

Anna Florio

Curriculum Vitae

Personal Information

Date and place of birth 10/05/1992 at Este (Padua, Italy)
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Address Ceremade, Université Paris Dauphine-PSL
Place du Maréchal de Lattre de Tassigny
75116 Paris (France)

Employment

From September 2021 **Maître de conférences**, *Université Paris Dauphine-PSL*, Analysis Group.
November 2019–August 2021 **Post-doc of Fondation de Sciences Mathématiques de Paris**, *IMJ-PRG and Ceremade*, Paris.

Education

2026 **HDR in Mathematics**, *Université Paris Dauphine-PSL*, Paris.
Title: *Contributions to Low-Dimensional Dynamics: from Reeb flows to universality, through dissipation.*
Referees: *Jacques Féjoz, Vadim Kaloshin, Marco Mazzucchelli.* Jury: *Marie-Claude Arnaud, Patrick Bernard, Sylvain Crovisier, Eva Miranda, Tere Seara.*

2016–2019 **Ph.D. in Mathematics**, *Avignon Université*, Avignon.
Thesis Title: *Asymptotic Maslov Indices.*
Advisor: *Marie-Claude Arnaud*, Co-advisor: *Andrea Venturelli*

2014–2016 **Master degree in Mathematics**, *Università degli Studi di Padova*, Padua.
Thesis Title: *Chain recurrent sets and Lyapunov functions: from Topological Dynamics to Weak KAM Theory.*
Advisor: *Prof. Olga Bernardi*

2011–2014 **Bachelor degree in Mathematics**, *Università degli Studi di Padova*, Padua.
Thesis Title: *Lorenz dynamics-exact reduction systems and applications.*
Advisor: *Prof. Franco Cardin*

Publications and pre-publications

Chaoticity of generic analytic convex billiards, *Inmaculada Baldomà, Anna Florio, Martin Leguil, Tere M.-Seara*, In preparation.

Measure of maximal entropy for H-flows on non-compact manifolds, *Anna Florio, Barbara Schapira, Anne Vaugon*, Preprint, (2025).

On the rigidity of the stable norm and Mather's β function for geodesic flows, *Anna Florio, Martin Leguil, Alfonso Sorrentino*, Preprint, (2025).

Birkhoff attractors for dissipative symplectic billiards, *Luca Baracco, Olga Bernardi, Anna Florio, Alessandra Nardi*, Preprint, (2025).

Livres brisés pour des flots de Reeb en dimension 3, *d'après Colin, Dehornoy et Rechtman, Séminaire Bourbaki*, (2024).

Birkhoff attractors of dissipative billiards, *Olga Bernardi, Anna Florio, Martin Leguil*, To appear in *Ergodic Theory and Dynamical Systems*, (2023).

Vanishing asymptotic Maslov index for conformally symplectic flows, *Marie-Claude Arnaud, Anna Florio, Valentine Roos*, To appear at *Annales Henri Lebesgue*, (2022).

Is every pseudo-orbit of some homeomorphism near an exact orbit of a nearby homeomorphisms?, *Olga Bernardi, Anna Florio, Jim Wiseman*, *Boll. Unione Mat. Ital.* 16, 153-162, (2023).

Steady Euler flows on \mathbb{R}^3 with wild and universal dynamics, *Pierre Berger, Anna Florio, Daniel Peralta-Salas*, *Comm. Math. Phys.* 401, no. 1, 937-983, (2023).

Quantitative conditions for right-handedness, *Anna Florio, Umberto L. Hryniewicz*, To appear in *Annales Scientifiques de l'École Normale Supérieure*, (2021).

A Conley-type function for the strong chain recurrent set, *Olga Bernardi, Anna Florio, Jim Wiseman*, *Topology and its Applications*, Vol. 307, n. 107768, p. 11, (2022).

Smooth conjugacy classes of 3D Axiom A flows, *Anna Florio, Martin Leguil*, Preprint, (2020).

Torsion of instability zones for conservative twist maps on the annulus, *Anna Florio, Patrice Le Calvez*, *Nonlinearity*, Vol. 34, n. 1, p. 411–423, (2021).

On the set of points of zero torsion for negative-torsion maps of the annulus, *Anna Florio*, To appear in *Journal of Modern Dynamics*, (2020).

The generalized recurrent set, explosions and Lyapunov functions, *Olga Bernardi, Anna Florio, Jim Wiseman*, *Journal of Dynamics and Differential Equations*, Vol. 32, n. 4, p. 1797–1817, (2019).

