

Mirella Cappelletti Montano

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Scopus ID: 5721493802

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Department of Mathematics

University of Bari Aldo Moro

Website: <https://www.dm.uniba.it/it/members/cappellettimontano>

Current Academic Position

Associate Professor

University of Bari Aldo Moro / Department of Mathematics, SSD: Math-03/A, Mathematical Analysis 2021–Present

Previous Academic Position

- **Assistant Professor**

University of Bari Aldo Moro / Department of Mathematics, SSD: Mat05, Mathematical Analysis 2005–2021

- **Research Fellow**

University of Bari Aldo Moro / Department of Mathematics 2005
Title of the Project: *Degenerate differential operators, positive semigroups and Markov processes associated to positive projections on continuous function spaces*

Education

PhD in Mathematics

University of Bari Aldo Moro, Bari, Italy 2000–2003
Dissertation: *Approximation problems for positive operators in adapted spaces*
Supervisor: Prof. Francesco Altomare

Visiting Researcher (6 months), Louisiana State University, Baton Rouge, USA, within the PhD Program in Mathematics, 2001–2002

Degree in Mathematics

University of Bari Aldo Moro, Bari, Italy 1995–1999
Dissertation: *Generalized Feller equations*
Supervisor: Prof. Francesco Altomare

Research Interests

- Generation and Approximation of Semigroups.
- Evolution Equations: qualitative study of the solutions.
- Linear and Nonlinear Approximation Processes.
- Mathematical Models in Population Dynamics.

Publications

Research Articles

1. M. Cappelletti Montano, R. Corso, V. Leonessa, *A nonlinear version of Kantorovich operators with p -averages: convergence results and asymptotic formula*, accepted for publication in *Analysis and Mathematical Physics*.
2. M. Cappelletti Montano, V. Leonessa, A. Travaglini, *On the approximation properties of generalized Gamma-type operators in several function spaces*, *Ann. Funct. Anal.* 16 (4) (2025), article number: 59.
3. M. Cappelletti Montano, V. Leonessa, *A note on Weibull operators and their modifications*, *Positivity* 29 (1) (2025), article number: 4.
4. F. Altomare, M. Cappelletti Montano, V. Leonessa, *On some representation formulae for operator semigroups in terms of integrated means*, *Dolomites Res. Notes Approx.* 17 (2) (2024), 1–13.
5. F. Altomare, M. Cappelletti Montano, V. Leonessa, *On some approximation processes generated by integrated means on noncompact real intervals*, *Results Math.* 78 (2023), no. 6, Article 250.
6. F. Altomare, M. Cappelletti Montano, V. Leonessa, *Kantorovich-type modifications of certain discrete-type operators on the positive real axis*, *Note di Mat.* 43 (1) (2023), 15–40.
7. M. Cappelletti Montano, B. Lisena, *Diffusive two-predators-one prey models on periodically evolving domains*, *Math. Methods Appl. Sci.* 44 (11) (2021), 8940–8962.
8. M. Cappelletti Montano, V. Leonessa, L.-E. Persson, *Francesco Altomare – the remarkable mathematician and human being*, *Constr. Math. Anal.* 4 (1) (2021), 1–19.
9. T. Acar, M. Cappelletti Montano, P. Garrancho, V. Leonessa, *Voronovskaya type results for Bernstein-Chlodovsky operators preserving e^{2x}* , *J. Math. Anal. Appl.* 491 (1) (2020), Article 124307.
10. M. Cappelletti Montano, B. Lisena, *Diffusive Lotka-Volterra competition models on periodically evolving domains*, *J. Math. Anal. Appl.* 484 (1) (2020), Article 123675.
11. T. Acar, M. Cappelletti Montano, P. Garrancho, V. Leonessa, *On sequences of J. P. King-type operators*, *J. Funct. Spaces*, 2019, Article ID 2329060, 12 pp.
12. M. Cappelletti Montano, V. Leonessa, *A sequence of Kantorovich-type operators on mobile intervals*, *Constr. Math. Anal.* 2 (3) (2019), 130–143.
13. M. Cappelletti Montano, V. Leonessa, *A generalization of Bernstein-Durrmeyer operators on hypercubes by means of an arbitrary measure*, *Studia Univ. Babeş-Bolyai Math.* 64 (2) (2019), 239–252.
14. T. Acar, M. Cappelletti Montano, P. Garrancho, V. Leonessa, *On Bernstein-Chlodovsky operators preserving e^{2x}* , *Bull. Belg. Math. Soc. Simon Stevin* 26 (5) (2019), 681–698.
15. F. Altomare, M. Cappelletti Montano, V. Leonessa, *On the positive semigroups generated by Fleming-Viot type differential operators*, *Comm. Pure Appl. Anal.* 18 (1) (2019), 323–340.
16. M. Cappelletti Montano, B. Lisena, *Global dynamics in Holling-Tanner models with impulses*, *Dynam. Cont. Discr. Impuls. Systems Ser. A* 26 (2019), 329–347.

