

## Francesca Martignone

### BIO AND EDUCATION

April 2002: Degree cum laude in Mathematics at the University of Genova. Thesis: "Analisi dei processi dimostrativi in ambito analitico".

April 2007: PhD Mathematics and Application at the University of Genova. Thesis: "Analisi di processi di pianificazione e sviluppo di strategie risolutive in problemi di Teoria dei Giochi".

2023: National Scientific habilitation as full professor – Scientific Sector 01/A1(MAT/04 - MATHEMATICS EDUCATION AND HISTORY OF MATHEMATICS).

### UNIVERSITY CAREER

2019-	Associate Professor, University of Eastern Piedmont
2013-2019	Researcher (T.D.), University of Eastern Piedmont
2007-2013	Fellowships, University of Modena and Reggio Emilia

### UNIVERSITY POSITIONS

2023-	Director of the 60 CFU Training Course (DPCM 4 August 2023) for class A-28 Mathematics and Science. University of Eastern Piedmont - Centro Interregionale per la Formazione degli Insegnanti della Scuola Secondaria - CIFIS
2022-2024	Rector's Delegate for: initial teacher education; relations with CISIA; relations with CIFIS.
2022-	Member of the Board of Council of the Teaching Learning Centre - Centre for Innovative Teaching at the University of Eastern Piedmont. Since 2023 vice-director of the Centre.
2021-	Member of the DiSIT Initial Competence Assessment Test Committee. Member of the previous working group on the test since 2013. Since 2022 President of the Commission for the Initial Skills Assessment Test.
2022-	Referent for the agreement between the Piedmont Regional School Office and DiSIT for education and research activities
2021-	Representative for the University of Eastern Piedmont in the board of CIFIS – Piedmont Inter-University Centre of Regional Interest for Secondary Teachers education.
2020-2023	Member of the Library Council of DiSIT, University of Eastern Piedmont. Permanent invitee of the Mathematics area.
2019-	Member of the DiSIT Orientation Commission, University of Eastern Piedmont
2016-2019	Member of the DiSIT Communication Commission, University of Eastern Piedmont
2014-2016	Referent for PAS A059, University of Eastern Piedmont (Alessandria).
2014-15	Referent for TFA A059, University of Eastern Piedmont (Alessandria).
2014-15	Member of the selection board for TFA A059 admission test, University of Eastern Piedmont (Alessandria).

## SCIENTIFIC POSITIONS

2023-	Associate investigator-Head of the research unit of the University of PIEMONTE ORIENTALE in PRIN 2022CKWY77 - Mathematics standardized assessment as a tool for teachers' professional development
2023-	PLS Mathematics Referent for the University of Eastern Piedmont. PLS Scientific Degrees Plan. Project title: National Mathematics Project.
2021	Coordinator of the "Formative argumentation and evaluation" project. Project developed within an agreement between DiSIT -University of Eastern Piedmont, Liceo G. Bruno of Albenga (SV) and Liceo G.Galilei (AL).
2022-	External collaborator in the project "Conocimiento especializado del profesorado de matemáticas: Tareas y conocimiento del formador (MTSK-T&MTEK)". Programa Estatal para Impulsar la Investigación Científico-Técnica y su Transferencia, del Plan Estatal de Investigación Científica, Técnica y de Innovación
2020-2024	External collaborator in the project 'Reasoning and proving in primary education (ProPrimEd)' developed by the research group in didactics of Mathematics at the Norwegian University of Science and Technology (NTNU).
2019-2021	Referent for the project "Mathematics education and applications" (local research project - FAR 2017).
2018-	Leader and teacher educator in projects for in-service teachers of Piedmont schools
2013-14	Scientific coordinator of the project "Un approccio longitudinale per l'analisi delle prove INVALSI di matematica: cosa ci può dire sugli studenti in difficoltà?" in the "Progetto Idee per la Ricerca" (I-3-FSE-2009-1)
2013-	INVALSI collaborator, as mathematics expert
2008-2013	Person in charge of the design and teacher educator in the in-service teacher education program "MMLab-ER - Laboratori delle Macchine Matematiche per l'Emilia Romagna"

## MAIN FIELDS OF INTEREST

1. Teacher education
2. Cognitive processes in mathematic problem solving
3. Laboratory activities with mathematical machines
4. Standardized tests

## CURRENT ISSUES OF RESEARCH

### 1. Mathematics teacher education

Analysis of the institutional, epistemological, cognitive and didactics aspects involved in teacher education projects for middle and high school mathematics teachers. Reflections on theoretical frameworks that can provide interpretative tools to analyze processes and characteristics of teacher education activities.

## 2. Analysis of mathematics standardized tests

Development of interpretative tools and theories that use qualitative and quantitative approaches for the analysis of mathematics standardized tests.

### CURRENT FUNDED PROJECTS

BANDO	PROJECT TITLE
PRIN 2022CKWY77	Mathematics standardized assessment as a tool for teachers' professional development

### TOP FIVE PAPERS

- Martignone F., Ferretti F., Rodríguez-Muñiz L. (2022). What aspects can characterize the specialized knowledge of a mathematics teacher educator?. *EDUCACIÓN MATEMÁTICA*, vol. 34, p. 301- 328, ISSN: 0187-8298, doi: 10.24844/EM3403.11
- Martignone, F., Ferretti, F. & Lemmo, A. (2018). Attained curriculum and external assessment in Italy: how to reflect on them? In Y. Shimizu & R. Vithal (Eds.), *Proceedings ICMI Study 24* (pp. 381-388). Tsukuba: ICME. ISBN 978 4924843936.
- Martignone, F. (2017). Analysis of mathematics standardized tests: examples of tasks for teachers. In Dooley, T., & Gueudet, G. (Eds.), *Proceedings of the Tenth Congress of the European Society for Research in Mathematics Education* (pp. 3344-3351). Dublin, Ireland: DCU Institute of Education and ERME. ISBN 978-1-873769-73-7
- Bartolini Bussi, M.G. & Martignone, F. (2014). Manipulatives in Mathematics Education. In S. Lerman (Ed.), *Encyclopedia of Mathematics Education*, pp 365-372. Springer Dordrecht, Heidelberg, New York, London, Print ISBN 978-94-007-4977-1, Online ISBN 978-94-007-4978-8
- Bartolini Bussi, M.G. & Martignone, F. (2013). Cultural issues in the communication of research on mathematics education. *For the Learning of Mathematics*, 33, 1 (March, 2013), 2-8, FLM Publishing Association, Fredericton, New Brunswick, Canada. ISSN 0228-671

### AWARDS

Winner, as scientific coordinator, of the national selection for the identification of projects to be developed within "Ideas for Research" project, a public competition supported by MIUR and INVALSI (Cod. naz. I-3-FSE-2009-1)