-15/12/2025 ISBN: 78-9925-7812-9-4
- F. **Martella**, D. Failli, M.F. Marino. *Modeling residual heterogeneity within the mixture of experts framework*. *ERCIM 2025*. (Invited talk) Organized Session: HiTEc: Clustering of complex data structures. Book of abstracts of the 19th International Joint Conference CFE-CMStatistics, Birkbeck, University of London, UK 13/12/2025-15/12/2025 ISBN: 78-9925-7812-9-4
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- D. Failli, M.F. Marino, F. **Martella**. *Mixture of Experts Latent Trait Analyzers* Book of abstracts of the 15th Scientific Meeting of the Classification and Data Analysis Group and 1st International Scientific Joint Meeting of the Italian and Dutch/Flemish Classification Societies. 2025 (**CLADAG-VOC, 2025**) Naples, 08/09/2025-10/09/2025.p.233 ISBN: 9788899594244.
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Poster

- F. **Martella**, I. Balikova, Y. Moreau, B. Thienpont, J. Vermeesch *Comparison of algorithms for high-resolution array CGH*. **Poster**, Second SymBioSys Workshop, Onderzoek en Navorsing (**O&N2**), Auditorium BMW6, (01/05/2007, Leuven, Belgium).
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PhD Thesis

F. **Martella** *Model-based double clustering for high dimensional data*. PhD Thesis in Statistical Methodology, 2007. Dipartimento di Statistica, Probabilità e Statistiche Applicate (Sapienza Università di Roma), Digital identifier: <http://hdl.handle.net/10805/988>.

Submitted

- D. Failli, M.F. Marino, F. **Martella**. Uncovering hidden states in longitudinal data via a dynamic mixture of latent trait analyzers. Submitted
- M. Ranalli, F. **Martella**. A novel model-based biclustering for ordinal data via an URV approach. Submitted
- N. Gollini, F. **Martella**, A. Maruotti. Dynamic analysis of equitable and sustainable well-being: a multivariate parsimonious hidden Markov model for clustering longitudinal Italian NUTS3 data. Submitted
- F. **Martella** and D. Vicari. Multivariate regression model on latent predictors. Submitted
- M. Alfö, M.F. Marino, F. **Martella**. Finite mixtures of linear quantile regressions with concomitant variables: a solution to endogeneity in longitudinal data modeling. Submitted
- D. Failli, M.F. Marino, F. **Martella**. Analyzing the digital divide in Italy via Mixture of Experts Latent Trait Analyzers

Attended National and International conferences and scientific meetings

- *A URV-based Biclustering to uncover Glioblastoma Molecular Signatures*. **IFCS 2026**, Milano, July 2026 (Invited talk)
- *Modeling residual heterogeneity within the mixture of experts framework*. **ERCIM 2025**. Organized Session: HiTEc: Clustering of complex data structures. The 19th International Joint Conference CFE-CMStatistics, Birkbeck, University of London, UK 13/12/2025-15/12/2025 (Invited talk)
- *Uncovering hidden mental health patterns via a dynamic mixture of Latent Trait Analyzers*. The 8th International Conference on Econometrics and Statistics. (Waseda University, Tokyo, Japan 21/08/2025-23/08/2025 (Invited talk)
- Advances in clustering and classification. Chair and Discussant: Francesca Martella. The 52nd Scientific Meeting of the Italian Statistical Society (**SIS 2025**, 16/06/2025 – 18/06/2025, Genova) and presentation of *Dynamic mixture of latent trait analyzers for clustering longitudinal data*.
- *Biclustering listeners and music genres using a composite likelihood-based approach*. CFE-CMstat Conference, London (**ERCIM 2024**, 14/12/2024-16/12/2024, London, UK)
- Session CO35: Innovative Approaches in Education and Social Sciences. Chair: Francesca Martella. ASA conference 2024, 18-20 September 2024 - University of Rome “Sapienza”
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- *An extension of finite mixtures of latent trait analyzers for biclustering bipartite networks*. (**SIS 2023**, 21/06/2023 – 23/06/2023, Ancona)