17. M. Cappelletti Montano, B. Lisena, *Diffusive Holling-Tanner predator-prey models in periodic environments*, Appl. Math. Lett. 87 (2019), 42–49.
18. F. Altomare, M. Cappelletti Montano, V. Leonessa, I. Rasa, *Elliptic differential operators and positive semigroups associated with generalized Kantorovich operators*, J. Math. Anal. Appl. 458 (1) (2018), 153–173.
19. F. Altomare, M. Cappelletti Montano, V. Leonessa, I. Rasa, *A generalization of Kantorovich operators for convex compact subsets*, Banach J. Math. Anal. 11 (3) (2017), 591–614.
20. M. Cappelletti Montano, V. Leonessa, *Generalized Kantorovich operators on Bauer simplices and their limit semigroups*, Numer. Funct. Anal. Optim. 38 (6) (2017), 723–737.
21. F. Altomare, M. Cappelletti Montano, V. Leonessa, I. Rasa, *On Markov operators preserving polynomials*, J. Math. Anal. Appl. 415 (1) (2014), 477–495.
22. F. Altomare, M. Cappelletti Montano, V. Leonessa, I. Rasa, *On differential operators associated with Markov operators*, J. Funct. Anal. 266 (6) (2014), 3612–3631.
23. M. Cappelletti Montano, V. Leonessa, *Approximation of some Feller semigroups associated with a modification of Szász-Mirakjan-Kantorovich operators*, Acta Math. Hungar. 139 (3) (2013), 255–275.
24. F. Altomare, M. Cappelletti Montano, V. Leonessa, *On a generalization of Szász-Mirakjan-Kantorovich operators*, Results Math. 63 (3–4) (2013), 837–863.
25. F. Altomare, M. Cappelletti Montano, V. Leonessa, *Iterates of multidimensional Kantorovich-type operators and their associated positive C_0 -semigroups*, Studia Univ. Babeş-Bolyai Math. LVI (2) (2011), 236–251.
26. F. Altomare, M. Cappelletti Montano, S. Diomedede, *Degenerate elliptic operators, Feller semigroups and modified Bernstein-Schnabl operators*, Math. Nachr. 284 (5–6) (2011), 587–607.
27. F. Altomare, M. Cappelletti Montano, V. Leonessa, *On a generalization of Kantorovich operators on simplices and hypercubes*, Adv. Pure Appl. Math. 1 (3) (2010), 359–385.
28. M. Cappelletti Montano, S. Diomedede, *Modified Bernstein-Schnabl operators on convex compact subsets of locally convex spaces and their limit semigroups*, Commun. Appl. Anal. 13 (4) (2009), 609–632.
29. F. Altomare, M. Cappelletti Montano, *On some density theorems in regular vector lattices of continuous functions*, Collect. Math. 58 (2) (2007), 131–144.
30. F. Altomare, M. Cappelletti Montano, *Korovkin-type theorems in regular locally convex vector lattices of continuous functions – Part II*, Studia Math. 172 (1) (2006), 69–90.
31. F. Altomare, M. Cappelletti Montano, *Korovkin-type theorems in regular locally convex vector lattices of continuous functions – Part I*, Studia Math. 171 (3) (2005), 239–260.
32. F. Altomare, M. Cappelletti Montano, *Affine projections on adapted subalgebras of continuous functions*, Positivity 9 (4) (2005), 625–643.

Monographies

33. F. Altomare, M. Cappelletti Montano, V. Leonessa, I. Rasa, *Markov Operators, Positive Semigroups and Approximation Processes*, de Gruyter Studies in Mathematics 61, Walter de Gruyter GmbH, Berlin/Boston, 2014.

Book Chapters

34. M. Cappelletti Montano, V. Leonessa, *A modification of Bernstein-Durrmeyer operators with Jacobi weights on the unit interval*, Trends in Math., 2023.
35. F. Altomare, M. Cappelletti Montano, V. Leonessa, I. Rasa, *Differential operators and approximation processes generated by Markov operators*, In: *Integral Methods in Science and Engineering*, Vol. 1: Theoretical Techniques, pp. 9–19, Birkhäuser Verlag, 2017, ISBN 978-3-319-59384-5.
36. F. Altomare, M. Cappelletti Montano, *On a class of vector lattices of continuous function spaces and related approximation and density problems*, Proceedings of the International Symposium on Banach and Function Spaces 2006, Kitakyushu (Japan), September 14–17, 2006, Yokohama Publisher Inc. (2008), 25–50.

