Antonio De Rosa Curriculum Vitae

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Academic Positions

2023-2024 **Associate Professor (with tenure)** *(on leave for academic year 2023-2024)*
Department of Mathematics, University of Maryland, College Park, MD, USA.

Assistant Professor Department of Decision Sciences and BIDSA, Bocconi University, Milano, Italy.

2020-2023 **Assistant Professor**
Department of Mathematics, University of Maryland, College Park, MD, USA.
Other affiliations:
Applied Mathematics & Statistics, and Scientific Computation program (AMSC), UMD.
Department of Decision Sciences and BIDSA, Bocconi University, Milano, Italy. (Fall 2021)

2017-2020 **Assistant Professor/Courant Instructor**
Courant Institute of Mathematical Sciences, New York University, New York, NY, USA.

Education

2014-2017 **Ph.D. in mathematics** - University of Zurich.
Advisors: *Prof. Camillo De Lellis* and *Prof. Guido De Philippis.*
Thesis: *Anisotropic energies in geometric measure theory.*
Awarded with *Distinction* and money prize (1.000 Chf).

2013-2014 **Master's in mathematics** : PDEs and Scientific Computing - University "Paris-Sud", Orsay.
Advisors: *Prof. Antonin Chambolle* and *Prof. Benoît Merlet.*
Thesis: *Continuous solutions for the divergence equation* - Grade : *Bien.*

Stage of Research (1/3/2014-30/6/2014) - CMAP - "Ecole Polytechnique" - CNRS, France.

2012-2014 **Master's in mathematics** - University of Naples "Federico II".
Advisor: *Prof. Bianca Stroffolini.*
Thesis: *Continuous solutions for the divergence equation* - Grade : *110/110 cum laude.*

2009-2012 **Bachelor's in mathematics** - University of Naples "Federico II".
Advisor: *Prof. Massimiliano Berti.*
Thesis: *Conservation Laws and Transport Phenomena* - Grade : *110/110 cum laude.*

Research interests

Calculus of variations, geometric measure theory, partial differential equations,
geometric analysis, and optimal transport.

Grants ($\sim$ 3M USD)

2023-2028 ERC Starting Grant 2022, number 101076411 (1.492.700 EUR) - Single PI:
ANGEVA: Anisotropic geometric variational problems: existence, regularity and uniqueness.

2023-2026 AFOSR grant FA9550-23-1-0123 (389.135 USD) - Co-PI with Aida Khajavirad:
Air Force Office of Scientific Research - Mathematical Optimization Program,
Novel Optimization Algorithms for Data Science Applications.

2022-2027 NSF DMS CAREER Award 2143124 (450.000 USD) - Single PI:
Existence, regularity, uniqueness and stability in anisotropic geometric variational problems.

2022-2024 NSF DMS Award 2149913 (480.525 USD) - I am one of 6 Senior Personnel:
REU: Modern topics in pure and applied mathematics - PIs are M. Cameron and W. Czaja.

2019-2022 NSF DMS Award 1906451-2112311 (124.242 USD) - Single PI:
Anisotropic energy functionals in geometric analysis.

2019-2021 AMS Simons travel grant (4.000 USD) - Single PI.

2016 GRC Grant 2016_Q3_G04, University of Zurich (9.896 CHF) - I was one of 6 Co-PIs.

Prizes

2023 2023 Maryland Research Excellence.