- *Biclustering bipartite networks via a finite mixture approach*. In the HiTEc meeting and Complex Data in Econometrics and Statistics Workshop. (**HiTEc 2023**, Limassol, Cyprus). 03/04/2023-04/04/2023
- *A finite mixture model for biclustering longitudinal trajectories: an application to Italian crime data*. In the 15th International Conference of the ERCIM WG on Computational and Methodological Statistics (**ERCIM 2022**, London, UK) 17/12/2022 – 19/12/2022
- *Extending finite mixtures of latent trait analyzers for bipartite networks*. In 51th Scientific Meeting on the Italian Statistical Society, (**SIS 2022**, Caserta). 22/06/2022 – 24/06/2022
- *Handling endogeneity in linear quantile regression models for longitudinal data*. In the 14th International Conference of the ERCIM WG on Computational and Methodological Statistics (**ERCIM 2021**, London, UK). 18/12/2021 – 20/12/2021
- *A survey of the Mediterranean broadleaved evergreen forests at the European scale*. In the 29th Conference of European Vegetation Survey. Revegetating Europe – Contributions of the EVS to the UN Decade on Ecosystem Restoration (online Conference) 06/09/2021- 07/09/2021
- *Biclustering longitudinal trajectories through a model-based approach*. In 50th Scientific Meeting on the Italian Statistical Society, (**SIS 2021**, Palermo and on line Conference) 20/06/2021 – 22/06/2021
- *High dimensional model-based clustering of European georeferenced vegetation plots*. In the 13th Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical Society. (**CLADAG 2021**, on line Conference). 09/09/2021 – 11/09/2021
- *Biclustering ordinal data through a model based approach*. In the 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (**CMStatistics 2020**, Virtual Conference). 19/12/2020 – 21/12/2020
- *The Generalized Dynamic Mixtures of Factor Analyzers for clustering multivariate longitudinal data*. In 50th Scientific Meeting on the Italian Statistical Society (**SIS 2020**, Pisa). 20/06/20 - 25/06/2020
- *Biclustering for Multivariate Longitudinal Data*. In the 32nd edition of the European Meeting of Statisticians. (**EMS 2019**, Palermo). 22/07/19 -26/07/2019.
- *Model-based biclustering of multivariate longitudinal trajectories*. In Final CRoNos meeting, Spring Course and Workshop on Multivariate Data. (**CRoNoS 2019**, Limassol, Cyprus). 14/04/19 - 16/04/2019.
- *Regression modelling via latent predictors*. In 49th Scientific Meeting on the Italian Statistical Society, (**SIS 2018**, Palermo). 20/06/2018 – 22/06/2018.
- *From mixtures of SEMs to mixtures of Double-structure SEMs*. In International Federation of Classification Societies 2015 Conference (**IFCS 2015**, Bologna). 06/07/2015 – 08/07/2015
- *A simple approach to biclustering discrete data*. In International Federation of Classification Societies 2015 Conference, (**IFCS 2015**, Bologna). 06/07/2015 – 08/07/2015
- *A regression modeling approach with latent predictors*. In second internal meeting of the FIRB (**Futuro in ricerca, 2012**) project “Mixture and latent variable models for causal-inference and analysis of socio-economic data”, Roma. 23/01/2015 – 24/01/2015
- *Probabilistic Disjoint Principal Component Analysis*. In 8th International Conference on Partial Least Squares and Related Methods, (**PLS’14**, Paris, France). 26/05/2014 – 28/05/2014
- *Multivariate regression modeling with clustered correlated predictors*. In 8th International Conference on Partial Least Squares and Related Methods, (**PLS’14**, Paris, France). 26/05/2014 – 28/05/2014
- *Hidden markov of factor analyzers for biclustering of microarray time course data in multiple conditions*. In the 6th International Conference of the ERCIM WG on Computational and Methodological Statistics, (**ERCIM 2013**, London, UK). 14/12/2013 – 16/12/2013
- *A biclustering approach for discrete outcomes*. In 9th Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical Society 2013, (**CLADAG 2013**, Modena). 18/09/2013 – 20/09/2013
- SIS 2013 Statistical Conference "Advances in Latent Variables. Methods, Models and Applications", Brescia. 19/06/2013 – 21/06/2013
- *Dimensions of well-being and their statistical measurements*. In 46th Scientific Meeting on the Italian Statistical Society, (**SIS 2012**, Roma). 20/06/2012 – 22/06/2012

