Martina **Conte**

Non-tenure track Assistant Professor (RTD-A)

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Profile *I am deeply interested in the study of topics that arise from biological and medical problems, valuing both the modeling and the numerical aspects, as well as the integration of real data in the theoretical framework. I believe in the importance of working in interdisciplinary teams and in the combination of theoretical and experimental knowledge.*

Research Interests *Multiscale modelling of biology and medicine related problems, nonlinear dynamics, kinetic equations, macroscopic limits, imaging and data analysis, numerical simulations.*

Current Position

Non-tenure track Assistant Professor (RTD-A) - SSD MAT/07 Mathematical Physics *Torino, Italy*

Department of Mathematical Sciences "G.L. Lagrange", Politecnico di Torino *April 2025 - Present*

SSD MAT/07 - Mathematical Physics

Past Positions

Postdoctoral Fellow *Parma, Italy*

Department of Mathematical, Physical and Computer Sciences, University of Parma *May 2024 - March 2025*

Project: Mathematical models for eco-sustainable strategies in socio-economic and environmental problems
Supervisor: Prof. Marzia Bisi

GSP Visiting Scholar *Los Angeles, USA*

Department of Computational and Quantitative Medicine, City of Hope *October 2022 - July 2024*

Research group: Mathematical Oncology
Supervisor: Prof. Russell Rockne

Postdoctoral Fellow *Torino, Italy*

Department of Mathematical Sciences "G.L. Lagrange", Politecnico di Torino *July 2021 - May 2024*

Project: NeMaMoB - Nested model in biomedicine
Supervisor: Prof. Andrea Tosin

Postdoctoral Fellow *Granada, Spain*

Department of Applied Mathematics, University of Granada *March 2021 - July 2021*

Project: Mathematical modelling of the relationship between Wnt/β-catenin and Shh-Gli pathways in Glioblastomas
Supervisor: Prof. Juan Soler Vizcaíno

Education

International Ph.D. in Mathematics and Statistics - Highest degree cum laude *Bilbao, Spain*

University of the Basque Country (UPV/EHU) *October 2017 - January 2021*

Thesis: Mathematical models for glioma growth and migration inside the brain
Supervisors: Prof. Luca Gerardo–Giorda (JKU) & Prof. Juan Soler Vizcaíno (Uni. Granada)
Research line: Mathematical and Theoretical Biology at BCAM - Basque Center for Applied Mathematics
Grant: INPhINIT "laCaixa" / Marie Skłowdowska-Curie PhD Fellowship

M.Sc. in Mathematics - 110/110 cum laude *Parma, Italy*

University of Parma *October 2015 - September 2017*

Thesis: A multiscale mathematical model for glioma spread with proliferation and therapy
Supervisors: Prof. Maria Groppi (Uni. Parma) & Prof. Luigi Preziosi (PoliTO)

B.Sc. in Mathematics - 110/110 cum laude *Parma, Italy*

University of Parma *October 2012 - September 2015*

Thesis: Qualitative analysis of a kinetic model for tumor-immune system interaction
Supervisors: Prof. Maria Groppi (Uni. Parma) & Prof. Giampiero Spiga (Uni. Parma)