Preprints

37. M. Cappelletti Montano, R. Corso, V. Leonessa, *Nonlinear operators based on discrete p -means*, in preparation.
38. M. Cappelletti Montano, R. Corso, V. Leonessa, *Error estimates of a sequence of nonlinear Kantorovich operators with p -averages*, in preparation.
39. M. Cappelletti Montano, R. Corso, V. Leonessa, *Shape preserving properties of nonlinear Kantorovich operators with p -averages*, in preparation.
40. M. Cappelletti Montano, V. Leonessa, A. Travaglini, *Modified Gamma-type operators*, in preparation.

Editorial Material

41. A. Albanese, F. Altomare, M. Campiti, M. Cappelletti Montano, V. Leonessa, *Preface*, Note di Mat. 43 (1) (2023).
42. M. Cappelletti Montano, M.C. De Bonis, C. Laurita, V. Leonessa, I. Notarangelo, D. Occorsio, M.G. Russo, *FAATNA 20 > 22, Functional Analysis, Approximation Theory and Numerical Analysis*, Dolomites Res. Notes Approx. 16 (3) (2023), Preface.
43. A. M. Candela, M. Cappelletti Montano, E. Mangino, *Recent Advancements in Mathematical Analysis*, Trends in Math., 2023, Preface.
44. V. Leonessa, T. Acar, M. Cappelletti Montano, P. Garrancho, *Operator Methods in Approximation Theory*, J. Funct. Spaces, Volume 2019, Article ID 3426301, Editorial.

Conference Presentations and Seminars

- *Generalized Gamma-type operators*, 3rd International Conference Constructive Mathematical Analysis, July, 02–05, 2025, Konya, Turkey.
- *Weibull operators and their modifications*, Functional Analysis: Theory and Applications, FATA 2025, February, 19–21, 2025, Genova, Italy.

- (Upon invitation) *Kantorovich-type modifications of certain discrete-type operators*, Special Session: Approximation methods for functional equations, Numerical Analysis & Modelling in Applied Sciences-NAMAS 2024, September 16–20, 2024, Gaeta, Italy.
- (Main Speaker) *Representation formulae for strongly continuous semigroups in terms of integrated means and related approximation processes*, Approximation: Theory, Methods and Applications ATMA 2024, June 11–14, 2024, Lecce, Italy.
- *On some representation formulae for C_0 -semigroups*, 17th International Conference on Applied Mathematics and Computer Science, July 11–13, 2023, Cluj-Napoca, Romania.
- *Representation formulae for C_0 -semigroups in terms of integrated means*, International Conference on Approximation Theory and Applications, June 18–22, 2023, Cetraro, Italy.
- *A diffusive two predators-one prey model on periodically evolving domains*, Approximation Theory and its Applications ICATA 2022, September 12–14, 2022, Sibiu, Romania.
- *The scientific achievements of Francesco Altomare*, Recent Developments in Mathematical Analysis, September 23–24, 2021, Bari, Italy.
- (Upon invitation) *Integral operators on mobile intervals*, Minisymposium in Approximation Theory and Applications, 8th European Congress of Mathematics, June 20–26, 2021, Portorož, Slovenia.
- *Operatori di tipo Bernstein-Chlodovsky che preservano certe funzioni esponenziali*, Prima Giornata di Lavoro del Gruppo U.M.I. T.A.A., May 14, 2021.
- *On some generalizations of Bernstein-Durrmeyer operators on hypercubes*, Multivariate Approximation: Theory and Applications MATA 2020, January 16–18, 2020, Perugia, Italy.
- *Semigrupperi di Markov associati ad operatori di tipo Kantorovich*, XXI Congresso dell'Unione Matematica Italiana, September 2–7, 2019, Pavia, Italy.
- *Bernstein-Durrmeyer type operators on hypercubes*, X Jaen Conference on Approximation Theory, June 30–July 5, 2019, Ubeda, Spain.
- *On the positive semigroups generated by Fleming-Viot type differential operators*, Fourth International Conference on Numerical Analysis and Approximation Theory NAAT 2018, September 6–9, 2018, Cluj-Napoca, Romania.
- *Generalized Kantorovich operators and their limit semigroups*, Minisymposium on Approximation Theory, International Conference on Mathematics ICOM 2018, July 3–6, 2018, Istanbul, Turkey.
- *Operatori differenziali ellittici e semigrupperi positivi associati ad operatori di tipo Kantorovich*, Equazioni di Evoluzione, Risultati Recenti e Prospettive, June 18–19, 2018, Lecce, Italy.
- *Operatori differenziali ellittici, semigrupperi di Markov e operatori di Bernstein-Schnabl*, XX Congresso dell'Unione Matematica Italiana, September 7–12, 2015, Siena, Italy.
- *Differential operators, Markov semigroups and Bernstein-Schnabl operators*, Numerical Analysis and Approximation Theory NAAT 2014, September 17–20, 2014, Cluj-Napoca, Romania.
- (Upon invitation) *Asymptotic formulae for Bernstein-Schnabl operators associated with Markov operators*, First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI, June 30–July 2, 2014, Bilbao, Spain.
- *Operatori differenziali, semigrupperi di Feller e processi di approssimazione positivi*, Department of Mathematics, Università degli Studi di Bari Aldo Moro, 2014.
- *On some differential operators on hypercubes*, Positivity VII, July 22–24, 2013, Leiden, Netherlands.
- *Operatori differenziali associati a operatori di tipo Kantorovich*, Department of Mathematics, Computer Science and Economics, Università degli Studi della Basilicata, 2013.
- *C_0 -semigrupperi associati ad una generalizzazione degli operatori di Kantorovich sull'iper cubo*, XIX Congresso dell'Unione Matematica Italiana, September 12–17, 2011, Bologna, Italy.