2019 Carlo Ciliberto Prize 2019 (1.500 EUR): for researchers in Mathematical Analysis.

2017 PhD thesis Distinction of the Science Faculty of the University of Zurich (1.000 CHF).

2013 Excellence Master Fellowship of the "Fondation mathematique Jacques Hadamard" (10.000 EUR).

2012 Bachelor's full scolarship.

2009 Prize of the Italian Ministry of Education for high school diploma cum laude.

2009 Honourable mention at the XXV National Mathematical Olympiad.

Other recognitions

2023 Abilitazione Scientifica Nazionale, Prima Fascia, Settore Concorsuale 01/A3.

2020 Abilitazione Scientifica Nazionale, Seconda Fascia, Settore Concorsuale 01/A3.

2019 US Junior Oberwolfach Fellow.

2018 US Junior Oberwolfach Fellow.

2018 Qualification as "Maître de conférences" in Sections 25-26.

2017 Oberwolfach Leibniz Graduate Student (OWLG).

Publications

Journal publications

1. A. De Rosa, and R. Neumayer. Local Minimizers of the Anisotropic Isoperimetric Problem on Closed Manifolds. **Indiana University Mathematics Journal** (2024). *Arxiv:2308.04565*.
2. G. De Philippis, and A. De Rosa. The anisotropic Min-Max theory: Existence of anisotropic minimal and CMC surfaces. **Communications on Pure and Applied Mathematics** (2024), 77(7): 3184-3226.
3. A. De Rosa, and R. Resende. Boundary regularity for anisotropic minimal Lipschitz graphs. **Communications in Partial Differential Equations** (2023), 49(1-2): 15-37.
4. A. De Rosa, and A. Khajavirad. Efficient Joint Object Matching via Linear Programming. **Mathematical Programming** (2023), 202: 1-46.
5. A. De Rosa, and R. Tione. Regularity for graphs with bounded anisotropic mean curvature. **Inventiones mathematicae** (2022), 230: 463-507.
6. A. De Rosa, and A. Khajavirad. The ratio-cut polytope and K-means clustering. **SIAM Journal on Optimization** (2022), 32(1): 173-203.
7. M. Colombo, A. De Rosa, A. Marchese, P. Pegon, and A. Prouff. Stability of optimal traffic plans in the irrigation problem. **Discrete and Continuous Dynamical Systems** (2022), 42(4):1647-1667.
8. A. De Rosa, and L. Lussardi. On the anisotropic Kirchhoff-Plateau problem. **Mathematics in Engineering** (2022), 4(2): 1-13.
9. M. Colombo, A. De Rosa, and A. Marchese. On the well-posedness of branched transportation. **Communications on Pure and Applied Mathematics** (2021), 74(4): 833-864.
10. A. De Rosa, and S. Gioffrè. Absence of bubbling phenomena for non convex anisotropic nearly umbilical and quasi Einstein hypersurfaces. **Journal für die reine und angewandte Mathematik** (2021), 2021(780): 1-40.
11. A. De Rosa, and D. A. La Manna. A nonlocal approximation of the Gaussian perimeter: Gamma convergence and Isoperimetric properties. **Communications on Pure and Applied Analysis** (2021), 20(5): 2101-2116.
12. A. De Rosa, S. Kolasinski, and M. Santilli. Uniqueness of critical points of the anisotropic isoperimetric problem for finite perimeter sets. **Archive for Rational Mechanics and Analysis** (2020), 238(3): 1157-1198.
13. A. De Rosa, and S. Kolasinski. Equivalence of the ellipticity conditions for geometric variational problems. **Communications on Pure and Applied Mathematics** (2020), 73(11): 2473-2515.
14. G. De Philippis, A. De Rosa, and F. Ghiraldin. Existence results for minimizers of parametric elliptic functionals. **Journal of Geometric Analysis** (2020), 30(2): 1450-1465.
15. M. Colombo, A. De Rosa, and A. Marchese. Stability for the mailing problem. **Journal de Mathématiques Pures et Appliquées** (2019), 128: 152-182.
16. A. De Rosa, and S. Gioffrè. Quantitative stability for anisotropic nearly umbilical hypersurfaces. **Journal of Geometric Analysis** (2019), 29(3): 2318-2346.

17. G. De Philippis, A. De Rosa, and J. Hirsch. The Area Blow Up set for bounded mean curvature submanifolds with respect to elliptic surface energy functionals. **Discrete and Continuous Dynamical Systems** (2019), 39(12): 7031-7056.
18. C. De Lellis, A. De Rosa, and F. Ghiraldin. A direct approach to the anisotropic Plateau's problem. **Advances in Calculus of Variations** (2019), 12(2): 211-223.
19. G. De Philippis, A. De Rosa, and F. Ghiraldin. Rectifiability of varifolds with locally bounded first variation with respect to anisotropic surface energies. **Communications on Pure and Applied Mathematics** (2018), 71(6): 1123-1148.
20. A. De Rosa. Minimization of anisotropic energies in classes of rectifiable varifolds. **SIAM Journal on Mathematical Analysis** (2018), 50(1): 162-181.
21. M. Colombo, A. De Rosa, and A. Marchese. Improved stability of optimal traffic paths. **Calculus of Variations and Partial Differential Equations** (2018), 57(28).
22. M. Colombo, A. De Rosa, A. Marchese, and S. Stuvard. On the lower semicontinuous envelope of functionals defined on polyhedral chains. **Nonlinear Analysis** (2017), 163C: 201-215.
23. G. De Philippis, A. De Rosa, and F. Ghiraldin. A direct approach to Plateau's problem in any codimension. **Advances in Mathematics** (2016), 288: 59-80.

