

Luigi PROVENZANO

PERSONAL DATA

PLACE AND DATE OF BIRTH: Casarano (LECCE), Italy | May 4, 1987
CITIZENSHIP: Italian

CURRENT POSITION

OCT. 2026–PRESENT | **Associate Professor** MATH-02/B - Geometria,
Dipartimento di Matematica e Informatica
Università degli Studi di Cagliari (Italy)
Email: [luigi.provenzano AT unica.it](mailto:luigi.provenzano@unica.it)

PAST POSITIONS

OCT. 2023–OCT. 2026 | **Associate Professor** MATH-02/B - Geometria,
Dipartimento di Scienze di Base e Applicate per l'Ingegneria -SBAI
Sapienza Università di Roma (Italy)
OCT. 2020–OCT. 2023 | **RTDB** MAT/03,
Dipartimento di Scienze di Base e Applicate per l'Ingegneria -SBAI
Sapienza Università di Roma (Italy)
FEB. 2018–JAN. 2020 | **Assegnista di ricerca senior (tipo b)** - PostDoc,
Dipartimento di Matematica "Tullio Levi-Civita", DM
Università degli Studi di Padova (Italy)
JUL. 2016–JAN. 2018 | **Chercheur avancé** - PostDoc,
SB MATH SCI-SB-JS, [SCI-SB-SMA](#)
EPFL - École Polytechnique Fédérale de Lausanne (Switzerland)
MAY 2016–JUN. 2016 | **Collaborateur Scientifique** - PostDoc,
Institut de Mathématiques, Chaire de géométrie différentielle
Université de Neuchâtel (Switzerland)
JAN. 2013–DEC. 2015 | **Ph.D Student**
Dipartimento di Matematica, Università degli Studi di Padova
Padova (Italy)

HABILITATIONS

NOV. 2024 | Abilitazione Scientifica Nazionale I fascia - SC Analisi Matematica,
Probabilità e Statistica Matematica 01/A3 - from 06/11/2024 to 06/11/2035.
JUN. 2022 | Abilitazione Scientifica Nazionale II fascia - SC Geometria e Algebra
01/A2 - from 01/06/2022 to 01/06/2032.
JAN. 2022 | Abilitazione Scientifica Nazionale II fascia - SC Analisi Matematica,
Probabilità e Statistica Matematica 01/A3 - from 31/01/2022 to 31/01/2031.
FEB. 2017 | Qualification 2017 Maître de Conference N.17225302724 (Mathématiques)
- France, Campaign 2017.
FEB. 2017 | Qualification 2017 Maître de Conference N.17226302724 (Mathématiques
appliquées et applications des mathématiques), France, Campaign 2017.

DEGREES AND DIPLOMAS

JAN. 2013–DEC. 2015	Ph.D in MATHEMATICS, Università degli Studi di Padova Supervisor: Prof. Pier Domenico LAMBERTI Ph.D thesis: “On mass distribution and concentration phenomena for linear elliptic partial differential operators”
JAN. 2010–MAR. 2012	Master degree in MATHEMATICS Università degli Studi di Padova Supervisor: Prof. Pier Domenico LAMBERTI Master thesis: “Eigenvalues of harmonic and poly-harmonic operators subject to mass density perturbations”
SEPT. 2006–DEC. 2009	Bachelor degree in MATHEMATICS Università degli Studi di Padova Supervisor: Prof. Pier Domenico LAMBERTI Bachelor thesis: “Sulla dipendenza dello spettro di una membrana vibrante dalla densità di massa”
SEPT. 2001–JUN. 2006	High school degree, Liceo Scientifico “G. C. Vanini” , Casarano (LECCE)

OTHER EXPERIENCES ABROAD

OCT. 2014–JAN. 2015	Research period at the Universidade de AVEIRO , Portugal Ph.D exchange program, supervision of Prof. Matteo Dalla Riva.
MAY 2012–AUG. 2012	Research period at the BCAM of BILBAO, Spain ERC project NUMERIWAVES, supervision of Prof. Enrique Zuazua.
SEPT. 2010–JUN. 2011	Erasmus at Université Denis Diderot-Paris 7 , PARIS, France.

RESEARCH INTERESTS

Geometric analysis, spectral geometry, shape optimization, functional analysis, asymptotic analysis, PDEs on Riemannian manifolds.

