

CHIARA VILLA

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| Languages | Italian, English, French |
| Software | MATLAB, Python, Stan (C++), Fortran90, COMSOL, Maple, R, HTML5 |
| Memberships | European Society for Mathematical and Theoretical Biology (ESMTB), Society for Mathematical Biology (SMB), Société de Mathématiques Appliquées et Industrielles (SMAI), Marie Curie Alumni Association (MCAA) |

ACADEMIC APPOINTMENTS

Current position

11/25 - today **Chargée de recherche CNRS, MAP5, Université Paris Cité**, Paris (FR)

Postdoctoral positions

- 02/25 - 08/25 **Postdoc, Inria Saclay Centre**, Palaiseau (FR)
Postdoctoral researcher in the Inria team MUSCA, project OvoTox/OVOPAUSE
- 01/23 - 12/24 **PRFP postdoc, Laboratoire Jacques-Louis Lions, Sorbonne Université**, Paris (FR)
Laureate of the Paris Region Fellowship Programme (PR and EU MSCA funding)
- 04/22 - 12/22 **Postdoc, Laboratoire Jacques-Louis Lions, Sorbonne Université**, Paris (FR)
Postdoctoral researcher in the group of Prof Benoît Perthame (ERC ADORA funding)

EDUCATION & RESEARCH EXPERIENCE

- 09/18 - 03/22 **PhD, Mathematics, University of St Andrews**, St Andrews (UK)
Supervisors: Prof Mark Chaplain, Dr Tommaso Lorenzi
Thesis: ‘Partial differential equation modelling in cancer and development’
Viva voce examiners: Prof Philip Maini (UniOx), Dr Nikolaos Sfakianakis (UoStA)
- 01/22 - 03/22 Research visit at Institute Henri Poincaré, Paris (FR)
- 2014 - 2018 **MMaths, Applied Mathematics, University of St Andrews**, St Andrews (UK)
Fast Track, First Class Honours awarded. Academic Prizes: Dean’s list (2014-2018), The Principal’s Scholarship for Academic Excellence
- Summer 2017 Undergraduate Summer Research Internship, *University of St Andrews* (UK)
- Summer 2016 Complex Systems Biology Research Internship, *Università degli Studi di Torino* (IT)

SUPERVISION, TEACHING AND MARKING

Supervision of postgraduate students

- 09/23 - today **PhD thesis supervision** (co-encadrante) of Federica Padovano (LJLL, SU)
- 01/23 - 08/23 **Master thesis supervision** of Federica Padovano (EPFL), at LJLL (SU)

Teaching and Marking

All activities of 2017-2022 undertaken with the School of Mathematics and Statistics, University of St Andrews. Teaching activities undertaken with groups of 50 (demonstrating) or 11 (tutoring) students. Feedback on Explanation (E), Organisation (O) and Availability (A) on a scale of 1 (excellent) to 5 (poor).

- Autumn 2020 **MT2000 Computing Workshop**, Demonstrator of computing in Python
- Autumn 2019 **MT2000 Computing Workshop**, Demonstrator of computing in Python
- Autumn 2019 **MT2501 Linear Mathematics**, Tutor of 2 groups (E=1.44, O=1.33, A=1.33)
- Spring 2019 **MT2507 Mathematical Modelling**, Tutor of 2 groups (E=1.45, O=1.85, A=1.45)
- Spring 2019 **MT2507 Mathematical Modelling**, Demonstrator of 3 groups
- Autumn 2018 **MT2503 Multivariate Calculus**, Tutor of 2 groups (E=1.17, O=1.5, A=1.17)
- Autumn 2018 **MT2504 Combinatorics and Probability**, Marking of 100 computing projects
- Autumn 2017 **UK Undergraduate Ambassadors Scheme**, weekly teaching in secondary school (S1, S3, Advanced Higher Maths), *Waid Academy, Anstruther (UK)*

FUNDING, GRANTS AND PRIZES AWARDED

Competitive positions

- 2025 **CNRS Concours Chercheurs 2024**, ranked 1st at the concours de Chargé de recherche de classe normale n° 51/02 of the CNRS CDI51 (affiliation Insmi).
- 2025 **COMPETITION n°9 SIF-CRCN-2025 (INRIA)**, ranked 1st at the concours de Chargés de recherche de classe normale n°9-SIF-CRCN-2025 of the Centre INRIA de Saclay – renounced to join the CNRS on 01/11/25.
- 2025 **MSCA Postdoctoral Fellowships** (EU HORIZON-MSCA-2024-PF-01-01) with the project “Modelling of Epithelial-to-Mesenchymal Transition in Invading Cells” (score: 95.40%, **€260347.92**) – renounced to join the CNRS on 01/11/25.
- 2022 **Paris Region Fellowship Programme** (EU Horizon E2020, MSCA Grant Agreement no 945298-ParisRegionFP) with the proposed project on “Mechanistic models of cell migration and cancer invasion” (**€257760**).

Additional grants

- 2023 **PEPS JCJC** funding awarded by Insmi for the project “Conservative numerical schemes for novel structured PDE models of cancer invasion” with Alexandre Poulain (**€4900**).
- 2023 **BOUM SMAI funding**, MC2D workshop organisation, Paris 10/2023 (**€1000**).
- 2023 **UFR 929 funding**, Sorbonne Université, MC2D workshop organisation (**€1500**).
- 2021 **IHP financial support** for the “Mathematical modeling of organization in living matter” thematic program at the Institute Henri Poincaré during 10/01-01/04 2022 (**€4500**).