Publications

Papers in peer review journals

1. M. Conte, M. Groppi, and G. Spiga. Qualitative analysis of kinetic-based models for tumor-immune system interaction. *Discrete & Continuous Dynamical Systems - Series B*, **23(6)** (2018): 2393–2414. Impact Factor: 1.27
2. M. Conte, L. Gerardo–Giorda, and M. Groppi. Glioma invasion and its interplay with nervous tissue and therapy: a multiscale model. *Journal of Theoretical Biology*, **486** (2020): 110088. Impact Factor: 2.691
3. M. Conte, S. Casas-Tintò, and J. Soler. Modeling invasion patterns in the glioblastoma battlefield. *PLoS Computational Biology*, **17(1)** (2021): e1008632. Impact Factor: 4.7
4. M. Conte, and C. Surulescu. Mathematical modeling of glioma invasion: acid- and vasculature mediated go-or-grow dichotomy and the influence of tissue anisotropy. *Applied Mathematics and Computation*, **407** (2021): 126305. Impact Factor: 4.091
5. M. Conte, and N. Loy. Multi-cue kinetic model with non-local sensing for cell migration on a fibers network with chemotaxis. *Bulletin of Mathematical Biology*. **84(42)** (2022). Impact Factor: 1.758
6. M. Conte, Y. Dzierma, S. Knobe, and C. Surulescu. Mathematical modeling of glioma invasion and therapy approaches via kinetic theory of active particles. *Mathematical Models and Methods in Applied Sciences*, **33(5)** (2023): 1009–1051. Impact Factor: 3.803
7. E. Buckwar, M. Conte, and A. Meddah. A stochastic hierarchical model for low grade glioma evolution. *Journal of Mathematical Biology*, **86** (2023): 89. Impact Factor: 2.164
8. M. Conte, and N. Loy. A non-local kinetic model for cell migration: a study of the interplay between contact guidance and steric hindrance. *SIAM Journal on Applied Mathematics*, **84(3)** (2023): S429-S451. Impact Factor: 2.148
9. M. Conte, R. Woodall, M. Gutova, B.T. Chen, M.S. Shiroishi, C.E. Brown, J.M. Munson, and R.C. Rockne. Structural and practical identifiability of contrast transport models for DCE-MRI. *PLoS Computational Biology*, **20(5)** (2024): e1012106. Impact Factor: 4.7
10. M. Conte, V. Cabeza-Fernández, F. J. Oliver, T. Alarcón, and J. Soler. Emergence of cyclic hypoxia and the impact of PARP inhibitors on tumor progression. *npj Systems Biology and Applications*, **10(1)** (2024): 122. Impact Factor: 3.5
11. G. Chiari, M. Conte, and M. Delitala. Multi-scale modeling of SNAIL-mediated response to hypoxia in tumor progression. *Communication in Nonlinear Science and Numerical Simulations*, **145** (2025): 108673. Impact Factor: 3.8
12. M. Conte and R. Travaglini. A kinetic derivation of spatial distributed models for tumor-immune system interactions. *Chaos, Solitons & Fractals*, **200(2)** (2025): 116969. Impact Factor: 5.6
13. M. Conte, A. Xella, R.T. Woodall, K.A. Cassady, S. Branciamore, C. Brown, and R.C. Rockne. CAR T-cell and oncolytic virus dynamics and determinants of combination therapy success for glioblastoma. *Mathematical Biosciences*, **389** (2025): 109531. Impact Factor: 1.8
14. R. Thiessen, M. Conte, T.L. Stepien, and T. Hillen. Go-or-Grow models in biology: a monster on a leash. *Journal of Mathematical Biology*, **91(5)** (2025): 58. Impact Factor: 2.3
15. R.C. Rockne, M. Andersen, A.R.A. Anderson, M. Conte, et al. The future of mathematical oncology in the age of AI. *Systems Biology and Applications*, **12** (2026): 22. Impact Factor: 3.5
16. M. Bisi, M. Conte, and M. Groppi. Kinetic modeling of knowledge and wealth dynamics in national and global markets. Accepted in *Mathematical Models and Methods in Applied Sciences* (2026). Impact Factor: 3.803

Book chapters

17. M. Conte, M. Groppi, and A. Tosin. Kinetic and macroscopic equations for action potential in neural networks. In: d'Onofrio, A., Fasano, A., Papa, F., Sinisgalli, C. (eds) *Problems in Mathematical Biophysics.* SEMA SIMAI Springer Series, **38**, Springer, Cham (2024).
18. N. Loy, and M. Conte. Modeling cell migration in cancer spread as a response to multi-cue heterogeneous environments: a kinetic approach. In: Eftimie, R., Trucu, D. (eds) *Modelling and Computational Approaches for Multi-scale Phenomena in Cancer Research*, World Scientific (2024)
19. M. Bisi, M. Conte, and M. Groppi. Action potential dynamics on heterogeneous neural networks: from kinetic to macroscopic equations. In: Čolić, M., Giesselmann, J., Glück, J., Fijavž, MK., Mugnolo, D., and Mauroy, A. (eds) *Mathematical models for interacting dynamics on networks*, Springer book series "Trends in Mathematics", Birkhäuser, Cham (2026).

Papers under review

20. M. Conte, and N. Loy. A novel linear transport model with distinct scattering mechanisms for direction and speed. (2025)
21. M. Conte, S. Hiremath, and C. Surulescu. Randomness-aware multiscale models of glioma invasion and treatment. (2026)

Fellowships, Grants & Awards

*:upcoming event

Fellowships

*2027	Fellowship to participate in the Hausdorff Junior Trimester Program *"Renewal Equations, PDEs and non-equilibrium systems in biological modelling"* as a Long Term Visitor.	*HIM*
2024	Fellowship to participate in the *Thematic Program on Mathematical Oncology* as a Long Term Visitor.	*Fields Institute*
2022	Fellowship from City of Hope's Global Scholars Program (GSP) to conduct a research period as Visiting Scholar in the Department of Computational & Quantitative Medicine.	*City of Hope*
2022	Fellowship to participate in the Hausdorff Junior Trimester Program *"Stochastic modelling in the life science: From evolution to medicine"* as a Long Term Visitor.	*HIM*
2017	Fellowship from "la Caixa" INPhINIT Fellowship Programme for Doctoral studies at Spanish Research Centres of Excellence. This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłowdowska-Curie grant agreement No. 713673.	*la Caixa Foundat.*