Torsion and Linking number for surface diffeomorphisms, *Anna Florio*, *Mathematische Zeitschrift*, Vol. 292, n.1-2, p. 231–265, (2019).

Existence of Lipschitz continuous Lyapunov function strict outside the strong chain recurrent set, *Olga Bernardi, Anna Florio*, *Dynamical Systems: an International Journal*, Vol. 34, n.1, p. 71–92, (2019).

A Conley-type decomposition of the strong chain recurrent set, *Olga Bernardi, Anna Florio, Ergodic Theory and Dynamical Systems*, Vol. 39, n.5, p.1261–1274, (2019).

Teaching

- 2025–2026 **MCF**, Cours “A review of differential calculus for ODEs and PDEs” (Master 2, Mathematics), Cours “Introduction to Dynamical Systems” (Master 2, Mathematics), CM/TD of Analysis 3 (Second year, Mathematics), Cours of Geometry and Differential Equations (Master 1, Mathematics).
- 2024–2025 **MCF**, Cours “A review of differential calculus for ODEs and PDEs” (Master 2, Mathematics), Cours “Introduction to Dynamical Systems” (Master 2, Mathematics), TD of Analysis 3 (Second year, Mathematics), TD of Geometry and Differential Equations (Master 1, Mathematics).
- 2023–2024 **MCF**, Cours “A review of differential calculus for ODEs and PDEs” (Master 2, Mathematics), TD of Lebesgue Integral and Probability (Third year, Mathematics), TD of Geometry and Differential Equations (Master 1, Mathematics), TD of Deterministic Models and finite probabilities (First Year, Mathematics).
- 2022–2023 **MCF**, TD of Calculus “Pre-rentree” (First year, Mathematics), TD of Lebesgue Integral and Probability (Third year, Mathematics), TD of Geometry and Differential Equations (Master 1, Mathematics).
- 2021–2022 **MCF**, TD of Lebesgue Integral and Probability (Third year, Mathematics).
- 2021 **Vacataire (42h)**, *Université Paris Dauphine*, Paris, TD of Probability (First year).
- 2020 **Vacataire (36h)**, *Sorbonne Université*, Paris, TD of Basic Mathematics (First year).
- 2017–2019 **Monitrice**, *Université d’Avignon et des Pays de Vaucluse*, Avignon, Basic Mathematics (First year, Earth Science), Algebra (First year, Informatics and Physics) and Differential Equations (Third year, Mathematics).
- March–June 2016 **Tutorship in Linear Algebra and Probability**, *Università degli Studi di Padova*, Padua.

Supervision

- 2026 **Yani Ardoun, Diego Bie Miquel, Alexander Temnikov**, *Le modèle de Frenkel-Kontorova*, Mémoire L3.
- 2026 **Bilel Senkez**, *La dynamique des billards convexes*, Stage L2 CPES.
- 2025 **Nibir Hossain**, *Sur le théorème de Gauss-Bonnet*, Mémoire L3.
- 2024–... **Victor Maeght**, *Dynamiques conformes symplectiques*, PhD student, Co-advised with Marie-Claude Arnaud and Jacques Féjóz.
- 2024 **Juan Kurchan**, *Homéomorphismes du cercle*, Mémoire M1.
- 2024 **Aymen Brakhli, Arsene Claustre, Noam Ould Belkacem**, *Étude dynamique du phénomène de synchronisation des lucioles*, Mémoire M1.
- 2023 **Sougata Mahanta**, *Viscosity Solutions of Hamilton-Jacobi equations*, Mémoire M2.

Distinctions

2026 **CRM Chair of Excellence 2026**, *Barcelona (Spain)*.

Invited talks

- October 2026 **ISTA Summer School in Dynamical Systems**, *Strobl (Austria)*.
June 2026 **Rencontre en théorie ergodique**, *Saint Jacut (France)*.
June 2026 **Séminaire Bourbaki**, *IHP Paris (France)*.
May 2026 **Real and Complex Wild Dynamics**, *Tromsø (Norway)*.
February 2026 **Séminaire de Géométrie, Topologie et Dynamique**, *Orsay*.
January 2026 **Stability of Hamiltonian Systems and Beyond**, *Padua (Italy)*.
October 2025 **Visit to Prof. Przemysław Berk**, *Nicolaus Copernicus University in Torun (Poland)*.
October 2025 **Conference on Symplectic Geometry and Dynamics on the occasion of Francois Laudenchach's 80th birthday**, *Nantes (France)*.
August 2025 **Conformal Dynamics and Geometry in Bordeaux**, *Bordeaux (France)*.
July 2025 **Dynamische Systeme**, *MFO Oberwolfach (Germany)*.
May 2025 **ENS Seminar "Raconte-moi"**, *Paris (France)*.
April 2025 **Geometry and Dynamical Systems Seminar**, *Lille (France)*.
March 2025 **Geometry and Topology Seminar (IMJ-PRG)**, *Paris (France)*.
February 2025 **Ergodic Theory Seminar**, *Rennes (France)*.
January 2025 **Infinite-dimensional Geometry: Theory and Applications**, *Vienna (Austria)*.
December 2024 **7th École d'hiver en dynamiques**, *Aussois (France)*.
October 2024 **DynamIST online talk**, *Vienna (Austria)*.
September 2024 **Fluid Dynamics, Geometry and Computer Science in interaction**, *CRM Barcelona (Spain)*.
June 2024 **Workshop on Symplectic Geometry and Anosov Flows**, *Heidelberg (Germany)*.
June 2024 **Séminaire Bourbaki**, *IHP Paris (France)*.
March 2024 **Dynamical systems seminar**, *University of Zurich (Switzerland)*.
October 2023 **7th Brazilian School of Dynamical Systems**, *Universidade Federal do Ceara (UFC), Brazil*.
September 2023 **XXII Congresso dell'Unione Matematica Italiana**, *Pisa, Italy*, Dynamical Systems session.
July 2023 **Dynamische Systeme**, *MFO Oberwolfach (Germany)*.
July 2023 **From smooth to C^0 symplectic geometry: topological aspects and dynamical implications**, *CIRM, Marseille (France)*.
May 2023 **Symplectic Dynamics Conference**, *Rome (Italy)*.
April 2023 **Conference "Dynamics of Anosov systems"**, *CIRM, Marseille (France)*.

- January 2023 **Dynamical Systems Seminar**, *Barcelona (Spain)*.
- November 2022 **Séminaire Rauzy**, *Marseille (France)*.
- October 2022 **Workshop in Geometry and Dynamics**, *Heidelberg (Germany)*.
- September 2022 **Journées Dynamiques à Paris**, *Paris (France)*.
- August 2022 **Workshop “Symplectic Dynamics Beyond Periodic Orbits”**, *Leiden (Holland)*.
- June 2022 **Conference Weak KAM theory—XXV years later**, *Avignon (France)*.
- December 2021 **Geometry Seminar at ICMAT**, *Madrid (Spain)*.
- December 2021 **Séminaire Symplectix**, *IHP, Paris (France)*.
- November 2021 **Two Days in Symplectic Dynamics**, *Bochum (Germany)*.
- November 2021 **Séminaire de Théorie Ergodique**, *Rennes (France)*.
- October 2021 **Séminaire de topologie, géométrie et algèbra**, *Nantes (France)*.
- September 2021 **Hyperbolic and symplectic Dynamics**, *Bochum (Germany)*.
- September 2021 **Séminaire Analyse-Probabilités**, *Ceremade, Université Paris Dauphine, Paris (France)*.
- September 2021 **Workshop on wild dynamics**, *Azores*.
- July 2021 **Dynamische Systeme**, *MFO Oberwolfach (Germany)*.
- June 2021 **Colloque international en l'honneur de Jean-Pierre Marco**, *Online seminar*.
- April 2021 **Resistencia dinamica (online seminar)**, *Brasil*.
- March 2021 **Séminaire de théorie ergodique et systèmes dynamiques**, *LAGA, Université Sorbonne Paris Nord, Paris (France)*.
- February 2021 **Séminaire Géométrie, analyse et dynamique**, *Laboratoire Dieudonné, Nice (France)*.
- February 2021 **Séminaire Analyse-Probabilité**, *Ceremade, Université Paris Dauphine, Paris (France)*.
- February 2021 **A hyperbolic day online**, *Virtual event*.
- December 2020 **Dinamici Day**, *Lecce (Italy)*.
- November 2020 **Séminaire des Systèmes Dynamiques**, *IMJ-PRG, Paris (France)*.
- November 2020 **Séminaire de Géométrie, Topologie et Dynamique**, *Orsay, Paris (France)*.

- September 2020 **Wild dynamical systems**, *Banyuls-sur-mer (France)*, as invited speaker.
- March 2020 **Séminaire Dynamique et Probabilités**, *LAMFA, Amiens (France)*.
- February 2020 **Séminaire Géométrie et Topologie**, *IMJ-PRG, Paris (France)*.
- January 2020 **Séminaire Symplectix**, *IHP, Paris (France)*.
- November 2019 **Paroles aux jeunes chercheur-es en Géométrie et Dynamique**, *Nancy (France)*, as invited speaker.
- October 2019 **Post Graduate Seminar Geometry and Analysis**, *Aachen (Germany)*.
- August 2019 **On the Trail of Women in Mathematics**, *Krakow (Poland)*, as invited speaker.
- June 2019 **Interactions of Symplectic Topology and Dynamics**, *Cortona (Italy)*, as invited speaker.
- April 2019 **Oberseminar Dynamical Systems**, *Ruhr-Universität, Bochum (Germany)*.
- March 2019 **Conference “Real and Complex Dynamics of Hénon’s Maps**, *Yokohama (Japan)*, as invited speaker.
- February 2019 **Séminaire Géométries**, *ICJ, Lyon (France)*.
- February 2019 **Séminaire Géométrie et applications**, *IRMA, Strasbourg (France)*.
- September 2018 **Séminaire Dynamique et Probabilités**, *LAMFA, Amiens (France)*.
- April 2018 **Séminaire de Géométrie, Groupes et Dynamiques**, *UMPA, ENS Lyon (France)*.
- March 2018 **Séminaire de Géométrie Hamiltonienne**, *IMJ-PRG, Paris (France)*.
- November 2017 **Department of Mathematics “Tullio Levi-Civita”**, *University of Padua (Italy)*.
- November 2017 **Forum des Jeunes Mathématicien-ne-s**, *IECL, Nancy (France)*.
- November 2017 **Séminaire de Systèmes dynamiques, Analyse et Géométrie**, *LMA, Avignon (France)*.
- October 2017 **1/2 journée doctorants LMA-BioSP**, *INRA, Avignon (France)*.

Organized conferences and schools

- November 2026 **Journées Dynamiques**, *Paris, France*.
- October 2026 **Workshop DAI IX**, *Pisa (Italy)*.
- June 2026 **ANR CoSyDy Meeting**, *Paris, France*.
- November 2025 **Journées Dynamiques**, *Paris, France*.
- September 2025 **ANR GALS meeting**, *Paris, France*.

- June 2025 **Summer School “Symplectic Dynamics and Topology”**, *Cetraro (Italy)*.
- October 2024 **Journées Dynamiques de l’IMJ-PRG**, *Paris, France*.
- Since April 2024 **DAI Seminar**, *Online seminar*.
- December 2023 **Conference “Surfaces in Banyuls”**, *Banyuls, France*.
- November 2023 **Special session “Dynamical Systems” at Barcelona Mathematical Days**, *Barcelona, Spain*.
- October 2023 **Journées Dynamiques de l’IMJ-PRG**, *Paris, France*.
- Since September 2023 **Séminaire d’Analyse et Probabilités**, *Université Paris Dauphine*.
- May 2023 **School on conformally symplectic dynamics and related fields**, *CIRM, Marseille, France*.
- November 2022 **Paroles aux jeunes chercheuses et chercheurs en Géométrie et Dynamique**, *Paris Orsay, France, GDR Platon*.
- September 2022–September 2024 **One World Dynamics Seminar**, *Online seminar*.
- February 2018 **Recent advances in Hamiltonian dynamics and symplectic topology**, *University of Padua, Italy*.

Scientific activities and Experiences

- Member of National committee CoNRS (2024-2025).**
- Member of selection committees for *Maître de conférences* position**, *Rennes (2023), Lyon (2023), Paris Dauphine (2024), Paris Nord (2024), Bordeaux (2026)*.
- Member of PhD defense committees**, *Donato Scarcella (December 2022), Marianne Ryzdek (December 2024), Skander Charfi (March 2025), Simon Vialeret (June 2025), Roman Moreno (PhD referee, July 2025)*.
- Since 2026 **Referent for MAPPA Master program**, *Université Paris Dauphine*.
- 2025-2026 **Member of the organizing committee of “Stages de troisième”**, *Ceremade, Université Paris Dauphine*.
- 2024-2025 **P.I. of PEPS CNRS project**, *“Jeunes chercheurs et chercheuses”*, 4000 euros.
- Since 2023 **Member of Council of Laboratoire**, *Ceremade, Université Paris Dauphine*.
- Since 2023 **Organization of Analysis and Probability Seminar**, *Ceremade, Université Paris Dauphine*.
- 2023–2027 **Elected member of council of *Gruppo Dinamici* (UMI group)**.
- 2023–2028 **Member of ANR project GALS**, *P.I. Barbara Schapira*.
- Since 2021 **Member of Unione Matematica Italiana**, *Gruppo Dinamici*.

- Since 2021 **Member of gender equality committee**, *Ceremade, Université Paris Dauphine.*
- 2021–2026 **Member of ANR project CoSyDy**, *P.I. Marie-Claude Arnaud.*
- Since 2020 **Referee for scientific journals**, *JEMS, Nonlinearity, Ergodic Theory and Dynamical Systems, Nonlinear Analysis, Journal of Fixed Point Theory and Applications.*
- From 2020 **Reviewer for Mathscinet.**
- August-September 2018 **Program Associate at MSRI (Berkeley, USA)**, *in the program Hamiltonian Systems, from topology to applications through analysis.*
- 2017–2019 **Member of Council of “Laboratoire de Mathématiques d’Avignon”.**
- October 2017 **Organization of the Math stand at “Fête de la Science”.**
- Since 2017 **Member of GDR CNRS Platon Géométrie, dynamique, probabilités.**
- 2017 **Participant at *Progetto Giovani 2017***, *GNFM*, with Prof. Olga Bernardi.
- Since 2016 **Member of *Société Mathématique de France*.**
- Since 2016 **Member of GNFM.**

Attended conferences and schools

- 2023-24-25 **Meeting ANR GALS**, *Rennes, Paris, Lyon, Montpellier.*
- 2021-22-23-24 **Meeting ANR CoSyDy**, *Paris, Strasbourg, Lyon, Nantes.*
- June 2022 **Meeting ANR Fatou**, *Orléans, France.*
- May 2019 **C^0 aspects of symplectic geometry and Hamiltonian dynamics**, *Tel Aviv, Israel.*
- December 2018 **Workshop on Surface Dynamics on the occasion of Patrice Le Calvez’s 60th anniversary**, *Montevideo, Uruguay.*
- August 2018 **Introductory Workshop: Hamiltonian Systems, from topology to applications through analysis**, *MSRI Berkeley, USA.*
- August 2018 **Connections for Women: Hamiltonian Systems, from topology to applications through analysis**, *MSRI Berkeley, USA.*
- April 2018 **Surfaces in Bedlewo**, *Bedlewo, Poland.*
- November 2017 **Forum des Jeunes Mathématicien-ne-s**, *IECL Nancy, France.*
- October 2017 **Conference on Hamiltonian Systems**, *Ascona, Switzerland, organized by the ETH Institute for Theoretical Studies.*
- June 2017 **15th School on Interactions between Dynamical Systems, Geometry and Partial Differential Equations**, *CRM Barcelona, Spain.*
- March 2017 **Doctoral Course, Weak KAM and Aubry-Mather Theory**, Professor Alfonso Sorrentino and Professor Olga Bernardi.
- February 2017 **Winter School in Conservative Dynamics**, *Engelberg, Switzerland, organized by the ETH Insitute for Theoretical Studies.*
- January 2017 **Beyond Hamilton-Jacobi, Last call to Bordeaux**, *University of Bordeaux, Institut de Mathématiques.*

- October 2016 **Surfaces in Luminy**, *Centre International de Rencontres Mathématiques, Marseille.*
- June 2016 **Eleventh meeting on Nonlinear Hyperbolic PDEs and Applications**, *SISSA, Trieste.*
- March 2016 **Analysis and Control on Networks: trends and perspectives**, *Padua.*
- January 2016 **KukulKAM School in Conservative Dynamics**, *Merida (Mexico).*
- November 2015 **Doctoral Course**, *Applications of Canonical Perturbation Theory in Dynamical Astronomy*, Professor Christos Efthymiopoulos.
- July–August 2010 **Scuola Normale Superiore di Pisa Summer Camp**, *Camigliatello Silano (CS).*

Languages

Italian **Mothertongue**
English **Fluent**
French **Fluent**

IELTS Certificate: 8.0 Overall