- *On a new sequence of positive linear operators on unbounded intervals*, Second International Conference on Numerical Analysis and Approximation Theory NAAT 2010, September 23–26, 2010, Cluj-Napoca, Romania.
- *Second order differential operators associated with Kantorovich-type operators*, I Jaen Conference on Approximation Theory, July 4–9, 2010, Ubeda, Spain.
- *On a generalization of Kantorovich operators on simplices and hypercubes*, 6th International Conference on Functional Analysis and Approximation Theory FAAT2009, September 24–30, 2009, Acquafredda di Maratea, Italy.
- *Degenerate elliptic operators, Feller semigroups and modified Bernstein-Schnabl operators*, Function Spaces IX, July 6–10, 2009, Krakow, Poland.
- *On a new sequence of positive linear operators in finite-dimensional settings*, Functional Analysis: Methods and Applications FAMA 2008, June 4–7, 2008, Amantea, Italy.
- *Teoremi di tipo Stone-Weierstrass in reticoli regolari di funzioni continue*, XVIII Congresso dell'Unione Matematica Italiana, September 24–29, 2007, Bari, Italy.
- *On some density theorems in regular vector lattices of continuous functions*, XII Meeting on Real Analysis and Measure Theory, July 3–7, 2006, Ischia, Italy.
- *Korovkin-Type theorems in regular vector lattices of continuous functions*, International Conference on Functional Analysis, Operator Theory and Applications, September 19–25, 2005, Mondello, Italy.
- *Korovkin-Type theorems in regular locally convex vector lattices of continuous functions*, 5th International Conference on Functional Analysis and Approximation Theory FAAT 2004, June 16–23, 2004, Acquafredda di Maratea, Italy.
- *Affine projections on adapted subalgebras of continuous functions*, The Wadislaw Orlicz Centenary Conference and Function Spaces VII, July 21–25, 2003, Poznan, Poland.
- *Affine projections on adapted subalgebras of continuous functions*, Operator Theory and Operator Algebras, June 23–28, 2003, Torre Normanna, Italy.
- *Proiettori affini su sottoalgebra adattate di funzioni continue*, Department of Mathematics, Università degli Studi di Bari Aldo Moro, 2002.
- *Positive projections*, Louisiana State University, 2001.

Research Projects

Principal Investigator and Research Coordination

- GNAMPA 2026 Project, *VEL.SAT. – VElocità di convergenza e SATurazione per operatori generati da distribuzioni*, 2026, PI.
- GNAMPA 2024 Project, *Tecniche di approssimazione in spazi funzionali con applicazioni a problemi di diffusione*, 2024, PI.
- Since 2023, Scientific Coordinator of the Research Group *Methods of Functional Analysis and Operator Theory for Differential and Approximation Problems*, University of Bari.
- GNAMPA 2020 Project, *Problemi di approssimazione costruttiva in spazi di funzioni*, 2020, PI.
- FFARB 2017.

Participation in Funded Research Projects

- GNAMPA 2025 Project, *MultiPolExp: Polinomi di tipo esponenziale in assetto multidimensionale e multivoco*, 2025, Researcher.
- GNAMPA 2019 Project, *Approssimazione di semigruppì tramite operatori lineari e applicazioni*, 2019, Researcher.
- GNAMPA 2012 Project, *Metodi della teoria degli operatori per problemi di approssimazione e per equazioni di evoluzione e loro applicazioni*, 2012, Researcher.
- FIRB 2004 Project, *Positive Operators, Evolution Equations and Approximation Problems*, 2004–2005, Researcher.

- PRIN-COFIN 2003 Project, *Operator Theory, Semigroups and Applications to Evolution Equations and Approximation Problems*, 2003–2004, Researcher.
- GNAMPA 2002 Project, *Metodi della teoria degli operatori per equazioni di evoluzione e problemi di approssimazione*, 2002, Researcher.
- Since 2001, member of the Research Group *Methods of Functional Analysis and Operator Theory for Differential and Approximation Problems*, University of Bari.