Grants

2025	Funding to organize the workshop "Recent Advances in the Modeling and Analysis of Biological Systems".	*GNFM*
2024	Travel Grant to attend the 19th Biomat International Summer School (Granada)	*GNFM*
2024	Travel grant to attend the 13th European Conference of Mathematical and Theoretical Biology (Toledo)	*ESMTB*
2024	Travel grant to attend the 13th European Conference of Mathematical and Theoretical Biology (Toledo)	*EWM*
2023	Travel grant to attend the ECCOMAS Young Investigators Conference (Porto)	*ESMTB*
2022	Travel grant to attend the 10th IMO Workshop School on Cancer Communities (Tampa, USA)	*IMO*
2022	G-Research travel grant to attend the 27th International Conference on Transport Theory (Bertinoro)	*EWM*
2022	Travel grant to attend the 11th Summer School on "Methods and Models of Kinetic Theory" (Pesaro)	*MMKT*
2020	Travel grant to attend the SIAM Conference on the Life Sciences	*SIAM*
2020	Travel grant to attend the Conference *"Mathematics of Complex Systems in Biology and Medicine"* (Marseille)	*CIRM*
2019	Travel grant to attend the ENABLE Conference (Nijmegen)	*ENABLE*
2019	Travel grant to attend the Conference *"Mathematical Biology on the Mediterranean"* (Samos)	*Uni. Aegean*
2019	Travel grant to attend the Summer School and Workshop (Granada)	*Uni. Granada*
2018	Travel grant to attend the International PhD School on Modeling Nature (Granada)	*Uni. Granada*
2018	Travel grant to attend the Workshop *"Mathematical perspectives in the biology and therapeutics of cancer"* (Marseille)	*CIRM*
2018	Travel grant to attend the Advanced School on Mathematical Modelling of Tumour Growth and Therapy (Barcelona)	*CMR*

Awards

2025	Abilitazione Scientifica Nazionale, II Fascia. G.S.D: 01/MATH-04 - Fisica Matematica	*MUR*
2024	Seal of Excellence for the project "IMTIDy" in the call HORIZON-MSCA-PF-2023	*EU Commission*
2023	Extraordinary Doctoral Awards 2023 for Ph.D. thesis in the area of Science	*Uni. País Vasco*
2022	2021 Reinhart-Heinrich Doctoral Thesis Award for the best doctoral thesis in the area of Mathematical and Theoretical Biology.	*ESMTB*
2021	Honour mention in the Italian edition of the program "*L'Oréal Italia per le Donne e la Scienza*" in collaboration with the Italian National Commission for UNESCO	*Fundation L'Oréal*
2018	Best-poster award, *"Mathematical perspectives in the biology and therapeutics of cancer"* Conference	*CIRM*
2016	Best-student award for the academic year 2015/2016.	*Uni. Parma*

Scientific Communications

*:upcoming event

Invited talks

*08/2026	Invited talk at the Workshop on *Nonlocal Aggregation Models in the Life Sciences*	*Banff*
*08/2026	Invited talk at the Workshop on *Advances in Nonlinear Partial Differential Equations in Biology*	*Victoria BC*
01/2026	MS *"Evolution PDEs in applied sciences"* at the Congress of the *Spanish Mathematical Society (RMSE)*	*Alicante*
09/2025	MS *"Advanced Numerical Methods and Machine Learning Techniques in Applied Science"* at the Congress of the *Italian Society of Applied and Industrial Mathematics*	*Trieste*
07/2024	MS *"Recent advances in modelling cancer invasion"* at the *13th European Conference on Mathematical and Theoretical Biology*	*Toledo*

07/2024 MS *"Mathematical models in oncology: cancer development and treatment optimisation"* at the Conference GIMC-SIMAI Young 2024 — *Napoli*

01/2024 Invited talk at the Workshop on *Modeling, analysis, and control of multi-agent systems across scales* — *Pisa*

11/2023 Invited talk at the Workshop on *Tumor Modeling and simulation* — *RICAM*

09/2023 MS *"Kinetic equations: numerical methods and applications"* at the Congress of the *Italian Society of Applied and Industrial Mathematics* — *Uni. Basilicata*

09/2023 MS *"Mathematical modelling in biology"* at the Congress of the *Italian Society of Applied and Industrial Mathematics* — *Uni. Basilicata*