RESEARCH ACTIVITY

Optimization problems for eigenvalues in Riemannian geometry. Spectral perturbation problems for elliptic operators, shape optimization and isoperimetric and functional inequalities for the eigenvalues. Geometric estimates for eigenvalues on Riemannian manifolds. Inequalities for sums and Riesz-means of eigenvalues and semiclassical asymptotics. Inequalities for Steklov and Neumann eigenvalues. Higher order Steklov problems and trace theorems. Isoparametric foliations and overdetermined problems. Magnetic Laplacians on surfaces, conformal spectral invariants, isoperimetric inequalities.

PUBLICATIONS

PUBLICATIONS IN SCIENTIFIC JOURNALS

1. F. Gladiali, M. Grossi, L. Provenzano, “*The role of the curvature of a surface in the shape of the solutions to elliptic equations*”, Proc. Lond. Math. Soc., accepted (2026).
2. A. DelaTorre, G. Mancini, A. Pistoia, L. Provenzano, “*Non-degeneracy of the bubble in a fractional and singular 1d Liouville problem*”, J. Funct. Anal., accepted (2026).
3. P.D. Lamberti, L. Provenzano, “ *H^2 -regularity of Steklov eigenfunctions on convex domains via Rellich-Pohozaev identity*”, Rev. Mat. Complut., accepted (2026).
4. F. Ferraresso, L. Provenzano, “*A note on Maxwell’s eigenvalues on thin sets*”, Proc. R. Soc. Edinb., Sect. A, Math., accepted (2026).
5. A. DelaTorre, G. Mancini, A. Pistoia, L. Provenzano, “*A note on the first Steklov eigenvalue on planar domains*”, J. Math. Sci. (N.Y.) 298 (2026), no. 2, 331–339.
6. L. Provenzano, J. Stubbe, “*Sum rules and sharp eigenvalue bounds for compact homogeneous irreducible Riemannian manifolds*”, Ann. Global Anal. Geom. 68 (2025), no. 3, Paper No. 14.
7. A. Enciso, A. Pistoia, L. Provenzano, “*Nonexistence of Courant-type nodal domain bounds for eigenfunctions of the Dirichlet-to-Neumann operator*”, J. Eur. Math. Soc. (2025), doi:10.4171/JEMS/1722.
8. L. Battaglia, A. Pistoia, L. Provenzano, “*On the critical points of Steklov eigenfunctions*”, Ann. Mat. Pura Appl. (4) 204 (2025), no. 5, 1881–1897.
9. P.D. Lamberti, L. Provenzano, “ *H^2 -regularity on convex domains for Robin eigenfunctions with parameter of arbitrary sign*”, J. Math. Sci. (N.Y.) 298 (2026), no. 2, 225–233.
10. B. Colbois, C. Léna, L. Provenzano, A. Savo, “*A reverse Faber-Krahn inequality for the magnetic Laplacian*”, J. Math. Pures Appl. (9) 192 (2024), 103631.
11. L. Provenzano, A. Savo, “*Geometry of the magnetic Steklov problem on Riemannian annuli*”, Commun. Contemp. Math. 27 (2025), no. 7, Paper No. 2550001.
12. M. Grossi, L. Provenzano, “*On the critical points of semi-stable solutions on convex domains of Riemannian surfaces*”, Math. Ann., 389 (2024), no. 4, 3447–3470.
13. B. Colbois, C. Léna, L. Provenzano, A. Savo, “*Geometric bounds for the magnetic Neumann eigenvalues in the plane*”, J. Math. Pures Appl. (9) 179 (2023), 454–497.
14. D. Buoso, P. Luzzini, L. Provenzano, J. Stubbe, “*Semiclassical estimates for eigenvalue means of Laplacians on spheres*”, J. Geom. Anal. 33 (2023), no. 9, 280.
15. P. Luzzini, L. Provenzano, J. Stubbe, “*The first Grushin eigenvalue on cartesian product domains*”, Adv. Calc. Var. 17(2024), no.2, 353–371.
16. F. Ferraresso, L. Provenzano, “*On the eigenvalues of the biharmonic operator with Neumann boundary conditions on a thin set*”, Bull. Lond. Math. Soc. 55(2023), no.3, 1154–1177.
17. B. Colbois, L. Provenzano, A. Savo, “*Isoperimetric inequalities for the magnetic Neumann and Steklov problems with Aharonov-Bohm magnetic potential*”, J. Geometric Analysis, no. 32, art. 285 (2022).
18. B. Colbois, L. Provenzano, “*Neumann eigenvalues of the biharmonic operator on domains: geometric bounds and related results*”, J. Geometric Analysis, vol. 32, article number: 218 (2022).
19. D. Buoso, L. Provenzano, J. Stubbe, “*Semiclassical bounds for spectra of biharmonic operators*”, Rendiconti di Matematica e delle sue Applicazioni (7) 43 (2022), 267–314.