Academic Affiliations

- 2020-present: Member of the Working Group on Approximation Theory and Applications, Italian Mathematical Union (UMI).
- 2020-present: Member of the Working Group on Licei Matematici, Italian Mathematical Union (UMI).
- 2019-present, Member of Rita, Research Italian network on Approximation.
- 2001-present, Member of GNAMPA (National Group for Mathematical Analysis, Probability and their Applications), Istituto Nazionale di Alta Matematica (INdAM).
- 2001-present, Member of the Unione Matematica Italiana (UMI).

Teaching Experience

Ph. D. Programme

Instructor of record:

- *Positive Semigroups* — Ph.D. in Mathematics, University of Bari Aldo Moro, 2011/2012, 30 hours.

Teaching Assistant:

- *Positive Semigroups and Evolution Problems* — Ph.D. in Mathematics, University of Bari Aldo Moro, 2010/2011, 15 hours.
- *Positive Semigroups and Evolution Problems* — Ph.D. in Mathematics, University of Bari Aldo Moro, 2008/2009, 11 hours.
- *Positive Semigroups and Evolution Problems* — Ph.D. in Mathematics, University of Bari Aldo Moro, 2006/2007, 14 hours.

MSc Degree Programme

Instructor of Record:

- *Semigroup Theory and Applications*, MSc. Degree in Mathematics, 31 hours (3 CFU), 2025/2026;
- *Semigroup Theory and Applications*, MSc. Degree in Mathematics, 32 hours (4 CFU), 2024/2025;
- *Foundations of Mathematics for Data Science*, MSc. Degree in Data Science, 62 hours (6CFU), 2024/2025;
- *Semigroup Theory and Applications*, MSc. Degree in Mathematics, 32 hours (4 CFU), 2023/2024;
- *Foundations of Mathematics for Data Science*, MS.c Degree in Data Science, 32 hours (4CFU), 2022/2023;

Teaching Assistant:

- *Advanced Calculus n. 2*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2022/2023;
- *Advanced Calculus n. 2*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2021/2022;

- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2020/2021;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2019/2020;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2018/2019;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2017/2018;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2016/2017;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 8 hours (1 CFU), 2015/2016;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2014/2015;
- *Advanced Calculus n. 1*, MSc. Degree in Mathematics, 16 hours (2 CFU), 2013/2014;

BSc. Programme

Instructor of Record:

- *Calculus*, BSc. Degree in Computer Science, track-A-D, 86 hours (9 CU), 2025/2026;
- *Calculus*, BSc. Degree in Computer Science, track-A-L, 86 hours (9 CU), 2024/2025;
- *Mathematics with Element of Statistics*, BSc Degree. in BISS, 55 hours (6 CFU), 2023/2024;
- *Calculus*, BSc. Degree in Computer Science, track-A-L, 56 hours (7 CU), 2023/2024;
- *Calculus n. 2*, BSc. Degree in Materials Science, 55 hours (6 CFU), 2022/2023;
- *Mathematics with Element of Statistics*, BSc. Degree in BISS, 52 hours (6 CFU), 2022/2023;
- *Calculus n. 2*, BSc. Degree in Materials Science, 63 hours (7 CFU), 2021/2022;
- *Mathematics with Element of Statistics*, BSc. Degree in BISS, 52 hours (6 CFU), 2021/2022;
- *Mathematics with Element of Statistics*, BSc. Degree in BISS, 52 hours (6 CFU), 2020/2021;
- *Mathematics with Element of Statistics*, BSc. Degree in BIAA, 52 hours (6 CFU), 2019/2020;
- *Mathematics*, BSc. Degree in BICM, 48 hours (5 CFU), 2007/2008;

Teaching Assistant:

- *Calculus n. 3*, BSc. Degree in Mathematics, 38 hours (3 CFU), 2025/2026;
- *Mathematics*, BSc. Degree in Earth Sciences, 16 hours (2 CFU) 2025/2026;
- *Mathematics*, BSc Degree in Earth Sciences,, 32 hours (3 CFU) 2021/2022;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2020/2021;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 23 hours (2 CFU), 2019/2020;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2019/2020;
- *Calculus n. 1*, BSc. Degree in Physics, 23 hours (2 CFU), 2019/2020;
- *An Introduction to Mechanics and Mathematical Analysis* BSc. Degree in Physics, 23 hours (2 CFU), 2018/2019;
- *Calculus n. 1*, BSc. Degree in Physics, 23 hours (2 CFU), 2018/2019;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2018/2019;
- *An Introduction to Mechanics and Mathematical Analysis*, BCs in Physics, 23 hours (2 CFU), 2017/2018;
- *Calculus n. 1*, BSc. Degree in Physics, 22.5 hours (1.5 CFU), 2017/2018;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2017/2018;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. in Physics, 23 hours (2 CFU), 2016/2017;
- *Calculus n. 1*, BSc. Degree in Physics, 25 hours (2 CFU), 2016/2017;
- *Calculus n. 3*, BSc. in Mathematics, 30 hours (2 CFU), 2016/2017;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 23 hours (2 CFU), 2015/2016;
- *Calculus n. 1*, BSc. Degree in Physics, 25 hours (2 CFU), 2015/2016;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2015/2016;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 23 hours (2 CFU), 2014/2015;