07/2023 MS *"Data-informed computational models and methods for predicting tumor growth and treatment response,"* at the *17th U. S. National Congress on Computational Mechanics* — *Albuquerque*

06/2023 MS *"Recent advances on modelling and simulations of collective dynamics"* at the ECCOMAS Young Investigators Conference — *Uni. Porto*

06/2023 MS *"Evolutionary dynamics in cancer growth and therapies: a multidisciplinary approach"* at the ECCOMAS Young Investigators Conference — *Uni. Porto*

11/2022 Plenary talk at the 4th BYMAT Conference - Bringing Young Mathematicians Together — *Online*

10/2022 Invited talk at the Conference *Current Trends in Kinetic Theory and Related Models* — *Uni. Parma*

09/2022 Price talk for the 2021 Reinhart-Heinrich Doctoral Thesis Award at the *12th European Conference on Mathematical and Theoretical Biology* — *Heidelberg*

09/2022 MS *"Non-local mathematical models for collective migration: insights from analytical methods"* at the *12th European Conference on Mathematical and Theoretical Biology* — *Heidelberg*

06/2022 Invited talk at BIOMAT 2022 - MNat International School on *"Multiscale Models and Methods in Life Sciences"* — *Uni. Granada*

12/2021 Invited talk at the Young Researcher Conference *Numerical Aspects of Hyperbolic Balance Laws and Related Problems* — *Uni. Verona*

09/2021 MS *"Mathematical models for cell migration"* at the Congress of the *Italian Society of Applied and Industrial Mathematics* — *Uni. Parma*

09/2021 MS *"Recent Results in Kinetic Theory and Applications"* at the Congress of the *Italian Society of Applied and Industrial Mathematics* — *Uni. Parma*

06/2021 MS *"Nonlinear PDEs and its applications in Natural Sciences"* at the Conference *"Differential Equation and Applications / Applied mathematics" (CEDYA-CMA)* — *Gijón*

05/2021 Invited talk at the *Mathematical Biology on the Mediterranean Coast* - Online Conference 2021 — *Online*

05/2021 Invited talk at the BIOMAT 2021 - MNat International School — *Uni. Granada*

07/2017 Invited talk at the Workshop *"Populations in epidemics and ecology: Modelling and numerical simulations"* — *BCAM Bilbao*

Invited seminars

*02/2026 Invited seminar at the Wolfson Centre for Mathematical Biology (WCMB) Group Meeting — *Uni Oxford*

02/2025 Virtual seminar series at the Center for Computational Oncology of University of Texas — *Uni Texas*

01/2025 UCL Mathematical Biology Meetings — *UCL*

01/2025 Invited seminar at the Wolfson Centre for Mathematical Biology (WCMB) Mathematical Oncology Group Meeting — *Uni Oxford*

11/2024 University of Florida Biomathematics Seminar — *Uni Florida*

09/2024 Mathematical Oncology Seminar at Fields Institute — *Toronto*

07/2023 Oberseminar at the *Multiscale and Stochastic Dynamics* Research Group — *Uni Munich*

01/2023 Seminar at the Mathematical Biology Seminar Series — *Uni Alberta*

04/2022 Seminar at the Etheridge Group — *Online*

06/2021 Seminar at the Seminar Series *"Multiscale phenomena in Continuum Mechanics: singular limits, off-equilibrium and transitions"* — *Online*

02/2021 Seminar at the Applied Analysis Group — *Uni. Graz*

02/2021 Seminar at the Department of Mathematical Science "Giuseppe Luigi Lagrange" (DISMA) — *PoliTO*

10/2019 Light Seminar in BCAM - Basque Center for Applied Mathematics — *Bilbao*

05/2019 Seminar at Biomathematics Research Group — *Uni. Kaiserslautern*

Contributed talks

06/2025 XXIII International Conference on Waves and Stability in Continuous Media — *Uni. Parma*

08/2024 The Mathematics of the Hallmarks of Cancer — *Toronto*

06/2024	19th Biomat International Summer School - *Exploring Mathematical Models in Immunology and Innovative Strategies in Immune Cell Reprogramming Therapies*	*Granada*
09/2022	XLVII Summer School on Mathematical Physics	*Ravello*
07/2022	27th International Conference on Transport Theory (ICTT-27)	*Bertinoro*
09/2021	Young women in Partial Differential Equations and applications	*Online*
09/2021	XLVI Summer School on Mathematical Physics	*Ravello*
02/2020	Conference *"Mathematics of Complex Systems in Biology and Medicine"*	*CIRM Marseille*
01/2020	Workshop *"Mathematical modeling of cell migration"*	*Uni. Kaiserslautern*
11/2019	3rd European PhD and Postdoc symposium *"Next-generation life scientists: Side by side to break new ground"*	*Nijmegen*
09/2019	Mathematical Biology on the Mediterranean Conference	*Uni. Aegean*
10/2018	Conference *"Kinetic and Transport Equations: Mathematical Advances and Applications"*	*Uni. Parma*
09/2018	International PhD School on Modeling Nature	*Uni. Granada*
08/2018	CIME-EMS Summer School in Applied Mathematics - The Mathematics of Mechanobiology	*Cetraro*
07/2018	11th European Conference on Mathematical and Theoretical Biology	*Lisbon*
02/2018	9th Workshop *"Dynamical Systems Applied to Biology and Natural Sciences"*	*Uni. Torino*
09/2016	XLI Summer School on Mathematical Physics	*Ravello*