20. L. Provenzano, A. Savo, “*Isoparametric foliations and the Pompeiu property*”, *Mathematics in Engineering* 5 (2022), no.2, 1–27.
21. L. Provenzano, “*Upper bounds for the Steklov eigenvalues of the p -Laplacian*”, *Mathematika*, 68 (2022): 148–162.
22. D. Buoso, P. Luzzini, L. Provenzano, J. Stubbe, “*On the spectral asymptotics for the buckling problem*”, *J. Math. Phys.* 62 (2021), no. 12, Paper No. 121501.
23. B. Colbois, L. Provenzano, “*Conformal upper bounds for the eigenvalues of the p -Laplacian*”, *J. Lond. Math. Soc.* (2) 104 (2021), no. 5, 2128–2147.
24. P.D. Lamberti, L. Provenzano, “*On the explicit representation of the trace space $H^{\frac{3}{2}}$ and of the solutions to biharmonic Dirichlet problems on Lipschitz domains via multi-parameter Steklov problems*”, *Rev. Mat. Complut.* 35(2022), no.1, 53–88.
25. P.D. Lamberti, L. Provenzano, “*On Trace Theorems for Sobolev Spaces*”, *Le Matematiche*, Volume 75, Issue 1 (2020), 137–175.
26. E. Harrell II, L. Provenzano, J. Stubbe, “*Complementary asymptotically sharp estimates for eigenvalue means of Laplacians*”, *Int. Math. Res. Not. IMRN*(2021), no.11, 8405–8450.
27. L. Provenzano, “*Inequalities between Dirichlet and Neumann eigenvalues of the Polyharmonic operators*”, *Proceedings of the American Mathematical Society* 147 (2019), no. 11, 4813–4821.
28. L. Provenzano, J. Stubbe, “*Weyl-type bounds for Steklov eigenvalues*”, *Journal of Spectral Theory* 9 (2019), no. 1, 349–377.
29. D. Buoso, L.M. Chasman, L. Provenzano, “*On the stability of some isoperimetric inequalities for the fundamental tones of free plates*”, *Journal of Spectral Theory* 8 (2018), no. 3, 843–869.
30. M. Dalla Riva, L. Provenzano, “*On vibrating thin membranes with mass concentrated near the boundary: an asymptotic analysis*”, *SIAM Journal on Mathematical Analysis* 50 (2018), no. 3, 2928–2967.
31. B. Colbois, L. Provenzano, “*Eigenvalues of elliptic operators with density*”, *Calculus of Variations and Partial Differential Equations* 57 (2018), no. 2, Art. 36.
32. L. Provenzano, “*A note on the Neumann eigenvalues of the biharmonic operator*”, *Mathematical Methods in the Applied Sciences*, *Math. Methods Appl. Sci.* 41 (2018), no. 3, 1005–1012.
33. P.D. Lamberti, L. Provenzano, “*Neumann to Steklov eigenvalues: asymptotic and monotonicity results*”, *Proceedings of the Royal Society of Edinburgh, Section: A Mathematics*, Volume 147, Issue 2 (2017), 429–447.
34. L. Andreis, D. Barbato, F. Collet, M. Formentin, L. Provenzano, “*Strong existence and uniqueness of the stationary distribution for a stochastic inviscid dyadic model*”, *Nonlinearity*, Volume 29, Issue 3 (2016), 1156–69.
35. D. Buoso, L. Provenzano, “*A few shape optimization results for a biharmonic Steklov problem*”, *J. Differential Equations*, Volume 259, Issue 5 (2015), 1778–1818.
36. P.D. Lamberti, L. Provenzano, “*A maximum principle in spectral optimization problems for elliptic operators subject to mass density perturbations*”, *Eurasian Mathematical Journal*, Volume 4, Issue 3 (2013), 70–83.

PUBLICATIONS IN BOOKS AND PROCEEDINGS

- 37. D. Buoso, L. Provenzano, “*On the eigenvalues of a biharmonic Steklov problem*”, Integral Methods in Science and Engineering, Theoretical and Computational Advances, 81–89, Birkhäuser, (2015).
- 38. P.D. Lamberti, L. Provenzano, “*Viewing the Steklov eigenvalues of the Laplace operator as critical Neumann eigenvalues*”, Current Trends in Analysis and Its Applications, Proceedings of the 9th ISAAC Congress, Kraków 2013 171–178, Birkhäuser, Basel (2015).

SUBMITTED PAPERS

- 39. L. Provenzano, “*Remarks on Weyl-type bounds for Steklov eigenvalues*” (2026).
- 40. C.A. Antonini, F. Pacella, C.C. Polvara, L. Provenzano, “*Regularity results for elliptic equations on cones*” (2026).
- 41. P.D. Lamberti, L. Provenzano, R. Sempio, “*On a shape optimisation problem for Maxwell’s eigenvalues on cuboids*” (2026).
- 42. M. Grossi, L. Provenzano, D. Raom, “*Geometric properties of positive solutions of Lane-Emden problems on convex domains of $\mathbb{S}^2$* ” (2026).
- 43. L. Provenzano, A. Savo, “*On the isoperimetric inequality for the first positive Neumann eigenvalue on the sphere*” (2026).
- 44. M. Michetti, L. Provenzano, A. Savo, “*Isoperimetric inequalities and sharp upper bounds for Aharonov-Bohm eigenvalues on surfaces*” (2026).
- 45. F. Pacella, C.C. Polvara, L. Provenzano, “*Bifurcation from bubbles in nonconvex cones*” (2025) .
- 46. B. Colbois, L. Provenzano, A. Savo, “*Magnetic ground states and the conformal class of a surface*” (2025).

OTHER PUBLICATIONS

- 47. L. Provenzano, “*On mass distribution and concentration phenomena for linear elliptic partial differential operators*”, tesi di dottorato, <http://paduaresearch.cab.unipd.it/9188/>

SCIENTIFIC DISSEMINATION

- 48. P.D. Lamberti, P. Toni, L. Provenzano, “*Nascita di un fungo matematico: dall’esperimento alla dimostrazione rigorosa*”, in the study “*Funghi matematici e Matematica come scienza semi-empirica*”, Nuova Secondaria, Fascicolo 2, October 2021.

ORGANIZATION OF CONFERENCES AND SEMINARS

SEPT. 14-18, 2026	Organizer of the “Workshop on Geometric Analysis and Spectral Theory: a Mediterranean gathering in Cagliari”, Cagliari, with D. Buoso, L. Cossu and D. Impera.
FEB. 2-6, 2026	Organizer of the workshop “Emerging Horizons in Geometric Spectral Theory - an ECR workshop” during the thematic semester “Geometric Spectral Theory and Applications” of INI, Cambridge (UK) with K. Gittins and M. Capoferri.
JUL. 17-18, 2024	Organizer of the mini-symposium “Spectral Geometry and related topics” at ECM, Seville (Spain) with D. Buoso and K. Gittins.
APR. 11-12, 2024	Organizer of the workshop “A Spring Day in Geometric Analysis”, Roma (Italy) with F. Bei and G. Pipoli.
JUN. 4-9, 2023	Organizer of the INDAM meeting “Geometric Analysis and PDE’s”, Cortona (Italy) with G. Besson, D. Impera and A. Savo.
JUN. 13-14, 2022	Assistant in the organization of the workshop “Recent Trends in Geometric Analysis and Spectral Theory”, Roma (Italy).
SEPT. 9-11, 2019	Organizer of the “Workshop on Spectral Geometry and Analysis of Differential Operators”, Padova (Italy) with P.D. Lamberti and P. Musolino.
JUN. 24-28, 2019	Assistant in the organization of the “Mini-courses in Mathematical Analysis 2019”, Padova (Italy).
JUL. 25-29, 2016	Assistant in the organization of the “14th International Conference on Integral Methods in Science and Engineering (IMSE 2016)”, Padova (Italy)
SEPT. 2016–JAN. 2018	Organizer of the cycle of seminars on the topic “SPECTRAL THEORY AND GEOMETRY”, EPFL, with K. Gittins.
NOV. 6–7, 2014	Organizer of the “Perturbation, Elliptic and Parabolic workshop”, Aveiro (Portugal) with M. Dalla Riva.

CONFERENCE TALKS

MARCH 23–27, 2026	Qualitative Aspects of Elliptic PDEs and Beyond, ALGHERO (Italy, invited)
JUNE 16–19, 2026	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
MARCH 23–27, 2026	Geometry of Eigenvalues, CAMBRIDGE, INI (UK, invited)
JULY 26–29, 2025	Analytic and algebraic methods in physics, PRAGUE (Czechia, invited)
JUNE 30–JULY 4, 2025	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
JUNE 16–20, 2025	Geometric Problems in Linear and Nonlinear PDEs, SKYE (UK, invited)
MAY 29–30, 2025	Variational and PDE problems in Geometric Analysis, V, BOLOGNA (Italy, invited)
MAY 19–20, 2025	Qualitative Analysis, ALGHERO (Italy, invited)
SEPT. 3–6, 2024	P.A.T. conference, MATERA (Italy)
JUNE 24–28, 2024	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
MAY 27–29, 2024	Shape Optimization, Geometric Inequalities and Related Topics, LECCE (Italy, invited)
NOV. 6–7, 2023	Differential Geometry Days @PoliTo, TORINO (Italy, invited)
OCT. 2–3, 2023	Chiacchierate Nonlineari, ALGHERO (Italy, invited)
SEPT. 18–22, 2023	Shape Optimization and Isoperimetric and Functional Inequalities, LEVICO TERME (Italy)
JUNE 19–23, 2023	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
JUL. 18–22, 2022	AMS-SMF-EMS Joint International Meeting, GRENOBLE (France, invited)
JUNE 20–24, 2022	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
JUNE 13–14, 2022	Recent Trends in Geometric Analysis and Spectral Theory, ROMA (Italy, invited)
MAY 30–JUN. 3, 2022	Geometric Analysis in Castro, CASTRO - LECCE (Italy, invited)
SEPT. 30–OCT. 4, 2019	Asymptotic Analysis & Spectral Theory, PARIS SUD - ORSAY (France)
SEPT. 23–27, 2019	Shape Optimization and Isoperimetric and Functional Inequalities, LEVICO TERME (Italy)
FEB. 4–8, 2019	XXIX Convegno Nazionale di Calcolo delle Variazioni, LEVICO TERME (Italy)
JUL. 2–7, 2018	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
JUN. 19–23, 2017	Workshop on Geometric Spectral Theory, NEUCHÂTEL (Switzerland, invited)
JUN. 12–16, 2017	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
JUN. 27–JUL. 01, 2016	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
FEB. 8–12, 2016	School and Workshop PDEs and Applications, NAPOLI (Italy)
AUG. 30–SEPT. 1, 2015	Modern Mathematical Methods in Science and Technology (M3ST) 2015, KALAMATA (Greece)
JUL. 6–10, 2015	EquaDiff 2015, LYON (France)
NOV. 6–7, 2014	Perturbation, Elliptic and Parabolic workshop, AVEIRO (Portugal)
OCT. 3–5, 2014	5th Iberian Mathematical Meeting, AVEIRO (Portugal)
JUL. 21–25, 2014	IMSE 2014, KARLSRUHE (Germany)
AUG. 5–10, 2013	Isaac 9th Congress KRAKOW (Poland)

INVITED SEMINARS

JULY 2, 2026	Invited seminar, Università degli Studi di Napoli “Federico II” NAPOLI (Italy)
MAY 5, 2026	Invited seminar “Seminari di Geometria Differenziale e Topologia”, Università degli Studi di Cagliari CAGLIARI (Italy)
JANUARY 14, 2026	Invited seminar “Seminario di Algebra e Geometria”, Department of Mathematics Guido Castelnuovo, Sapienza Università di Roma, ROMA (Italy)
NOVEMBER 18, 2025	Invited seminar “Seminario di Analisi Matematica”, Dipartimento di Matematica e Fisica, Università degli Studi Roma 3, ROMA (Italy)
MAY 8, 2025	Invited seminar “ $P(n)/N(p)$ ”, Department of Mathematics Guido Castelnuovo, Sapienza Università di Roma, ROMA (Italy)
FEBRUARY 11, 2025	Invited seminar “Seminari di Geometria Differenziale e Topologia”, Università degli Studi di Cagliari CAGLIARI (Italy)
FEBRUARY 10, 2025	Invited online seminar “Spectral geometry in the clouds”, Université Laval MONTREAL (Canada), King’s College LONDON and Univ. BRISTOL (UK)
NOVEMBER 19, 2024	Invited seminar “Seminario di Equazioni Differenziali”, Tor Vergata Università degli Studi di Roma ROMA (Italy)
APRIL 22, 2024	Invited online seminar “Spectral geometry in the clouds”, Université Laval MONTREAL (Canada), King’s College LONDON and Univ. BRISTOL (UK)
APRIL 16, 2024	Invited seminary and research stay at Czech Technical University, PRAGUE (Czech Republic)
MAY 19, 2023	Invited seminar “Algebra e Geometria allo SBAI”, Department SBAI, Sapienza Università di Roma, ROMA (Italy)
DECEMBER 16, 2022	Invited seminar, Università Ca’ Foscari, VENEZIA (Italy)
SEPTEMBER 16, 2022	Invited seminar, Università degli Studi di Padova, PADOVA (Italy)
FEBRUARY 28, 2022	Invited seminar “Cardiff Analysis & PDE Seminar”, Cardiff University, CARDIFF (Wales)
NOVEMBER 18, 2021	Invited seminar “Seminario di Algebra e Geometria”, Università degli Studi dell’Aquila, L’AQUILA (Italy)
APRIL 15, 2021	Invited seminar “ $P(n)/N(p)$ ”, Department of Mathematics Guido Castelnuovo, Sapienza Università di Roma, ROMA (Italy)
FEBRUARY 1, 2021	Invited online seminar “Spectral geometry in the clouds”, Université Laval MONTREAL (Canada) and UCL LONDON (UK)
SEPTEMBER 8, 2020	Invited seminar, SBAI, Sapienza Università di Roma, ROMA (Italy)
FEBRUARY 20, 2020	Invited seminar, Politecnico di Torino, TORINO (Italy)
APRIL 10, 2019	Invited seminar, Università di Roma La Sapienza, ROMA (Italy)
MAY 8, 2018	Invited seminar, University of Bern, BERN (Switzerland)
OCTOBER 4, 2016	Invited seminar, Université Paris 13, PARIS (France)
JANUARY 13, 2016	Invited seminar, Université de Neuchâtel, NEUCHÂTEL (Switzerland)
JULY 3, 2015	Invited seminar, Politecnico di Torino, TORINO (Italy)

PARTICIPATION AT INTERNATIONAL CONFERENCES (WITHOUT CONTRIBUTIONS)

JAN. 19–23, 2026	PDEs at Grand Paradis, COGNE (Italy)
JUL. 14–19, 2024	9th European Congress of Mathematics and EWM event, SEVILLE (Spain)
JUN. 3–7, 2024	PDEs at Grand Paradis, COGNE (Italy)
FEB. 26–28, 2024	A conference in classical differential geometry and integrable systems, TORINO (Italy)
SEPT. 18–22, 2023	Shape Optimization and Isoperimetric and Functional Inequalities, LEVICO TERME (Italy)
JUN. 21–25, 2021	Online Mini-courses in Mathematical Analysis, PADOVA (Italy)
SEPT. 14–17, 2020	Online Mini-courses in Mathematical Analysis, PADOVA (Italy)
JUN. 24–28, 2019	Mini-courses in Mathematical Analysis, PADOVA (Italy)
APR. 3–7, 2017	Spectral Days, STUTTGART (Germany)
NOV. 21–25, 2016	Shape optimization and Isoperimetric and Functional Inequalities, CIRM MARSEILLE (France)
SEPT. 17–18, 2015	Modelli Matematici per Ponti Sospesi, TORINO (Italy)
JUN. 22–26, 2015	Mini-Courses in Mathematical Analysis, PADOVA (Italy)
FEB. 9–13, 2015	Spectral theory and shape optimization problems for elliptic PDEs , MILANO (Italy)
FEB. 2–6, 2015	XXV Convegno Nazionale di Calcolo delle Variazioni , LEVICO TERME
JUN. 30– JUL. 4, 2014	First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI , BILBAO (Spain)
JUN. 23–27, 2014	Mini-courses in Mathematical Analysis , PADOVA (Italy)
FEB. 20–21, 2014	Workshop on Partial Differential Equations and Applications , PISA (Italy)
JAN. 27–31, 2014	XIV Convegno Nazionale di Calcolo delle Variazioni, LEVICO TERME (Italy)
NOV. 21–23, 2013	New Trends in Calculus of Variations, NAPOLI (Italy)
SEPT. 23–27, 2013	Workshop in New Trends in Shape Optimization, ERLANGEN (Germany)
SEPT. 5–7, 2013	Third workshop on thin structures , NAPOLI (Italy)
JUN. 10–14, 2013	Mini-courses in Mathematical Analysis , PADOVA (Italy)
JUN. 8–9, 2012	European Finite Element Fair , BILBAO (Spain)
JUN. 13–17, 2011	Mini-courses in Mathematical Analysis , PADOVA (Italy)

SCIENTIFIC VISITS

MAR. 15–APR. 3, 2026	Visit at INI - Cambridge (UK) as participant at the “Geometric Spectral Theory and Applications” program.
FEB. 23–26, 2026	Visit at Università di Padova (Italy).
FEB. 1–14, 2026	Visit at INI - Cambridge (UK) as participant at the “Geometric Spectral Theory and Applications” program.
SEPT. 16–21, 2024	Visit at Université de Neuchâtel (Switzerland)
APR. 14–20, 2024	Visit at Czech Technical University, PRAGUE (Czech Republic)
FEB 5–11, 2023	Visit at EPFL, LAUSANNE (Switzerland) (Switzerland)
FEB 2–7, 2020	Visit at Université de Neuchâtel (Switzerland)
SEPT. 16–22, 2018	Visit at EPFL, LAUSANNE (Switzerland)
MAY 6–10, 2018	Visit at Université de Neuchâtel and EPFL (Switzerland)

TEACHING ACTIVITY

A.A. 2025–2026	Professor of the course “ Geometria ”, 90+30 hours, Sapienza Università di Roma, Bachelor in Aerospace and Mechanics Engineering.
A.A. 2024–2025	Ph.D course “ Spectral Geometry ”, 24 hours (with D. Buoso), Sapienza Università di Roma, Ph.D program in Mathematical Models for Engineering, Electromagnetics and Nanosciences.
A.A. 2024–2025	Professor of the course “ Geometria ”, 90+30 hours, Sapienza Università di Roma, Bachelor in Aerospace and Mechanics Engineering.
A.A. 2023–2024	Professor of the course “ Geometria ”, 90+30 hours, Sapienza Università di Roma, Bachelor in Aerospace and Mechanics Engineering.
A.A. 2022–2023	Professor of the course “ Geometria ”, 90 hours, Sapienza Università di Roma, Bachelor in Aerospace Engineering.
A.A. 2021–2022	Ph.D course “ Spectral geometry of the Laplace operator ”, 12 hours, Sapienza Università di Roma, Ph.D program in Mathematical Models for Engineering, Electromagnetics and Nanosciences.
A.A. 2021–2022	Professor of the course “ Geometria ”, 90 hours, Sapienza Università di Roma, Bachelor in Aerospace Engineering.
A.A. 2020–2021	Professor of the course “ Geometria ”, 90 hours, Sapienza Università di Roma, Bachelor in Mechanical Engineering.
A.A. 2019–2020	Professor of the course “ Analisi Matematica 1 ”, 50 hours Università degli Studi di Padova, Bachelor in Information Engineering.
A.A. 2018–2019	Professor of the course “ Analisi Matematica 1 ”, 40 hours Università degli Studi di Padova, Bachelor in Mechanical Engineering.
A.A. 2017–2018	Assistant for the course “ Analyse Avancée I ”, 56 hours EPFL, Bachelor in Physics.
A.A. 2016–2017	Assistant for the course “ Analyse Avancée I et II ”, 112 hours EPFL, Bachelor in Physics.
A.A. 2015–2016	Teaching assistant for the course “ Analisi Matematica 1 ”, 50 hours Università degli Studi di Padova, Bachelor in Mathematics.
A.A. 2015–2016	Teacher of the “ Precorso di Calcolo ” MOOC of the University of Padova on <i>Iversity</i> and <i>Eduopen</i> .
A.A. 2014–2015	Professor of the course “ Precorso di Matematica ”, 20 hours Università degli Studi di Padova, Bachelor in Statistics.
A.A. 2013–2014	Teaching assistant for the course “ Analisi Matematica 2 ”, 25 hours Università degli Studi di Padova, Bachelor in Mathematics.
APR 1 AND 8, 2016	Teacher of the mini-courses “ Introduzione a Matematica ”, 12 hours
MAY 8 AND 15, 2015	Università degli Studi di Padova, Bachelor in Physics and Astronomy.
2012–2015	Other teaching assistance activities, Università degli Studi di Padova.

RESEARCH PROJECTS AND FUNDINGS

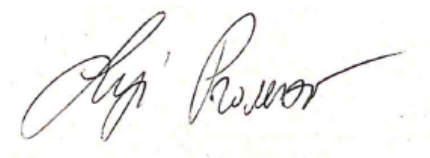
2026	Progetto di Ateneo - Sapienza Università Roma “Geometry, Spectra, and Nonlinear Phenomena in Partial Differential Equations” (P.I.).
2025	Progetto di Ateneo - Sapienza Università Roma “Qualitative aspects of nonlocal partial differential equations” (participant).
2025	Progetto INDAM GNSAGA “Analisi Geometrica e Teoria Spettrale su Varietà Riemanniane ed Hermitiane” (participant).
2024	Progetto di Ateneo - Sapienza Università Roma “Geometric Analysis and Partial Differential Equations” (participant).
2023	Progetto PRIN 2022 “Perturbation problems and asymptotics for elliptic differential equations: variational and potential theoretic methods” (Subst. P.I.).
2023	Progetto INDAM GNSAGA “Analisi Geometrica: Equazioni alle Derivate Parziali e Teoria delle Sottovarietà” (P.I.).
2023	Progetto di Ateneo - Sapienza Università Roma “Geometry of PDE’s on Riemannian manifolds” (P.I.).
2022	Progetto di Ateneo - Sapienza Università Roma “Partial Differential Equations in Analysis and Geometry” (participant).
2021	Progetto di Ateneo - Sapienza Università Roma “Esistenza, unicità e proprietà qualitative di soluzioni di equazioni differenziali su varietà Riemanniane” (participant).
2019	GNAMPA research project (INDAM) “Analisi spettrale per operatori ellittici del secondo e quarto ordine con condizioni al contorno di tipo Steklov o di tipo parzialmente incernierato” (participant).
2019	Research grant Type B - sostegno di ricerche di carattere innovativo e di eccellenza proposte da giovani non strutturati “Eigenvalue bounds for the Laplacian and related operators” (P.I.).
2015	GNAMPA research project (INDAM) “Un approccio funzionale analitico per problemi di perturbazione singolare e di omogeneizzazione” (participant).
2012	ERC advanced grant “NUMERIWAVES” FP7-246775 (participant).
2012	Ph.D scholarship, Università degli Studi di Padova
2012	Progetto di Ateneo - Università degli Studi di Padova “Singular perturbation problems for differential operator” (participant).

THESIS SUPERVISION/DOCTORAL COMMITTEE/OTHER

2024-2025	Supervision of post-doctoral student Marco Michetti (Sapienza Università di Roma)
2025	Supervision of Master student Gianfranco Carnovale (Sapienza Università di Roma)
2023-2026	Co-supervision of Ph.D student Daniel Raom (with M. Grossi, Sapienza Università di Roma)
2024-...	Co-supervision of Ph.D student Rebecca Sempio (with P.D. Lamberti, Università di Padova)
2026	External referee Ph.D thesis of Alain Didier Noutchequeme (Université de Montreal)

LANGUAGES

ITALIAN:	mother tongue
ENGLISH:	fluent
FRENCH:	fluent
SPANISH:	basic
PORTUGUESE:	basic



Updated October 1, 2026.

Il sottoscritto Luigi Provenzano, ai sensi del Dlgs 196/03, autorizza espressamente l'utilizzo dei dati personali e professionali riportati nel curriculum. Il sottoscritto Luigi Provenzano, consapevole che chiunque rilascia dichiarazioni mendaci è punito ai sensi del codice penale e delle leggi speciali in materia, ai sensi degli artt. 46 e 47 del D.P.R. 28 Dicembre 2000, n.445 e successive modificazioni e integrazioni, dichiara che quanto riportato nel presente curriculum corrisponde a verità.