- *Calculus n. 1*, BSc. Degree in Physics, 30 hours (2 CFU), 2014/2015;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2014/2015;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 23 hours (2 CFU), 2013/2014;
- *Calculus n. 1*, BSc. Degree in Physics, 30 hours (2 CFU), 2013/2014;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2013/2014;
- *An Introduction to Mechanics and Mathematical Analysis*, BCs in Physics, 16 hours (2 CFU), 2012/2013;
- *Calculus n. 1*, BSc. Degree in Physics, 30 hours (2 CFU), 2012/2013;
- *Calculus n. 3*, BSc. Degree in Mathematics, 30 hours (2 CFU), 2012/2013;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 16 hours (2 CFU), 2011/2012;
- *Calculus n. 1*, BSc. Degree in Physics, 30 hours (2 CFU), 2011/2012;
- *Calculus n. 2*, BSc. Degree in Physics, 15 hours (CFU), 2011/2012;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 18 hours, 2010/2011;
- *Calculus n. 1*, BSc. Degree in Physics, 18 hours, 2010/2011;
- *Calculus n. 3*, BSc. Degree in Mathematics, 32 hours, 2010/2011;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 18 hours, 2009/2010;
- *Calculus n. 1*, BSc. Degree in Physics, 24 hours, 2009/2010;
- *Calculus n. 3*, BSc. Degree in Physics, 18 hours, 2009/2010;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 6 hours, 2008/2009;
- *Calculus n. 1*, BSc. in Physics, 27 hours, 2008/2009;
- *Calculus n. 2*, BSc. Degree in Physics, 15 hours, 2008/2009;
- *Foundations of Mathematics n. 2*, BSc. Degree in Materials Science, 15 hours, 2008/2009;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 6 hours, 2007/2008;
- *Calculus n. 1*, BSc. in Physics, 27 hours, 2007/2008;
- *Calculus n. 2*, BSc. in Physics, 27 hours, 2007/2008;
- *An Introduction to Mechanics and Mathematical Analysis*, BSc. Degree in Physics, 9 hours, 2006/2007;
- *Calculus n. 1*, BSc. in Physics, 27 hours, 2006/2007;
- *Calculus n. 2*, BSc. Degree in Physics, 27 hours, 2006/2007;
- *Calculus n. 1*, BSc. Degree in Physics, 27 hours, 2005/2006;
- *Calculus n. 2*, BSc. Degree in Physics, 27 hours, 2005/2006;
- *Calculus n. 4*, BSc. Degree in Physics, 18 hours, 2005/2006;
- *Calculus n. 2*, BSc. Degree in Physics, 27 hours, 2004/2005;

Academic Service

Professional service

- Member of the National Coordinating Committee of RITA, Research ITalian network on Approximation. 2021–2023.

Review Activity

Reviewer for:

Advances in Operator Theory; Analysis and Mathematical Physics; Annales Polonici Math-

ematici; Annali di Matematica Pura e Applicata; Annals of Functional Analysis; Applicable Analysis and Discrete Mathematics; Applied Mathematics and Computation; Archiv der Mathematik; Bollettino dell'Unione Matematica Italiana; Bulletin of the Malaysian Mathematical Sciences Society; Constructive Approximation; Constructive Mathematical Analysis; Dolomites Research Notes on Approximation; Journal of Approximation Theory; Journal of Fourier Analysis and Applications; Journal of Mathematical Analysis and Applications; Mathematica Slovaca; Mathematical Communications; Mathematical Foundations of Computing; Mathematische Nachrichten; Mediterranean Journal of Mathematics; Positivity; Proceedings of the American Mathematical Society; Rendiconti del Circolo Matematico di Palermo; Results in Mathematics; Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas; Studia Universitatis Babeş-Bolyai Mathematica.