Poster Presentations

02/2023	COH Annual Poster Session	*City of Hope*
11/2022	27th SNO Annual Meeting	*Tampa*
11/2022	10th IMO Workshop on Cancer Communities	*Tampa*
06/2022	11th Summer School on "Methods and Models of Kinetic Theory"	*Pesaro*
04/2022	EMBO workshop *"Long distance cell-cell communication in development and disease"*	*Uni. Exeter*
04/2019	LMS- CMI Research School *"PDEs in Mathematical Biology: Modelling and Analysis"*	*ICMS Edinburgh*
07/2018	Workshop *"Mathematical perspectives in the biology and therapeutics of cancer"*	*CIRM Marseille*
04/2018	School on Mathematical Modelling of Tumour Growth and Therapy	*CRM Barcelona*

Teaching & Mentoring

*:upcoming event

Teaching

Doctoral courses

06/2025	*"Modeling cell Migration in Oriented Environment: Application to Brain Tumors"* - 10 hours	*Uni. Granada*
05/2023	*"Modelling Glioblastoma dynamics - An introduction to multiscale models of glioma invasion"* - 10 hours	*Uni. Granada*

Undergraduate courses

*Spring 2026	Teaching Assistant for the undergraduate course *Linear Algebra* - 20 hours	*PoliTO*
Fall 2025	Teaching Assistant for the undergraduate course *Theoretical Mechanics* - 15 hours	*PoliTO*
Fall 2025	Lecturer for the undergraduate course *"City and Territory" Studio* (Probability and mathematical statistics module) - 20 hours	*PoliTO*
Spring 2025	Teaching Assistant for the undergraduate course *Linear Algebra* - 20 hours	*PoliTO*
Fall 2024	Teaching Assistant for the undergraduate course *Calculus 1* - 60 hours	*PoliTO*
Spring 2024	Teaching Assistant for the undergraduate course *Linear Algebra* - 40 hours	*PoliTO*
Fall 2023	Teaching Assistant for the undergraduate course *Calculus 1* - 60 hours	*PoliTO*
Fall 2016	Teaching Assistant for the undergraduate course *Rational Mechanics* - 25 hours	*Uni. Parma*

Mentoring

On-going	Ph.D Co-supervisor (co-supervised with M. Groppi) of Francesco Maria Mori.	*Uni. Parma*
2025	M.Sc. thesis *"A non-local mathematical model for density-dependent cell migration: from microscopic to macroscopic descriptions"* of F. Mori. Co-supervision with M. Groppi	*Uni. Parma*
2025	M.Sc. thesis *"Identificación de Dinámicas No Lineales en Modelos Biológicos mediante Técnicas de Aprendizaje Automático"* of R. Jalón Michán. Co-supervision with B. Blanco Besteiro	*Uni. Granada*
2024	B.Sc. thesis *"Un modello matematico per la dinamica di tumori immunogenici"* of R. Santoro. Co-supervision with M. Groppi	*Uni. Parma*

Research Visits

*:upcoming event

Long term visits

*01-02/2027	Long Term Visitor at the Hausdorff Research Institute for Mathematics (Bonn), for the Junior Trimester Programs *"Renewal Equations, PDEs and non-equilibrium systems in biological modelling"*
*09/2026	Long Term Visitor at the Beckman Research Institute of City of Hope (California, USA)
02/2026	Long Term Visitor at the Mathematical Institute of University of Oxford (UK)
01-02/2025	Long Term Visitor at the Mathematical Institute of University of Oxford (UK)
08-09/2024	Long Term Visitor of the Thematic Program on Mathematical Oncology at the Fields Institute for Research in Mathematical Sciences (Toronto)
06-07/2023	Visiting scholar at the Beckman Research Institute of City of Hope (California, USA)
10/2022 – 02/2023	Visiting scholar at the Beckman Research Institute of City of Hope (California, USA)
05/2022	Long Term Visitor at the Hausdorff Research Institute for Mathematics (Bonn), for the Junior Trimester Programs *"Stochastic modelling in the life science: From evolution to medicine"*
11/2019 – 01/2020	Ph.D. visiting scholar at the University of Kaiserslautern (Germany)