Smaller awards

- 2022 **Junior Fellowship** for the participation to the workshop “Parabolic and kinetic models in population dynamics” in Toulouse in September 2022.
- 2020 **SMBdevBio Poster Prize 1**, Society for Mathematical Biology, SMB2020 (**\$250**)
- 2020 **LMS ECR Travel Grant**, London Mathematical Society, 12th ECMTB (**£500**)
- 2018 **The Principal’s Scholarship for Academic Excellence**, prize awarded to the top 50 academically performing students in their final year at the UoStA (**£1000**)
- 2014 - 2018 **The Deans’ list**, annual award for academic excellence by the Deans of the UoStA
- 2017 **Research scholarship**, Undergraduate Summer Research Internship, UoStA (**£1684.29**)

PROFESSIONAL RESPONSIBILITIES

Peer reviewing activity

- 03/21 - today **Journal Peer Reviewer** (12 manuscripts), *PLOS Computational Biology*, *Journal of Mathematical Biology*, *International Journal of Non-Linear Mechanics*, *Bulletin of Mathematical Biology*, *iScience*, *European Journal of Applied Mathematics*, *Mathematical Biosciences*, *European Control Conference 2022*, *Frontiers in Ecology and Evolution*

Mentoring and Representation

- 11/25 - today **Math C pour L stage organiser**, *MAP5, Université Paris Cité*
- 01/23 - 12/24 **Member of ‘Comité Parité’**, *Laboratoire Jacques-Louis Lions, Sorbonne Université*
- 10/22 - 12/24 **Postdoctoral Research Rep**, *Laboratoire Jacques-Louis Lions, Sorbonne Université*
- 09/18 - 06/22 **Mentor in Peer Mentoring scheme** of 4 Undergraduate, 3 Master, 2 PhD students
- 11/20 **Piscopia Society**, *School of Mathematics and Statistics, University of St Andrews*, Testimonial encouraging female/non-binary students considering a PhD in mathematics
- 09/18 - 09/19 **Postgraduate Research Rep & Postgraduate Research Executive Rep**, UoStA
- 09/18 - 09/19 **University of St Andrews Student Rep**, *SMSTC*

SELECTED SCIENTIFIC MEETINGS

Scientific meetings organised

- 06/25 **Minisymposium** ‘Mathematical advances in modelling cancer treatment’, *SMAI 2025*
07/24 **Minisymposium** ‘Recent advances in modelling cancer invasion’, *ECMTB2024*
10/23 **Workshop** ‘**Mathematical challenges in modelling cancer dynamics**’ (~ 50 ppl),
 Laboratoire Jacques-Louis Lions, Sorbonne Université, <https://mc2d.sciencesconf.org/>
09/20 - 12/21 **StAMBio seminar series**, Weekly talks (online) by members of the St Andrews Mathematical Biology research group and international guest speakers
01/20 **Postgraduate Interdisciplinary Mathematics Symposium**, for PhD students of the School of Mathematics and Statistics of the University of St Andrews, *Edzell*
12/19 **Workshop ‘Scottish Mathematical Biology Forum’**, *ICMS, Edinburgh*

Invitations to speak at International Workshops

- Dec 2025 **New trends in mathematical models for biology**, *Institut Henri Poincaré*
Apr 2025 **Young women in Mathematical Biology**, *Bonn University*
Apr 2024 **Mathematical and numerical tools for Oncology**, *Oncolille Institut*
Nov 2023 **Mechanistic models for continuous phenotypic adaptation**, *University of Leeds*
Jun 2023 **Mathematical Biology: Analysis and Application**, *Technische Universität Dresden*
Feb 2023 **Multiscale analysis and methods for PDEs**, *Institute for Mathematical Sciences (SG)*
Oct 2022 **Modelling cell and tissue biomechanics**, *LJLL, Sorbonne University*
Jun 2021 **Soft Tissue Mechanics**, *University of St Andrews*, Online
May 2021 **Mathematical Biology on the Mediterranean Coast**, *LJLL, SU*, Online
Jun 2020 **Interplay between Oncology, Mathematics and Numerics**, *LJLL, Inserm*, Online

Invitations to speak at Conference Mini-symposia:

- Jul 2024 **13th ECMTB**, ‘Modelling heterogeneity, adaptation and evolution in cancer’, *Toledo*
Jul 2024 **ECM**, ‘Mathematical methods for biological problems’, *Sevilla*
Aug 2023 **SIMAI**, ‘Models and methods for biomedical applications’, *Matera*
Sep 2022 **12th ECMTB**, ‘Evolutionary dynamics in structured populations’, *Heidelberg*

Invitations to speak at Seminars:

- Nov 2024 **Séminaire de modélisation mathématique en sciences de la vie et santé**, *LJLL*
May 2024 **Mathematical Biology Seminar**, *University of Leeds*
Apr 2024 **Puissant Lab**, *Saint-Louis Medical Center (Paris)*
May 2023 **The Evolution Seminar**, *Bielefeld University*
Apr 2023 **Analyse Numérique et Équations aux Dérivées Partielles**, *Université de Lille*
Nov 2022 **Synthsys Seminar**, *Centre for Synthetic and Systems Biology, Edinburgh*