Editorial Activity

- Editorial Assistant for Mediterranean Journal of Mathematics.
- Guest editor for the Special Volume *Recent Advances in Mathematical Analysis* in Trends in Mathematics, Springer, 2023, DOI: <https://doi.org/10.1007/978-3-031-20021-2>, ISSN: 2297-0215.
- Guest editor for the Special Issue *Functional Analysis, Approximation Theory and Numerical Analysis-FAATNA20>22*, in Note di Mat. 43(1) (2023)
- Guest editor for the Special Issue *Functional Analysis, Approximation Theory and Numerical Analysis-FAATNA20>22*, in Dolomites Res. Notes Approx 16(3) (2023).
- Guest editor for the Special Issue *Operator Methods in Approximation Theory*, in Journal of Function Spaces, 2019.

Workshops organization

Member of the *Scientific Committee* of the international conferences:

- 4th International Conference: Constructive Mathematical Analysis, July 01-02, 2026, Selkçuc University, Konja, Turkey;
- International Conference on Approximation Theory and Applications, June, 18-22, 2023 Cetraro, Italy;
- International Conference on Approximation Theory: Methods and Applications ATMA 2023, January 18-20, 2023 Padua, Italy;
- International Conference on Functional Analysis, Approximation Theory and Numerical Analysis FAATNA 20 > 22, July 05-08, 2022, Matera, Italy.

Member of the *Organizing Committee* of the international conferences:

- Workshop on Approximation Theory and Applications, December 5-6, 2024, Bari, Italy;
- International Conference on Functional Analysis, Approximation Theory and Numerical Analysis FAATNA 20 > 22, July 05-08, 2022, Matera, Italy;
- Recent Developements in Mathematical Analysis, ReDiMA 2021, September, 23-24, 2021, Bari, Italy;
- International Workshop on Approximation Theory and Applications, IWATA 2013, September, 12-13, 2013, Rifreddo, Italy;
- Recent Developements in Functional Analysis and Approximation Theory RDFAAT 2011, September, 22-24, 2011, Lecce, Italy;
- 6th International Conference on Functional Analysis and Approximation Theory FAAT 2009, September, 24-30, 2009, Acquafredda di Maratea, Italy.

Administrative Activity

Institutional Roles:

- Student Orientation and Tutoring Representative for the Department of Mathematics at CAOT (Comitato d'Ateneo per l'Orientamento e il Tutorato) since 2019/2020.
- Departmental Delegate for Student Orientation for the Department of Mathematics, since 2018/2019.
- Since 2025, member of the CVD Committee of the Department of Mathematics.
- Project Coordinator of the two-year project (2022-2024) *Scuole in Ste@m*, funded by the Ufficio per l'Attuazione delle Politiche di Genere of Apulia region.
- Coordinator, with Prof. Gulia Dileo, of the Project for the support of inactive and off-track students presented by the Department of Mathematics and funded by the University of Bari (€10.000), 2023.
- Since 2019, member of the A.Q. Committee for the CdS in Mathematics.
- Student Orientation Representative for the Department of Mathematics at CAOT (Comitato d'Ateneo per l'Orientamento e il Tutorato) for 2018/2019.
- Erasmus Agreement coordinator: Selçuk University, Konja, Turkey, and Ulm University, Germany.
- Member of the Academic Board of the PhD Program in Mathematics, University of Bari Aldo Moro, for the 25th, 26th, 27th, and 28th cycles.
- Member of the Academic Board of the PhD Program in Computer Science Mathematics, University of Bari Aldo Moro, for the 29th cycle.
- Member of the Department Council, representing the Researchers' group, for the period 2015–2018.
- Coordinator, with Prof. Luciano Lopez, for the Soft Skill course “Laboratorio Matematico-Informatico II(II Python per il Calcolo Scientifico)”, 2020/2021.
- Coordinator, with Prof. Luciano Lopez, for the Soft Skill course “Il Python per il Calcolo Scientifico”, 2021/22 and 2022/2023.
- Coordinator for the preparatory courses funded by the University of Bari for 2022/2023.
- Coordinator, with Prof. Anna Maria Candela, for the preparatory courses funded by the University of Bari for 2022/2023.
- Coordinator, with Prof. Anna Maria Candela and Prof.ssa Silvia Cingolani, for the preparatory courses funded by the University of Bari for 2024/2025 and 2025/2026.

Academic Selection Committees:

- Member of the evaluation committee for the selection procedure for the recruitment of 1 fixed-term tenure-track university researcher (RTT), Scientific-Disciplinary Group 01/MATH-03 – Mathematical Analysis, Probability, and Mathematical Statistics, Scientific-Disciplinary Sector MATH-03/A – Mathematical Analysis, at the Department of Mathematics and Computer Science, University of Palermo, D.R. no. 9459/2024 dated 24/09/2024.
- Member of the selection committee for the admission competition to the PhD Program in Mathematics at the University of Bari Aldo Moro, 28th Cycle.