Short term visits

Short visits in 2023	University of Parma (Italy) hosted by Dr. R. Travaglini and Dr. G. Martalò
05-06/10/2023	Technische Universität München (Germany) hosted by Prof. C. Kuehn
07-11/08/2013	Isaac Newton Institute for Mathematical Sciences (UK), for the programme *"Mathematics of movement: an interdisciplinary approach to mutual challenges in animal ecology and cell biology"*.
17-21/04/2023	University of Minho (Portugal) hosted by Prof. A.J. Pereira Costa Soares and Dott. R. Travaglini.
30-31/01/2023	University of Alberta (Canada) hosted by Prof. T. Hillen.
Short visits in 2019	University of Granada (Spain) hosted by Prof. J. Soler.
26-30/05/2019	University of Kaiserslautern (Germany) hosted by Prof. C. Surulescu.
20-24/05/2019	University of Parma (Italy) hosted by Prof. M. Groppi.

Funded Projects

Principal investigator

08/2025 - 07/2026	*"Multi-species non-Maxwellian Fokker-Planck models inferred from local non-equilibrium distributions"*, founded by the National Group of Mathematical Physics (INdAM - GNFM). *Budget:* 2k €.
04/2025 - 03/2028	*"IMTIDy - Integrated Mathematical approach to Tumor Interface Dynamics"*, founded by the Italian Ministry of University and Research (MUR). *Budget:* 250k €.
01/2023 - 12/2023	*"From kinetic to macroscopic models for tumor-immune system competition"*, founded by the National Group of Mathematical Physics (INdAM - GNFM). *Budget:* 2.5k €.

Member

01/2023- 12/2026	*"Collective Behavior of Multi-Agent System in Fluids, Cell Communication and Tumor Dynamics"*, founded by the Spanish State Research Agency. *PI:* J. Soler. *Budget:* 304.2k €.
01/2020 - 12/2022	*"Modelos matemáticos en comunicación mediada por citonemas y dinámica de glioblastomas"*, founded by the Regional Government of Andalusia. *PI:* J. Soler. *Budget:* 134.7k €.
01/2019 - 12/2022	*"Dinámica de patrones en ecuaciones en derivadas parciales no lineales originadas en mecánica celular y de fluidos"*, founded by the Spanish State Research Agency. *PI:* J. Soler. *Budget:* 116.8k €.
01/2019 – 07/2020	*"MULTIscale modeling with applications in QUANTitative bioscience"*, founded by the Spanish State Research Agency. *PI:* L. Gerardo-Giorda. *Budget:* 44.5k €.
01/2016 - 12/2018	*"Brain ELEctro-METabolic modeling and numerical approximation"*, founded by the Spanish State Research Agency. *PI:* L. Gerardo-Giorda. *Budget:* 61.7k €.
01/2018 - 12/2021	Programme BERC.2018-2021, founded by the Basque Government. *PI:* L. Vega. *Budget:* 4.7M €.
07/2018 - 06/2022	Severo Ochoa SEV-2017-0718, founded by the Spanish State Research Agency. *PI:* L. Vega. *Budget:* 4M€.

Event Organization

*:upcoming event

Scientific Events

*06/2026	Organizing committee for the 21th Biomat International Summer School *"Integrating Mathematical Modeling and Data-Driven Methods for Biological and Medical Sciences"*	*Granada*

02/2026	Organizing committee for the Workshop *"From Micro to Macro in Mathematical Biology: Recent Advances in the Modeling and Analysis of Biological Systems"*	*Torino*
06/2025	Organizing committee for the XXIII International Conference on Waves and Stability in Continuous Media (WASCOM)	*Parma*
02/2021	Organizing committee for DSABNS 2021 - 12th Workshop on *"Dynamical Systems Applied to Biology and Natural Sciences"*	*BCAM Bilbao*
02/2019	Organizing committee for QBIO2019 - Quantitative Biomedicine in Health and Disease	*BCAM Bilbao*

Minisymposia

09/2025	MS *"Multiscale Dynamics of Complex Interacting Systems: Theory, Modeling and Applications"* at the Congress of the *Italian Society of Applied and Industrial Mathematics*	*Trieste*
07/2024	MS *"Modeling and analysis in cell biology: multi-scale perspectives"* at the *13th European Conference on Mathematical and Theoretical Biology*	*Toledo*
09/2023	MS *"Models and Methods for Biomedical Applications"* at the Congress of the *Italian Society of Applied and Industrial Mathematics*	*Uni. Basilicata*