Submitted papers

24. A. De Rosa, and A. Khajavirad. On the power of linear programming for K-means clustering. **Submitted** (2024). *ArXiv:2402.01061*.
25. A. De Rosa, Y. Lei, and R. Young. Construction of fillings with prescribed Gaussian image and applications. **Submitted** (2024). *ArXiv:2401.10858*.
26. A. De Rosa, and R. Tione. The double and triple bubble problem for stationary varifolds: the convex case. **Submitted** (2023). *Arxiv:2301.10705*.
27. A. De Rosa, and A. Khajavirad. Explicit convex hull description of bivariate quadratic sets with indicator variables. **Submitted** (2022). *Arxiv:2208.08703*.

Interdisciplinary papers

28. L. Bach-Morrow, F. Boccalatte, A. De Rosa, D. Devos, C. Garcia-Sanchez, M. Inglese, A. Droby. Functional changes in prefrontal cortex following frequency-specific training. **Nature Scientific Reports** (2022), 12, Article number: 20316.
29. G. de Falco, M. Florent, A. De Rosa, T.J. Bandosz. Proposing an Unbiased Oxygen Reduction Reaction Onset Potential Determination by Using a Savitzky-Golay Differentiation Procedure. **Journal of Colloid and Interface Science** (2021), 586: 597-600.

Reports and Proceedings

30. A. De Rosa. Min-max construction of anisotropic CMC surfaces. **Calculus of Variations. Oberwolfach Reports** (2022), DOI: 10.14760/OWR-2022-37 (Lia Bronsard, László Székelyhidi, Yoshihiro Tonegawa, Tatiana Toro).
31. A. De Rosa. Regularity of anisotropic minimal surfaces. **Partial Differential Equations. Oberwolfach Reports** (2021), DOI: 10.4171/OWR/2021/35 (Guido De Philippis, Richard Schoen, Felix Schulze).
32. A. De Rosa. Anisotropic counterpart of Allard's rectifiability theorem and applications. **Calculus of Variations. Oberwolfach Reports** (2019), Volume 15, no. 3, Pages 2077-2156 (Alessio Figalli, Robert V. Kohn, Tatiana Toro, Neshan Wickramasekera).

Mentoring:

2023	REU (Research Experience for Undergraduates) at University of Maryland - June 12th to August 4th: *Geometric measure theory in optimal transport, geometric flows, and minimal surfaces.* Mentored students: Leo Chang, Stanley Jian, Aren Martinian, Adam Moubarak.
2021	Advisor of the *PostDoc Giulia Bevilacqua* supported by Ermenegildo Zegna Founder's Scholarship.
2021	Advisor for the REU of the *undergraduate Nicholas Baranello* at University of Maryland.
2016-2019	Co-mentor of the *PhD student Stefano Gioffré* at University of Zurich (main advisor C. De Lellis).

2017-2018 Advisor of the *undergraduate student Dominic Louis Wynter* at Courant Institute, NYU.
Awarded the *Hollis Cooley Memorial Prize* for his thesis.
(Currently PhD student at University of Cambridge, UK).

2017-2018 Advisor of the *undergraduate student Jeffrey Kober* at Courant Institute, NYU.

2016-2017 Co-mentor of the *master student Simone Steinbrüchel* at University of Zurich (main advisor C. De Lellis).

Teaching experience (teaching evaluations are in parenthesis)

Instructor

At Bocconi University:
Spring 2025: Optimization
Fall 2024: Real Analysis I (PhD)
Fall 2021: Advanced analysis and optimization (9.29/10)
Spring 2025: Introduction to partial differential equations
Spring 2024: Optimization

At University of Maryland:
Spring 2023: Partial Differential Equations II (PhD) (3.9/4)
Spring 2021: Partial Differential Equations (3.9/4)
Fall 2022: Geometric Analysis (PhD) (3.8/4)
Fall 2020: Honors Calculus III (3.8/4)

At Courant Institute:
Spring 2020: Honors Analysis I (4.6/5)
Spring 2019: Analysis (4.8/5)
Spring 2018: Calculus 1 (4.4/5)
Fall 2019: Analysis (4.7/5)
Fall 2018: Calculus 1 (3.95/5)
Fall 2017: Mathematics for Economics I (4.3/5)

Recitation lecturer

At University of Zurich:
Spring 2017: Introduction to probability
Spring 2016: Convex Optimization (graduate)
Spring 2015: Convex Optimization (graduate)
Fall 2016: Analysis 1 for Mathematics
Fall 2015: Analysis for the Natural Sciences
Fall 2014: ODEs and dynamical systems

Invited talks

Conference talks:

