

PERSONAL INFORMATION

Rita Fioresi

📍 FaBiT, via San Donato 15, 40127 Bologna, Italy

📞 +39 333 8652673

✉ rita.fioresi@unibo.it

Nationality Italian

AREA OF EXPERTISE

Lie Theory, Supergeometry, Quantum Groups, Deep Learning

WORK EXPERIENCE

- 2020 – Present Full Professor, FaBiT Department, University of Bologna, Italy
- 2020 – 2025 Associate Professor, FaBiT Department, University of Bologna, Italy
- 2008 – 2020 Associate Professor, Dept of Mathematics, University of Bologna, Italy
- 2000 – 2008 Researcher, Dept of Mathematics, University of Bologna, Italy
- 1998 – 2000 Adjunct Professor, Dept of Mathematics, UCLA, Los Angeles, USA

EDUCATION AND TRAINING

- 1992–1997 PhD in Mathematics, UCLA, Los Angeles, USA
- 1991–1993 Bachelor in Mathematics, University of Bologna, Italy
- 1989–1991 Bachelor in Nuclear Engineering, University of Bologna, Italy

COMPETITIVE FUNDS

- 2024 Principal Investigator, CaLiFoRNIA MSCA-DN-101119552
EU funding: 2.5 M euros
- 2023-present Principal Investigator, CaLIGOLA MSCA-2021-SE-01-101086123
EU funding: 874000 euros
- 2022-present Action Chair, COST Action CaLISTA CA 21109
EU funding: 500000 euros
- 2022-present Principal Investigator: Geometric Deep Learning
BAM Institute funding: 87000 euros

BOARDS AND COMMITTEES

- 2021-present Member of ELLIS Society
- 2020 – present Member of the Supervisory Board AddU
Women Association of University of Bologna Professors, University of Bologna, Italy

- 2020 – present **Member of the Supervisory Board of the Collegium of Excellence**
University of Bologna, Italy
- 2020 – present **Member of the Supervisory Board of Unione Matematica Italiana**
Mathematics and Artificial Intelligence section, Italy
- 2015-present **Member of AFR-FNR Luxembourg Board**
- 2017 – 2020 **Member of the Supervisory Interdepartmental Library**
School of Sciences, University of Bologna, Italy
- 2015 – 2020 **Member of PhD Committee in Mathematics**
Department of Mathematics, University of Bologna, Italy
- 2012 – 2015 **Member of Research Committee in Mathematics**
Department of Mathematics, University of Bologna, Italy
- 2008 – 2011 **Member of the Giunta**
Supervisory Board of the Department of Mathematics, University of Bologna, Italy
- 2007 – 2010 **Presidente di Corso di Laurea**
Undergraduate Chair, Internet Sciences, University of Bologna, Italy

EDITORIAL BOARDS

Journal of Lie Theory

International Journal of Geometric Methods in Modern Physics

Expositiones Mathematicae

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	A1	A2	A1	A1	A1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

SELECTED PUBLICATIONS

- [1] Rita Fiorese and V. S. Varadarajan. “Harish-Chandra Highest Weight Representations of Semisimple Lie Algebras and Lie Groups”. In: *Journal of Lie Theory* 1 (2023), pp. 217–252.
- [2] Rita Fiorese and Fabio Gavarini. “Real Forms of Complex Lie Superalgebras and Supergroups”. In: *Communications in Mathematical Physics* 397 (2022), pp. 937–965.
- [3] Meng-Kiat Chuah and Rita Fiorese. “Levi Factors and Admissible Automorphisms”. In: *Algebras and Representation Theory* 25 (2022), pp. 1–18.

- [4] Paolo Aschieri, Rita Fiorese, and Emanuele Latini. “Quantum Principal Bundles on Projective Bases”. In: *Communications in Mathematical Physics* 382 (2021), pp. 1691–1724.
- [5] Ivan Dimitrov and Rita Fiorese. “On Kostant root systems of Lie superalgebras”. In: *Journal of Algebra* (2021).
- [6] Luca Grentieri and Rita Fiorese. “Model-centric Data Manifold: the Data Through the Eyes of the Model”. In: *SIIMS abs/2104.13289* (2021).
- [7] Rita Fiorese, Stephen Kwok, and David W. Taylor. “Quotients of complex algebraic supergroups”. In: *Journal of Geometry and Physics* (2019).
- [8] Meng-Kiat Chuah and Rita Fiorese. “Equal rank real forms of affine non-twisted Kac-Moody Lie superalgebras”. In: *Journal of Pure and Applied Algebra* 224 (2020), p. 106278.
- [9] Claudio Carmeli, Rita Fiorese, and V. S. Varadarajan. “HIGHEST WEIGHT HARISH-CHANDRA SUPERMODULES AND THEIR GEOMETRIC REALIZATIONS”. In: *Transformation Groups* 25 (2020), pp. 33–80.
- [10] Rita Fiorese, Pratik Chaudhari, and Stefano Soatto. “A Geometric Interpretation of Stochastic Gradient Descent Using Diffusion Metrics”. In: *Entropy* 22 (2019).
- [11] Rita Fiorese, Emanuele Latini, M A Lledó, and Felip Nadal. “The Segre embedding of the quantum conformal superspace”. In: *Adv. Theor. Math. Phys.* (2018).
- [12] Rita Fiorese, Emanuele Latini, and Alessio Marrani. “The q-linked complex Minkowski space, its real forms and deformed isometry groups”. In: *International Journal of Geometric Methods in Modern Physics* (2018).
- [13] Rita Fiorese, Emanuele Latini, and Alessio Marrani. “Quantum Klein Space and Superspace”. In: *Symmetry, Integrability and Geometry: Methods and Applications* (2018).
- [14] Rita Fiorese and Stephen Kwok. “The projective linear supergroup and the SUSY-preserving automorphisms of $1|1$ ”. In: *Pacific Journal of Mathematics* 295 (2015), pp. 385–401.
- [15] Claudio Carmeli, Rita Fiorese, and V. S. Varadarajan. “Super Bundles.” In: *arXiv: Representation Theory* (2018).