Outreach

01/2026	Teaching assistant for the orientation course for secondary school students "Mathematics and Medicine: Mathematical Models, Numerical Simulations and Statistics for Biomedical Research and Progress"	*Torino*
09/2025	Coordinator of a research laboratory at the European Researchers' Night (UNIGHT)	*Torino*
11/2021-04/2022	Organizing committee for the online seminar series DNFM - *"Divulgazioni Notturne di Fisica Matematica"*	*Online*

Membeships

since 2022	UMI (Unione Mathematica Italiana)
since 2020	SIMAI (Italian Society of Applied and Industrial Mathematics)
since 2020	EWM (European Women in Mathematics)
since 2019	GNFM (Mathematical Physics National Group)
since 2018	ESMTB (European Society for Mathematical and Theoretical Biology)
since 2017	MCAA Marie Curie Alumni Association

Attendences

*:upcoming event

Attended Conferences & Workshops

*08/2026	Workshop on *Nonlocal Aggregation Models in the Life Sciences*	*Banff*
*08/2026	Workshop on *Advances in Nonlinear Partial Differential Equations in Biology*	*Banff*
*07/2026	14th European Conference on Mathematical and Theoretical Biology	*Graz*
01/2026	Congress of the *Spanish Mathematical Society (RMSE)*	*Alicante*
09/2025	Congress of the *Italian Society of Applied and Industrial Mathematics*	*Trieste*
06/2025	XXIII International Conference on Waves and Stability in Continuous Media (WASCOM)	*Parma*
10/2024	Assemblea Scientifica GNFM 2024	*Montecatini*
09/2024	Mathematical Modelling of Cancer Treatments, Resistance, Optimization	*Toronto*
08/2024	The Mathematics of the Hallmarks of Cancer	*Toronto*
07/2024	13th European Conference on Mathematical and Theoretical Biology	*Toledo*
07/2024	Conference GIMC-SIMAI Young 2024	*Napoli*
01/2024	Workshop on *Modeling, analysis, and control of multi-agent systems across scales*	*Pisa*
11/2023	Workshop on *Tumor Modeling and simulation*	*RICAM*
09/2023	Congress of the *Italian Society of Applied and Industrial Mathematics*	*Uni. Basilicata*
08/2023	Workshop on *Collective Behaviour* in the programme *"Mathematics of movement: an interdisciplinary approach to mutual challenges in animal ecology and cell biology"*	*Cambridge*
07/2023	17th U. S. National Congress on Computational Mechanics	*Albuquerque*
06/2023	ECCOMAS Young Investigators Conference	*Uni. Porto*
02/2023	COH Annual Poster Section	*Tampa*

11/2022	27th SNO Annual Meeting	*City of Hope*
11/2022	4th BYMAT Conference - Bringing Young Mathematicians Together	*Online*
11/2022	10th IMO Workshop on Cancer Communities	*Tampa*
10/2022	Current Trends in Kinetic Theory and Related Models	*Parma*
09/2022	European Conference on Mathematical and Theoretical Biology (ESMTB 2022)	*Heidelberg*
09/2022	BioTOMath Conference - Mathematical Challenges in Biology and Medicine	*Turin*
07/2022	27th International Conference on Transport Theory (ICTT-27)	*Bertinoro*
06/2022	BIOMAT 2022 - MNat International School on *"Multiscale Models and Methods in Life Sciences"*	*Uni. Granada*
04/2022	EMBO workshop *"Long distance cell-cell communication in development and disease"*	*Uni. Exeter*
12/2021	Young Researcher Conference *Numerical Aspects of Hyperbolic Balance Laws and Related Problems*	*Uni. Verona*
09/2021	Young women in Partial Differential Equations and applications	*Online*
09/2021	Congress of the *Italian Society of Applied and Industrial Mathematics*	*Uni. Parma*
06/2021	Conference *"Differential Equation and Applications / Applied mathematics" (CEDYA-CMA)*	*Gijón*
05/2021	Mathematical Biology on the Mediterranean Coast - Online Conference 2021	*Online*
05/2021	Seminars BIOMAT 2021 - MNat International School	*Uni. Granada*
02/2021	12th Workshop *"Dynamical Systems Applied to Biology and Natural Sciences"*	*BCAM Bilbao*
02/2020	Conference *"Mathematics of Complex Systems in Biology and Medicine"*	*CIRM Marseille*
01/2020	Workshop *"Mathematical modeling of cell migration"*	*Uni. Kaiserslautern*
12/2019	Challenge Workshop *"Mathematical Modeling of Biomedical Problems"*	*Erlangen*
11/2019	3rd European PhD and Postdoc symposium *"Next-generation life scientists: Side by side to break new ground"*	*Nijmegen*
09/2019	Mathematical Biology on the Mediterranean Conference	*Uni. Aegean*
06/2019	BIOMAT2019 - Patterns in Life and Social Sciences	*Uni. Granada*
02/2019	QBIO2019 - Quantitative Biomedicine in Health and Disease	*BCAM Bilbao*
10/2018	Conference *"Kinetic and Transport Equations: Mathematical Advances and Applications"*	*Uni. Parma*
10/2018	EACR Conference Series - Mechanisms to Therapies: Innovations in Cancer Metabolism	*Bilbao*
07/2018	11th European Conference on Mathematical and Theoretical Biology	*Lisbon*
07/2018	Workshop *"Mathematical perspectives in the biology and therapeutics of cancer"*	*CIRM Marseille*
05/2018	PinEE 2018 - Population in Epidemics and Ecology: Modeling and numerical simulation	*BCAM Bilbao*
02/2018	QBIO2018 - Quantitative Biomedicine in Health and Disease	*BCAM Bilbao*
02/2018	9th Workshop *"Dynamical Systems Applied to Biology and Natural Sciences"*	*Uni. Torino*
07/2017	Workshop *"Populations in epidemics and ecology: Modelling and numerical simulations"*	*BCAM Bilbao*