1. "Geometric Variational Problems in Smooth and Nonsmooth Metric Spaces", Mathematical Congress of the Americas, University of Miami, July 21-25, 2025.
2. "PDE conference in Hong Kong", HKUST, May 19-23, 2025.
3. "Nonlocal Analysis and Geometric Measure Theory", Fall 2024 AMS Eastern Sectional Meeting, University at Albany, NY, October 19-20, 2024.
4. "Geometry of Measures and Free Boundaries; a Conference in Honor of Tatiana Toro", Seattle, July 22–26, 2024.
5. "PDE in Moab: Advances in Theory and Applications", Utah State University, Moab, June 3–7, 2024.
6. "XXXIII Convegno Nazionale di Calcolo delle Variazioni", Riccione, February 12–16, 2024.
7. "Calculus of Variations, Oberwolfach", Agust 14–20, 2022.
8. "Regularity Theory for Free Boundary and Geometric Variational Problems II", Pisa, July 10–15, 2022.
9. "Partial Differential Equations, Oberwolfach", July 25–31, 2021.
10. "Workshop on Minimal Surfaces and Related Topics", Tongji University, Shanghai, June 11–13, 2021.
11. "JMM 2021 Special Session 53A: PDEs in optimization, control, and games", Washington, DC, January 6–9, 2021.
12. "AMS Fall Eastern Sectional Meeting", Pennsylvania State University, October 3-4, 2020.
13. "The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications" (rescheduled due to COVID-19), Atlanta, 2020.
14. "Dynamics, Equations and Applications, (DEA 2019)", AGH, Kraków, September 16–20, 2019.
15. "Kinetic descriptions in theory and applications", University of Maryland, October 22–26, 2018.
16. "Calculus of Variations, Oberwolfach", July 29–Agust 04, 2018.
17. PCMI Summer Session (IAS): "Harmonic Analysis", July 1–21, Park City, Utah, 2018.
18. PCMI Summer Session (IAS): "Harmonic Analysis", July 1–21, Park City, Utah, 2018.
19. "2018 Seminar on Geometric Measure Theory, Varifolds, and Their Applications", Portland State University, Oregon, July 9–12, 2018.
20. "Kinetic models in biology and social sciences", Arizona State University, February 19–23, 2018.
21. "Current trends in kinetic theory", University of Maryland, October 9–13, 2017.

22. “XXVII Convegno nazionale di calcolo delle variazioni”, Levico Terme, February 6–10 2017.
23. “New Trends in Calculus of Variations”, Accademia Nazionale dei Lincei, Rome.

Seminar talks:

24. 16.05.2024, Analysis Seminar, SISSA, Trieste.
25. 25.03.2024, Analysis Seminar, Sapienza University of Rome.
26. 07.11.2023, Center for Nonlinear Analysis Seminar, Carnegie Mellon University.
27. 02.11.2023, Colloquium, Rutgers University, Newark.
28. 01.11.2023, Differential Geometry & Geometric Analysis Seminar, Princeton University.
29. 27.04.2023, Virtual Analysis and PDE Seminar, The University of California, Los Angeles.
30. 27.04.2023, Virtual PDE seminar, Beijing Normal University.
31. 04.04.2023, Geometric Analysis Seminar, University of Chicago, Chicago
32. 24.03.2023, Geometric Analysis and Topology Seminar, Courant Institute of Mathematical Sciences, NYU.
33. 21.03.2023, ISE Seminar, Lehigh University.
34. 28.02.2023, Center for Nonlinear Analysis Seminar, Carnegie Mellon University.
35. 24.02.2023, Rutgers University, Newark.
36. 09.02.2023, Differential Geometry Seminar, University of California San Diego, San Diego.
37. 05.12.2022, PDE/Applied Math seminar, Indiana University Bloomington.
38. 15.11.2022, Geometric Analysis Seminar (postponed to April 4th, 2023), University of Chicago, Chicago.
39. 04.11.2022, Analysis, Logic and Physics Seminar (ALPS), Virginia Commonwealth University.
40. 24.10.2022, Analysis and Geometric Analysis Seminar, Cornell University.
41. 07.10.2022, Geometry & Analysis Seminar, Columbia University, New York.
42. 26.09.2022, Geometric Analysis Seminar, Iowa State University.
43. 23.09.2022, Mathematics Colloquium, Howard University.
44. 25.08.2022, PDE Seminar via Zoom 2022.
45. 26.07.2022, Analysis seminar, National University of Singapore.
46. 27.04.2022, Colloquium, University of Maryland, College Park.
47. 25.04.2022, Johns Hopkins University, Baltimore.
48. 22.12.2021, Nonlinear Analysis Seminar, Rutgers University, New Brunswick.
49. 29.11.2021, Analysis and Applied Math seminar, University of Illinois at Chicago.
50. 18.11.2021, Analysis seminar, University of Trento.
51. 12.11.2021, Departmental Applied Math Colloquium, University of Maryland Baltimore County.
52. 04.11.2021, Geometry and Algebra Seminar, University of L’Aquila.
53. 07.09.2021, Online Seminar Geometric Analysis, Universities of Salzburg-Halle-Pittsburgh-Freiburg.
54. 18.05.2021, Colloquium Talk, Bocconi University.
55. 13.04.2021, Mathematics Colloquium, City College of New York, New York.
56. 15.12.2020, Differential Equations in Warsaw, Warsaw.
57. 04.12.2020, EPFL, Lausanne.
58. 14.10.2020, CSCAMM Seminar, University of Maryland, College Park.
59. 06.10.2020, Geometric Analysis Seminar, Rutgers University, New Brunswick.
60. 29.05.2020, The London Geometry and Topology Seminar, Imperial College London.
61. 06.05.2020, Calculus of Variations Seminar, University of Pisa, Pisa.
62. 21.02.2020, Colloquium Talk, University of Puerto Rico.
63. 30.01.2020, Analysis Seminar, University Federico II of Naples, Naples.
64. 22.01.2020, EPFL, Lausanne.
65. 09.01.2020, Georgia Institute of Technology, Atlanta.
66. 26.11.2019, PDE-Applied Math Seminar, University of Maryland, College Park.
67. 15.11.2019, Analysis Special Lecture, University of Pennsylvania, Philadelphia.
68. 13.11.2019, Special Seminar, North Carolina State University, Raleigh.
69. 18.10.2019, Nonlinear PDEs Seminar, University of California Irvine, Irvine.
70. 17.10.2019, Analysis Seminar, University of California San Diego, San Diego.
71. 08.10.2019, Geometric Analysis Seminar, University of Chicago, Chicago.
72. 12.06.2019, Analysis Seminar, Tokyo Institute of Technology, Tokyo.
73. 11.06.2019, Analysis Seminar, The University of Tokyo, Tokyo.
74. 03.06.2019, Analysis Seminar, TU Delft.
75. 28.05.2019, Excellence Project Seminar DISMA, Politecnico di Torino.