Departmental Selection Committees:

- Member of the evaluation committee for the public selection procedure based solely on qualifications for the award of 1 occasional freelance contract within the framework of the Project: CLIO – Cooperative Learning by Historic Outlook.
- Member of the evaluation committee for the selection, based on qualifications, for the award of 2 ordinary tutoring grants to students enrolled at the University of Bari Aldo Moro, for the academic year 2025/2026, for the Department of Mathematics.
- Member of the evaluation committee for the selection, based on qualifications, for the

award of 5 ordinary tutoring grants to students enrolled at the University of Bari Aldo Moro, for the academic year 2023/2024, for the Department of Mathematics.

- Member of the evaluation committee for the selection, based on qualifications, for the award of 6 peer-tutoring grants to students enrolled at the University of Bari Aldo Moro, for the academic year 2022/2023, for the Department of Mathematics
- Member of the evaluation committee for the selection, based on qualifications, for the award of 6 peer-tutoring grants to students enrolled at the University of Bari Aldo Moro, for the academic year 2022/2023, for the Department of Mathematics.
- Member of the evaluation committee for the selection, based on qualifications, for the award of 11 grants to promote tutoring activities for students enrolled at the University of Bari Aldo Moro, for the academic year 2021/2022, for the Department of Mathematics.
- Member of the evaluation committee for the selection, based on qualifications, for the award of 3 grants to promote tutoring activities for students enrolled at the University of Bari Aldo Moro, for the academic year 2020/2021, for the Department of Mathematics.
- Member of the evaluation committee for the selection, based on qualifications, for the award of 4 peer-tutoring grants to students enrolled at the University of Bari Aldo Moro, for the academic year 2021/2022, for the Department of Mathematics..
- Member of the evaluation committee for the selection, based on qualifications, for the award of 2 grants to promote tutoring activities for students enrolled at the University of Bari Aldo Moro, for the academic year 2019/2020, for the Department of Mathematics.
- Member of the evaluation committee for the selection, based on qualifications, for the award of 2 grants to promote tutoring activities for students enrolled at the University of Bari Aldo Moro, for the academic year 2018/2019, for the Department of Mathematics.

Third Mission and Outreach Activities

- Social Media Coordinator for the Department of Mathematics, with Prof. R. Capone and Prof. G. Mancini.
- Since 2023, Member of the Scientific Committee of MuMa, Museo della Matematica.
- Member of the Scientific Committee of Liceo ad Indirizzo Matematico, Università degli Studi di Bari Aldo Moro.
- Participation in the organization of the activities of the Department of Mathematics during multiple editions of the European Researchers' Night.
- Member of the Organizing Committee of *The Unbearable Lightness of Mathematics*, 14–15 March 2023, an initiative of the Department of Mathematics on the occasion of the International Day of Mathematics.
- Member of the Organizing Committee of *Playing with Maths*, 12–13 March 2024, i an initiative of the Department of Mathematics on the occasion of the International Day of Mathematics.
- Member of the Organizing Committee of *Maths, Art and Creativity*, 12-13 March 2025, an initiative of the Department of Mathematics on the occasion of the International Day of Mathematics.
- Member of the Organizing Committee of *Maths and hope*, March 16 2026, an initiative of the Department of Mathematics on the occasion of the International Day of Mathematics.
- Project lead for the *Scuole in STE@M* two-year initiative (2022–2024), funded by the Office for the Implementation of Gender Policies, Apulia Region, including school-based orientation activities.
- Since 2020, involved, on behalf of the Department of Mathematics, in organizing all editions of the *Open Campus* orientation event, hosted by the School of Science and Technology at the University of Bari Aldo Moro.
- Participation, on behalf of the Department of Mathematics, in various orientation events organized by the University of Bari Aldo Moro, including *Orientamento Consapevole*, *Open*

Day, *UniBa è Magistrale*, *Orientation Days*, and the Student Fair.

- Presentation of the Bachelor's and Master's Degree Programme in Mathematics during several outreach meetings with local schools.
- Participation, on behalf of the Department of Mathematics, in several editions of the project "Art&Science Across Italy, Bari stage", promoted by the National Institute for Nuclear Physics (INFN) and CERN, Geneva.
- Seminar *The Golden Ratio*, delivered on 17 March 2021 within the Art&Science Across Italy project.
- Talk *Who's Afraid of R_0 ?* delivered on 27 November 2020 as part of the Department of Mathematics initiatives for the European Researchers' Night 2020.
- Lecture *Mathematical Models in Population Dynamics*, delivered on October 2020 within the professional development course "Liceo ad Indirizzo Matematico", organized by the Department of Mathematics, University of Bari Aldo Moro.
- Member of the Organizing Committee for the first and second editions of *Liceo Matematico Day*.

I hereby declare that the information provided in this curriculum vitae is true and accurate. I authorize the processing of my personal data in accordance with Regulation (EU) 2016/679 (General Data Protection Regulation – GDPR).