Attended Courses & Trainings

*06/2026	21th Biomat International School *"Integrating Mathematical Modeling and Data-Driven Methods for Biological and Medical Sciences"*	*Granada*
*06/2026	13th Summer School on "Methods and Models of Kinetic Theory"	*Pesaro*
06/2025	20th Biomat International School *"Biochemical and Biomechanical Mechanisms Driving Tumor Growth"*	*Granada*
06/2024	19th Biomat International School *"Exploring Mathematical Models in Immunology and Innovative Strategies in Immune Cell Reprogramming Therapies"*	*Granada*
06/2024	12th Summer School on "Methods and Models of Kinetic Theory"	*Pesaro*
09/2022	XLVII Summer School on Mathematical Physics	*Ravello*
06/2022	11th Summer School on "Methods and Models of Kinetic Theory"	*Pesaro*
09/2021	XLVI Summer School on Mathematical Physics	*Ravello*
04/2021	Online Hausdorff School *Diffusive Systems: bifurcations, pattern formation and biological applications*	*Online Course*
11/2020	Short Course Series: Mathematics of Porous Media	*Online Courses*
09/2020	"laCaixa" 3rd Annual Gathering's training	*Online Training*
04/2019	LMS- CMI Research School *"PDEs in Mathematical Biology: Modelling and Analysis"*	*ICMS Edinburgh*
04/2019	Course for PhD students *"An introduction to kinetic equations"*	*BCAM Bilbao*
02/2019	"laCaixa" Fellowship Training Programme *"Project pitch competition and workshop"*	*Barcelona*
02/2019	"laCaixa" Fellowship Training Programme *"Effective and Collaborative Researcher Training"*	*Barcelona*
11/2018	Course for PhD students *"Entropy methods in PDE & Kinetic Theory"*	*BCAM Bilbao*
09/2018	International PhD School on Modeling Nature	*Uni. Granada*
08/2018	CIME-EMS Summer School in Applied Mathematics - The Mathematics of Mechanobiology	*Cetraro*
06/2018	Course for PhD students *"Introduction to Mathematical Neuroscience: neuronal models and their bifurcations"*	*BCAM Bilbao*

05/2018	Summer School on Fractional and Other Nonlocal Models	*BCAM Bilbao*
04/2018	School on Mathematical Modelling of Tumour Growth and Therapy	*CRM Barcelona*
11/2017	"laCaixa" Fellowship Training Programme *"Introduction to intellectual property and commercialisation within research"*	*Girona*
11/2017	"laCaixa" Fellowship Training Programme *"Vitae Induction for 'la Caixa' Fellows"*	*Girona*
11/2017	Course for PhD students *"Introduction to mathematical modelling in biosciences"*	*BCAM Bilbao*
10/2017	Course for PhD students *"Introduction to statistical modelling in R"*	*BCAM Bilbao*
09/2016	XLI Summer School on Mathematical Physics	*Ravello*

Skills

Scientific computing skills

Programming languages and software packages: Matlab, C++, SAS

Specialized softwares: FSL, Freesurfer, Freeview, FSLeyes, Paraview, Fiji, Prism

Languages

Italian Mothertongue
English Advanced – IELTS with overall band score 7.0 (CEFR level C1) – 02/2017
Spanish Intermediate – Certificado de Nivel Intermedio B2 – 06/2019