- *Clustering Multivariate Longitudinal Data: Hidden Markov or Factor Analyzers*. In 46th Scientific Meeting on the Italian Statistical Society, (**SIS 2012**, Roma). 20/06/2012 – 22/06/2012
- *Dimensions of well-being and their statistical measurements*. In Making decisions: the role of statistics for knowledge and governance, (Roma). 19/04/2012 – 20/04/2012
- *Genome-wide linkage analysis for longevity in European nonagenarian siblings: Genetics of Healthy Ageing Study (GEHA)*. In 12th International Congress of Human Genetics/61st Annual Meeting of The American Society of Human Genetics, (Montreal, Canada). 11/10/2011 – 15/10/2011
- Giornata Italiana della Statistica, Roma. 20/10/2011
- *Multivariate regression model based on a partition of predictors*. Specialized Session in 7th Conference on Statistical Computation and Complex Systems, (**SCO**, Padova). 19/09/2011 – 21/09/2011
- *Multivariate regression model based on an optimal partition of predictors*. Contributed Session in 8th Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical Society 2011, (**CLADAG 2011**, Pavia). 07/09/2011 – 09/09/2011
- *A mixture model with random-effects components for classifying sibling pairs with application to the Leiden Longevity Study*. In "Symposium on analysis of genetic and family data" in LUMC (Leiden, NL). 24/06/2011 – 24/06/2011
- *A Mixture Model with Random Effects Components for Classifying Families with Application to Healthy Aging*. In the 19th Annual Meeting of the International Genetic Epidemiology Society, (Boston, USA). 24/10/2010 – 26/10/2010
- Geha symposium, Roma. 09/2010
- 45th Scientific Meeting on the Italian Statistical Society, (**SIS 2010**, Padova). 29/06/2010 – 01/07/2010
- *Identifying partitions of genes and tissue samples in microarray data*. Specialized Session in 7th Conference of the Classification and Data Analysis group of the Italian Statistical Society 2009, (**CLADAG 2009**, Catania). 09/09/2009 – 11/09/2009
- *Model-based clustering for dependent data*. In Second IBS Channel Network Conference, Section on Model selection and clustering, (Ghent, Belgium). 06/04/2009 – 06/04/2009
- *Model-based approaches to synthesize microarray data: a unifying review using mixture SEM*. In IFCS 2009: 11th Conference of the International Federation of Classification Societies, Section on Mixture Analysis - Mixture models in genetics, (**IFCS 2009**, Dresden, Germany). 13/03/2009 – 18/03/2009
- VOC meeting 2009 (Dutch/Flemish Classification Society), (Mixture Model'), Tilburg (NL). 10/04/2009
- Second MSOURCE symposium: Advanced Topics in Survival Analysis, Kraainem (Belgium). 07/11/2008
- Symposium on mixture modeling with special interest to applications in educational measurement and bioinformatics, Leuven, (Belgium). 20/11/2007 – 20/11/2007
- *Model-based biclustering for expression data*. Benelux Bioinformatics Conference BBC07, Leuven (Belgium). 12/11/2007 – 13/11/2007
- *Biclustering of microarray data*. Specialised Session in 6th Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical Society 2007, (**CLADAG 2007**, Macerata). 12/09/2007 – 14/09/2007
- *Comparison of algorithms for high-resolution array CGH*. In Second SymBioSys Workshop, Onderzoek en Navorsing (O&N2), Auditorium BMW6, (Leuven, Belgium). 01/05/2007 – 01/05/2007
- MC Gard (Marie Curie - Genome Architecture in Relation to Disease), Conference 1 MOLECULAR PROFILING OF THE GENOME, Amsterdam (NL). 05/2007
- The 7th Belgian Society Human Genetics meeting: Muscle, brain and sex, Charleroi (Belgium). 04/2007
- *Model-based double clustering*. Contributed Session, in XX Riunione Scientifica – DSPSA (Roma). 26/01/2007 – 26/01/2007
- International Conference on Statistical Latent Variables Models in the Health Sciences, Perugia. 09/2006

- COMPSTAT2006, The 17th Conference of the International Association for Statistical computing. 08/2006
- *Double Hierarchical Mixture model for microarray data*. In IFCS 2006 Conference: Data Science and Classification, Invited Session on Clustering and Classification of Microarray Gene Expression Data, (**IFCS 2006**, Ljubljana - Slovenia). 25/07/2006 – 29/07/2006
- *Model-based double clustering*. In XX riunione scientifica del Dipartimento di Statistica Probabilità e Statistiche Applicate, Università di Roma La Sapienza, Roma. 26/01/2007
- *Clustering of Microarray Data using Finite Mixture Models*. Contributed Session, in 5th Scientific Meeting of the Classification and Data Analysis Group of the Italian Statistical Society, (**CLADAG 2005**, Parma). 06/06/2005 – 08/06/2005
- XIX riunione scientifica del Dipartimento di Statistica Probabilità e Statistiche Applicate, Università di Roma La Sapienza, Roma. 01/2005
- XVIII riunione scientifica del Dipartimento di Statistica Probabilità e Statistiche Applicate, Università di Roma La Sapienza, Roma. 02/2004

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*Francesca
Martella*

A handwritten signature in black ink, appearing to read 'Francesca Martella', written in a cursive style.