76. 14.05.2019, Geometry/Topology Seminar, University of California, Davis.
77. 10.05.2019, UCSB Differential Geometry Seminar, University of California, Santa Barbara.
78. 25.04.2019, Analysis Seminar, University of Pennsylvania.
79. 18.04.2019, Analysis Seminar, Stony Brook University, New York.
80. 12.04.2019, Geometric Analysis Colloquium, Fields Institute, Toronto.
81. 07.02.2019, Analysis Seminar, Courant Institute of Mathematical Sciences, New York University.
82. 23.01.2019, Geometric function and mapping theory Seminar, IMPAN, Warsaw.
83. 04.12.2018, Rainwater Seminar, University of Washington, Seattle.
84. 28.09.2018, Geometry & Analysis Seminar, Columbia University, New York.
85. 25.09.2018, Geometric Analysis Seminar, CUNY, New York.
86. 18.06.2018, Analysis Seminar, University of Parma, Parma.
87. 08.06.2018, University of Konstanz, Konstanz.
88. 01.06.2018, Analysis Seminar, University Grenoble Alpes.
89. 31.05.2018, Applied Seminar, University Grenoble Alpes.
90. 28.05.2018, GdT Calcul des Variations, LJLL, University Paris Diderot.
91. 22.05.2018, Applied Mathematics Seminar, University of Pavia, Pavia.
92. 02.05.2018, Differential Geometry & Geometric Analysis Seminar, Princeton University.
93. 26.03.2018, Analysis and Partial Differential Equations Seminar, Johns Hopkins University, Baltimore.
94. 14.03.2018, Analysis Seminar, University Federico II of Naples, Naples.
95. 01.11.2017, Rutgers University, New Brunswick.
96. 20.10.2017, Courant Institute of Mathematical Sciences, NYU.
97. 28.09.2017, Geometric Analysis and Topology Seminar, Courant Institute of Mathematical Sciences, NYU.
98. 29.03.2017, Calculus of Variations Seminar, University of Pisa, Pisa.
99. 23.02.2017, University of Sussex, Brighton.
100. 22.02.2017, Geometry Seminar, King's College London and University College London, London.
101. 21.12.2016, Analysis Seminar, University Federico II of Naples, Naples.
102. 31.05.2016, Graduate Colloquium, Joint Math Seminar of ETH and UZH, Zurich.
103. 12.05.2016, 19.05.2016, Reading Seminar, ETH, Zurich.
104. 18.03.2016, