# Giovanni S. Alberti

# Curriculum Vitae

Contact info Machine Learning Genoa Centre (MaLGa)

Department of Mathematics

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Personal Date of Birth: 6<sup>th</sup> August 1987

INFO Nationality: Italian

Languages: English (fluent), French (fluent), Italian (mother tongue)

Employment	2024 - now	University of Genoa, Dept. of Mathematics, full professor
	2022 - 2024	University of Genoa, Dept. of Mathematics, associate professor
	2016 - 2022	University of Genoa, Dept. of Mathematics, assistant professor

 $\begin{array}{ll} 2015-2016 & \hbox{ETH Z\"urich, Department of Mathematics, Postdoc} \\ 2014-2015 & \hbox{\'ecole Normale Sup\'erieure, Paris, DMA, Postdoc} \end{array}$ 

EDUCATION 2011 – 2014 Oxford University, Doctor of Philosophy in Mathematics

2006 – 2011 University of Genoa, BSc+MSc in Maths (110/110 cum laude)

RESEARCH Partial differential equations, inverse problems, functional analysis, applied harmonic analysis, wavelets, compressed sensing, machine learning

GRANTS	2023 - 2026	AFOSR, Co-PI, \$240K
	2023 - 2025	PRIN 2022 PI €190K

2023 – 2025 PRIN 2022, PI, €190K

2021 – 2023 – UniGe BIPE "Promoting Competitiveness", PI, €85K

2020 – 2023 AFOSR, Co-PI, \$253K

2019 – 2021 UniGe starting grant "Curiosity driven", PI, €60K

2016 – 2018 ETH Postdoctoral Fellowship co-funded by ETH and Marie

Curie actions (salary and research funding), PI, CHF 225K

2011 – 2015 EPSRC Doctoral Training Award (University of Oxford)

Honours	2025	Calderón prize (Inverse Problems International Association)
& AWARDS	2021	Abilitazione Professore I Fascia in Analisi Matematica
	2021	Selected for "Emerging Talents 2021" of the journal $Inverse\ Problems$
	2018	Eurasian Association on Inverse Problems Young Scientist Award
	2017	Abilitazione Professore II Fascia in Analisi Matematica
	2017	Premio "Gioacchino Iapichino" per l'Analisi Matematica
	2015	IMA Lighthill-Thwaites Prize Finalist

## Publications Preprints

- [P8] D. Elbrächter, G.S.A. and M. Santacesaria, MAD: Manifold Attracted Diffusion, 2025.
- [P7] G.S.A., E. De Vito, B. Gariboldi and G. Gigante, Sampling theorems for inverse problems on Riemannian manifolds, 2025.
- [P6] G.S.A., D. Lazzaro, S. Morigi, L. Ratti and M. Santacesaria, *Deep Unfolding Network for Nonlinear Multi-Frequency Electrical Impedance Tomography*, 2025.
- [P5] G.S.A., R. Petit and C. Poon, On the non-convexity issue in the radial Calderón problem, 2025.
- [P4] G.S.A., R. Petit and S. Sanna, A convex lifting approach for the Calderón problem, 2025.
- [P3] G.S.A., A. Felisi, M. Santacesaria and S. I. Trapasso, Compressed sensing for inverse problems II: applications to deconvolution, source recovery, and MRI, 2025.
- [P2] G.S.A, E. De Vito, T. Helin, M. Lassas, L. Ratti and M. Santacesaria, *Learning sparsity-promoting regularizers for linear inverse problems*, 2024.
- [P1] R. Alaifari, G.S.A. and T. Gauksson, On  $L^{\infty}$  stability for wave propagation and for linear inverse problems, 2024.

#### Journal articles

- [A36] G.S.A., D. Barnes, A. Jambhale and R. Nickl, On low frequency inference for diffusions without the hot spots conjecture, Math. Stat. Learn. 8, no. 3/4, pp. 305–322, 2025.
- [A35] G.S.A., L. Ratti, M. Santacesaria and S. Sciutto, *Learning a Gaussian Mixture for Sparsity Regularization in Inverse Problems*, IMA J. Numer. Anal., to appear.
- [A34] G.S.A., A. Felisi, M. Santacesaria and S. I. Trapasso, Compressed sensing for inverse problems and the sample complexity of the sparse Radon transform, J. Eur. Math. Soc., to appear.
- [A33] S. Sun and G.S.A, The learned range test method for the inverse inclusion problem, SIAM J. Appl. Math., 85(4), 1881–1905, 2025.
- [A32] G. Wang, Y. Shan, W. Lin, Z. Tian, S. Zhou, G.S.A., B. Detmann, T. Zhou and J. Chen, A lightweight physics-data-driven method for real-time prediction of subgrade settlements induced by shield tunneling, Comput. Aided Civ. Infrastruct. Eng., 40, 3259–3278, 2025.
- [A31] G.S.A., M. Santacesaria and S. Sciutto, *Continuous Generative Neural Networks: A Wavelet-Based Architecture in Function Spaces*, Numer. Func. Anal. Opt., 46(1), 2024.
- [A30] Q. Liu, B. Lv, H. Konietzky, G.S.A., K. S. Lee, C. Zhang, P. Han, L. Wang and Y. Cheng, A Novel Method for Rock Permeability Determination Based on the Pressure Pulse Decay Method and Inverse Numerical Simulations, Rock Mech. Rock Eng., 57, 2024.
- [A29] B. Hu, Y. Shan, Y. Zhao, B. Wang, S. Zhou, G.S.A., W. Ma and B. Detmann, Experimental study on tunneling-induced soil arching evolution in pile-raft foundations, Transp. Geotech., 48, 101340, 2024.
- [A28] G.S.A., J. Hertrich, M. Santacesaria and S. Sciutto, *Manifold Learning by Mixture Models of VAEs for Inverse Problems*, J. Mach. Learn. Res., 25(202),1–35, 2024.
- [A27] G.S.A., R. Petit and M. Santacesaria, *Localization of point scatterers via sparse optimization on measures*, SIAM J. Imaging Sci., 17(3), 619–1649, 2024.
- [A26] R. Alaifari, G.S.A. and T. Gauksson, *Localized adversarial artifacts for compressed sensing MRI*, SIAM J. Imaging Sci., 16(4), SC14–SC26, 2023.
- [A25] G.S.A., Á. Arroyo and M. Santacesaria, Inverse problems on low-dimensional manifolds, Nonlinearity, 36, 734–808, 2023.

- [A24] G.S.A., Non-zero constraints in elliptic PDE with random boundary values and applications to hybrid inverse problems, Inverse Probl. 38, 124005, 2022.
- [A23] G.S.A. and M. Santacesaria, Calderón's Inverse Problem with a Finite Number of Measurements II: Independent Data, Appl. Anal., 101(10), 3636–3654, 2022.
- [A22] G.S.A. and M. Santacesaria, *Infinite-dimensional inverse problems with finite measure-ments*, Arch. Rational Mech. Anal., 243(1), 1–31, 2022.
- [A21] G.S.A. and Y. Capdeboscq, Combining the Runge approximation and the Whitney embedding theorem in hybrid imaging, Int. Math. Res. Notices, 2022(6), 4387–4406, 2022.
- [A20] G.S.A., P. Campodonico and M. Santacesaria, Compressed sensing photoacoustic tomography reduces to compressed sensing for undersampled Fourier measurements, SIAM J. Imaging Sci., 14(3), 1039–1077, 2021.
- [A19] G.S.A. and M. Santacesaria, Infinite dimensional compressed sensing from anisotropic measurements and applications to inverse problems in PDE, ACHA, 50, 105–146, 2021.
- [A18] G.S.A., Y. Capdeboscq and Y. Privat, On the randomised stability constant for inverse problems, Math. in Engineering, 2(2): 264–286, 2020.
- [A17] G.S.A., F. Bartolucci, F. De Mari and E. De Vito, *Unitarization and Inversion Formulae* for the Radon Transform between Dual Pairs, SIAM J. Math. Anal., 51(6), 2019.
- [A16] G.S.A. and M. Santacesaria, Calderón's Inverse Problem with a Finite Number of Measurements, Forum Math. Sigma, 7, e35, 2019.
- [A15] G.S.A., H. Ammari, F. Romero and T. Wintz, *Dynamic Spike Superresolution and Applications to Ultrafast Ultrasound Imaging*, SIAM J. Imaging Sci., 12(3), 1501–1527, 2019.
- [A14] G.S.A., M. Brown, M. Marletta and I. Wood, *Essential spectrum for Maxwell's equations*, Ann. Henri Poincaré, 20(5), 1471–1499, 2019.
- [A13] G.S.A., Hölder regularity for Maxwell's equations under minimal assumptions on the coefficients, Calc. Var. Partial Differential Equations, 57(3), 71, 2018.
- [A12] G.S.A., G. Bal and M. Di Cristo, Critical Points for Elliptic Equations with Prescribed Boundary Conditions, Arch. Rational Mech. Anal., 226(1), 117–141, 2017.
- [A11] G.S.A., S. Dahlke, F. De Mari, E. De Vito and S. Vigogna, *Continuous and discrete frames generated by the evolution flow of the Schrödinger equation*, Anal. Appl., 2017.
- [A10] G.S.A., H. Ammari, F. Romero and T. Wintz, *Mathematical Analysis of Ultrafast Ultra-sound Imaging*, SIAM J. Appl. Math., 77(1), 1–25, 2017.
- [A9] G.S.A. and H. Ammari, Disjoint sparsity for signal separation and applications to hybrid inverse problems in medical imaging, ACHA, 42(2), 319–349, 2017.
- [A8] G.S.A., H. Ammari, B. Jin, J.-K. Seo and W. Zhang, *The Linearized Inverse Problem in Multifrequency Electrical Impedance Tomography*, SIIMS, 9(4), 1525–1551, 2016.
- [A7] G.S.A., Absence of Critical Points of Solutions to the Helmholtz Equation in 3D, Arch. Rational Mech. Anal., 222(2), 879–894, 2016.
- [A6] G.S.A., Enforcing local non-zero constraints in PDEs and applications to hybrid imaging problems, Comm. PDE, 40(10), 1855–1883, 2015.
- [A5] G.S.A., On multiple frequency power density measurements II. The full Maxwell's equations, J. Differ. Equations, 258(8), 2767–2793, 2015.
- [A4] G.S.A. and Y. Capdeboscq, Elliptic regularity theory applied to time harmonic anisotropic Maxwell's equations with less than Lipschitz complex coefficients, SIMA, 46(1), 2014.
- [A3] G.S.A., F. De Mari, E. De Vito and L. Mantovani, Reproducing subgroups of  $SP(2,\mathbb{R})$ . Part II: Admissible Vectors, Monatsh. Math., 173(3), 261–307, 2014.
- [A2] G.S.A., On multiple frequency power density measurements, Inverse Probl., 29(11), 115007, 2013.
- [A1] G.S.A., L. Balletti, F. De Mari and E. D $\eth$  Vito, Reproducing subgroups of  $SP(2,\mathbb{R})$ . Part I: Algebraic Classification, J. Fourier Anal. and Appl., 19(4), 651–682, 2013.

#### **Books**

[B1] G.S.A. and Y. Capdeboscq, Lectures on elliptic methods for hybrid inverse problems, Cours Spécialisés 25, Société Mathématique de France, 2018.

### Book chapters and proceedings

- [C7] G.S.A., E. De Vito, M. Lassas, L. Ratti and M. Santacesaria, *Learning the optimal regularizer for inverse problems*, NeurIPS 2021.
- [C6] G.S.A., F. Bartolucci, F. De Mari and E. De Vito, Radon Transform: Dual Pairs and Irreducible Representations, Appl. Numer. Harmon. Anal., 1–28, 2020.
- [C5] R. Alaifari, G.S.A. and T. Gauksson, *ADef: an Iterative Algorithm to Construct Adversarial Deformations*, ICLR 2019.
- [C4] G.S.A., S. Dahlke, F. De Mari, E. De Vito and H. Führ, Recent Progress in Shearlet Theory: Systematic Construction of Shearlet Dilation Groups, Characterization of Wavefront Sets, and New Embeddings, Appl. Numer. Harmon. Anal., 127–160, 2017.
- [C3] G.S.A. and Y. Capdeboscq, On local non-zero constraints in PDE with analytic coefficients, Contemp. Math., vol. 660, AMS, 2016, pp. 89-97.
- [C2] G.S.A., H. Ammari and K. Ruan, Multi-frequency acousto-electromagnetic tomography, Contemp. Math., vol. 658, AMS, 2016, pp. 67-79.
- [C1] G.S.A. and Y. Capdeboscq, À propos de certains problèmes inverses hybrides, Seminaire: Equations aux Dérivées Partielles. 2013–2014, Exp. No. II. École Polytech.

Professional European Laboratory for Learning and Intelligent Systems (ELLIS)

MEMBERSHIPS Inverse Problems International Association (IPIA)

IFIP working group Inverse Problems and Imaging

Gruppo UMI Matematica per l'intelligenza artificiale e il machine learning Gruppo UMI Matematica delle Immagini, della Visione e delle loro Ap-

plicazioni (MIVA)

Institutional EAIP Young Scientist Award Committee (2022, 2024)

MEMBERSHIPS PhD Committee of Adrian Kirkeby (DTU, Copenhagen, 2019), Francesca Bar-

tolucci (UniGe, 2020), Paolo Massa (UniGe, 2022), Andreas Habring (Univer-

sity of Graz, 2023), Elena Rizzo (UniGe, 2025)

Scientific Committee, PhD in Mathematics and applications, UniGe

EDITOR 2025-now Mathematical Foundations of Machine Learning

2024-now SIAM Journal on Imaging Sciences

2023-now Numerical Functional Analysis and Optimization

2023-now Inverse Problems

2022-now Communications on Analysis and Computation 2019-2021 Inverse Problems in Science and Engineering

Supervision Postdocs

2025-now Nesrine Aroua, Wadim Gerner, Fedor Goncharov

2024-2025 Markus Holzleitner, Dennis Elbrächter

2023-2024 Romain Petit, Anupam Gumber

2020-2023 Luca Ratti (next: ass. prof. at University of Bologna)

2020-2022 S. Ivan Trapasso (next: ass. prof. at Politecnico di Torino)

2019-2020 Ángel Arroyo (next: ass. prof. at University Carlos III of Madrid)

#### PhD students

Simone Sanna (2023-now), Işıl Güleken (2022-now), Alessandro Felisi (2021-2025), Silvia Sciutto (2020-2024), Tandri Gauksson (2018-2024, ETH Zürich)

#### Master's students

Giacomo Traverso (2025), Matteo Arscone (2025), Lorenzo Bozzi (2024), Veronica Raffetto (2024), Lorenzo Sacchi (2023), Simone Sanna (2023), Camilla Casaleggi (2023), Silvia Sciutto (2020), Paolo Campodonico (2019), Luca Di Fazio (2018, co-supervision, University of Catania), Victor Storchan (2015, co-supervision, École Normale Supérieure)

#### Bachelor's students

N. Venerandi (2025), R. Capurro (2025), D. Poli (2025), M. Pesce (2025), R. Bertolini (2024), L. Finotti (2023), G. Traverso (2023), M. Arscone (2022),
S. Buzzo (2022), S. Sanna (2021), M. Bertuzzo (2021), F. Papallo (2020), L. Bozzi (2020), B. Ravera (2020), M. Baracchini (2019), E. Dellepiane (2019),
D. Parodi (2019), S. Sciutto (2018)

ORGANISATION	9/2026	Applied Harmonic Analysis and Machine Learning, $UniGe$
	9/2024	Applied Harmonic Analysis and Machine Learning, UniGe
	6/2023	INdAM Workshop on Learning for Inverse Problems, INdAM, Rome
	5/2022	XLI Convegno di Analisi Armonica, University of Genoa
	5/2022	Electrical Impedance Tomography: Theory and Applications, IPMS
	3/2022	Data-Driven Methods in Inverse Problems & Imaging, SIAM IS
	9/2019	Applied Harmonic Analysis and Machine Learning, <i>UniGe</i>
	7/2019	Compressed Sensing meets Inverse Problems, AIPC 2019
	5/2018	Direct and Inverse Problems for Maxwell's Equations, IPMS 2018
	7/2017	Summer School on Applied Harmonic Analysis, University of Genoa
Conference	7/2026	IMSE 2026, University of Basilicata
TALKS	7/2026	Foundations of Computational Mathematics, University of Vienna
	7/2026	AIMS Conference, University of Athens
	5/2026	Inverse Problems in PDEs and Geometry, Cortona, Italy
	7/2025	Applied Inverse Problems Conference, FGV EMAp, Rio de Janeiro
	6/2025	Inverse Problems in Milan, University of Milan
	12/2024	AIMS Conference, NYU Abu Dhabi
	12/2024	Tomography Across the Scales Meeting, Obergurgl, Austria
	10/2024	Deep Learning for PDE-based Inverse Problems, MFO Oberwolfach
	9/2024	Statistical aspects of non-linear inverse problems, Cambridge, UK
	7/2024	AMS-UMI Joint Meeting, University of Palermo, Italy
	5/2024	XLIII Convegno nazionale di analisi armonica, University of Padua

- 5/2024 International Conference on Elliptic and Parabolic Problems, Gaeta
- 2/2024 SIAM conference on Uncertainty Quantification, Trieste, Italy
- 1/2024 Inverse Problems in the Physical Sciences, Puerto Varas, Chile
- 12/2023 CoMFoS23: Mathematical Aspects of Continuum Mechanics 2023
- 11/2023 Control Methods in Hyperbolic PDEs, MFO Oberwolfach
- 9/2023 Congresso UMI 2023, University of Pisa
- 9/2023 Applied Inverse Problems Conference (plenary speaker), Göttingen
- 7/2023 Deep Learning for Computational Physics (keynote speaker), UCL
- 6/2023 Leveraging model- and data-driven methods in medical imaging, BIRS, UBC Okanagan
- 5/2023 MATH + X Symposium on Dynamos, Planetary Exploration and General Relativity, Inverse Problems and Machine Learning, Hella
- 2/2023 2023 BASP Frontiers workshop, Villars-sur-Ollon Switzerland
- 12/2022 Inverse problems in the desert, New York University Abu Dhabi
- 12/2022 Recent advances in direct and inverse problems for PDEs and applications, Sapienza University of Rome
- 11/2022 Inverse problems on large scales, RICAM, Linz Austria
- 10/2022 PICOF 2022 (plenary speaker), Caen France
- 9/2022 MIA-MIVA workshop, Université Côte d'Azur
- 3/2022 SIAM Conference on Imaging Science
- 11/2021 Statistical aspects of non-linear inverse problems, Banff Canada
- 9/2021 Chemnitz Symposium on Inverse Problems 2021, Klagenfurt
- 9/2021 IFIP TC7 Conference on System modeling and optimization, Quito
- 9/2021 SIMAI 2020, University of Parma
- 3/2021 Tomographic Reconstructions and their Startling Applications, ESI
- 9/2020 Inverse Problems for PDEs: A one day webinar in occasion of the  $65^{\rm th}$  birthday of Sergio Vessella
- 7/2020 SIAM Conference on Imaging Science
- 6/2020 Convegno Nazionale di Analisi Armonica, University of Bologna
- 9/2019 Dynamics, Equations and Applications 2019, AGH UST, Kraków
- 7/2019 Applied Inverse Problem Conference, University of Grenoble
- 6/2019 Reconstruction Methods for Inverse Problems, Banff Canada
- 5/2019 Inverse Problems and Machine Learning Workshop, CRM, Montreal
- 5/2019 Spring Workshop on Computational Mathematics, Statistics and Machine Learning, *University of Pavia*
- 1/2019 Operators, Operator Families, and Asymptotics II, Bath UK
- 6/2018 SIAM Conference on Imaging Science, Bologna
- 5/2018 Reconstruction Methods in Inverse Problems, INDAM, Rome
- 5/2018 Inverse Problems: Modeling & Simulation (plenary speaker), Malta
- 3/2018 Inverse Problems, Imaging and PDEs, IAS, Hong Kong
- 1/2018 Trends in Hybrid Data Tomography, DTU, Copenhagen
- 7/2017 Radon meets Bell and Maxwell, RICAM, Linz Austria
- 5/2017 Applied Inverse Problem Conference, Hangzhou China
- 4/2017 Inverse Problems Network Meeting 1, Cardiff University
- 3/2017 100 Years of the Radon Transform, RICAM, Linz Austria
- 2/2017 INdAM Workshop on Biomedical Imaging, Sapienza, Rome

6/2016 PICOF 2016, Autrans – France 3/2016 New trends in Hybrid Ultrasonic Imaging, Orléans – France 11/2015 Inverse Problems Workshop, Marseille – France 11/2015 Compressive Sensing and Sparsity: Theory and Applications in Tomography, University of Manchester 10/2015 Mathematics for Imaging Workshop, ETH Zürich 7/2015 EquaDiff 2015, Université Claude Bernard Lyon 1 6/2015 Hybrid Methods in Imaging, Banff – Canada 5/2015 Applied Inverse Problem Conference, University of Helsinki 3/2015 British Applied Mathematics Colloquium, University of Cambridge 3/2015 Real and complex manifolds: geometry, topology and harmonic analysis, Scuola Normale Superiore di Pisa 12/2014 Inverse Days 2014, Tampere – Finland 8/2014 Imaging, Multi-scale and high contrast PDEs, NIMS – Korea 7/2014 The 10 <sup>th</sup> AIMS Conference on Dynamical Systems, Differential Equations and Applications, Universidad Autónoma de Madrid 7/2014 Hybrid imaging and multi-modal imaging, Manchester University 7/2014 Young Researchers in Mathematics, Université Fourier – Grenoble 2/2014 Problèmes Inverses et Imagerie, Institut Henri Poincaré – Paris 1/2014 6 <sup>th</sup> South West Regional PDE Winter School, Oxford University 7/2013 Applied Inverse Problem Conference, KAIST – Korea  INVITED 1/2025 Geilo Winter Schools in eScience, Geilo, Norway COURSES 7/2015 PhD School on Hybrid Data Tomography, DTU, Copenhagen 4/2017 Spring School in Analysis, Polish Academy of Sciences 2/2017 INdAM Workshop on Biomedical Imaging, Sapienza, Rome
12/2015 Inverse Problems Workshop, Marseille – France 11/2015 Compressive Sensing and Sparsity: Theory and Applications in Tomography, University of Manchester 10/2015 Mathematics for Imaging Workshop, ETH Zürich 7/2015 EquaDiff 2015, Université Claude Bernard Lyon 1 6/2015 Hybrid Methods in Imaging, Banff – Canada 5/2015 Applied Inverse Problem Conference, University of Helsinki 3/2015 British Applied Mathematics Colloquium, University of Cambridge 3/2015 Real and complex manifolds: geometry, topology and harmonic analysis, Scuola Normale Superiore di Pisa 12/2014 Inverse Days 2014, Tampere – Finland 8/2014 Imaging, Multi-scale and high contrast PDEs, NIMS – Korea 7/2014 The 10 <sup>th</sup> AIMS Conference on Dynamical Systems, Differential Equations and Applications, Universidad Autónoma de Madrid 7/2014 Hybrid imaging and multi-modal imaging, Manchester University 7/2014 Young Researchers in Mathematics, University of Warwick 6/2014 Workshop Imagerie Multi-Ondes, Université Fourier – Grenoble 2/2014 Problèmes Inverses et Imagerie, Institut Henri Poincaré – Paris 1/2014 6 <sup>th</sup> South West Regional PDE Winter School, Oxford University 7/2013 Applied Inverse Problem Conference, KAIST – Korea  INVITED 1/2025 Geilo Winter Schools in eScience, Geilo, Norway COURSES 1/2025 Advanced Numerical Methods for Machine and Deep Learning, University of Ferrara 1/2018 PhD School on Hybrid Data Tomography, DTU, Copenhagen 4/2017 Spring School in Analysis, Polish Academy of Sciences
11/2015 Compressive Sensing and Sparsity: Theory and Applications in Tomography, University of Manchester  10/2015 Mathematics for Imaging Workshop, ETH Zürich  7/2015 EquaDiff 2015, Université Claude Bernard Lyon 1 6/2015 Hybrid Methods in Imaging, Banff - Canada 5/2015 Applied Inverse Problem Conference, University of Helsinki 3/2015 British Applied Mathematics Colloquium, University of Cambridge 3/2015 Real and complex manifolds: geometry, topology and harmonic analysis, Scuola Normale Superiore di Pisa 12/2014 Inverse Days 2014, Tampere - Finland 8/2014 Imaging, Multi-scale and high contrast PDEs, NIMS - Korea 7/2014 The 10 <sup>th</sup> AIMS Conference on Dynamical Systems, Differential Equations and Applications, Universidad Autónoma de Madrid 7/2014 Hybrid imaging and multi-modal imaging, Manchester University 7/2014 Young Researchers in Mathematics, University of Warwick 6/2014 Workshop Imagerie Multi-Ondes, Université Fourier - Grenoble 2/2014 Problèmes Inverses et Imagerie, Institut Henri Poincaré - Paris 1/2014 6 <sup>th</sup> South West Regional PDE Winter School, Oxford University 7/2013 Applied Inverse Problem Conference, KAIST - Korea  INVITED 1/2025 Geilo Winter Schools in eScience, Geilo, Norway COURSES 1/2018 PhD School on Hybrid Data Tomography, DTU, Copenhagen 4/2017 Spring School in Analysis, Polish Academy of Sciences
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7/2015 EquaDiff 2015, Université Claude Bernard Lyon 1 6/2015 Hybrid Methods in Imaging, Banff - Canada 5/2015 Applied Inverse Problem Conference, University of Helsinki 3/2015 British Applied Mathematics Colloquium, University of Cambridge 3/2015 Real and complex manifolds: geometry, topology and harmonic analysis, Scuola Normale Superiore di Pisa 12/2014 Inverse Days 2014, Tampere - Finland 8/2014 Imaging, Multi-scale and high contrast PDEs, NIMS - Korea 7/2014 The 10 <sup>th</sup> AIMS Conference on Dynamical Systems, Differential Equations and Applications, Universidad Autónoma de Madrid 7/2014 Hybrid imaging and multi-modal imaging, Manchester University 7/2014 Young Researchers in Mathematics, University of Warwick 6/2014 Workshop Imagerie Multi-Ondes, Université Fourier - Grenoble 2/2014 Problèmes Inverses et Imagerie, Institut Henri Poincaré - Paris 1/2014 6 <sup>th</sup> South West Regional PDE Winter School, Oxford University 7/2013 Applied Inverse Problem Conference, KAIST - Korea  INVITED 1/2025 Geilo Winter Schools in eScience, Geilo, Norway COURSES 1/2025 Advanced Numerical Methods for Machine and Deep Learning, University of Ferrara 1/2018 PhD School on Hybrid Data Tomography, DTU, Copenhagen 4/2017 Spring School in Analysis, Polish Academy of Sciences
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4/2017 Spring School in Analysis, Polish Academy of Sciences
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2/2017 INdAM Workshop on Biomedical Imaging, Sapienza, Rome
Seminars 10/2025 International Zoom Inverse Problems Seminar
12/2024 Data-Enabled Science Seminar, University of Houston
11/2024 Imperial College London
11/2024 Applied Mathematics Seminar, University of Warwick
11/2024 Harmonic Analysis E-Seminars
2/2024 Statistics Seminar, University of Cambridge
5/2023 Collegio Fonda, Trieste
5/2023 Webinar on Scientific Machine Learning, NYCU, Taiwan
11/2022 Analysis seminar, University of Milan
9/2022 IAS Program on Inverse Problems, Imaging and PDEs, HKUST
4/2022 UMI AI&ML&MAT
3/2022 Partial Differential Equation and Applications Seminar, Warwick
3/2022 Seminari di Matematica Applicata, University of Pavia
3/2022 Machine Learning Seminar, Italian Institute of Technology
1/2022 Applied Analysis Seminar, University of Heidelberg

12/2021	OneWorld IMAGINE seminar
10/2021	Mathematics Colloquium, New York University Abu Dhabi
10/2021	Analysis & PDE Seminar, Cardiff University
3/2021	Inverse Problems Seminar Series, UCL – London
1/2021	Mathematical Methods in the Theory of Electromagnetism, Padua
4/2019	Colloquium in Applied and Computational Math., ETH Zürich
10/2018	PDE CDT Lunchtime Seminar, University of Oxford
7/2018	Analysis Seminar, University of Catania
6/2018	Differential Equations and Applications, University of Padua
5/2018	Seminar of Calculus of Variations and PDEs, University of Florence
4/2018	D.A.T.A & Crostata Seminars, University of Genoa
10/2016	Analysis Seminar, Politecnico di Milano
10/2016	PDE Seminar, Université de Lorraine
6/2016	Analysis Seminar, Università di Trieste
10/2015	Inverse Problems Seminar Series, $\mathit{UCL}$ – $\mathit{London}$
6/2015	Inverse Problems Seminar, IHP – Paris
2/2015	Applied Harmonic Analysis Seminar, Università di Genova
11/2014	ENS Analysis Seminar, ENS – Paris
10/2014	Maths for Imaging Seminar, ENS – Paris
5/2014	OxPDE Lunchtime Seminar, University of Oxford
3/2014	MACSI Seminar Series, University of Limerick
11/2013	Graduate Seminar, St Peter's College – Oxford University
2/2013	MIDA Seminar, Università di Genova
1/2013	OxPDE Junior Seminar, Oxford University

 ${\bf Teaching} \qquad \qquad {\bf See \ rubrica.unige.it/personale/VkNCXl9s}$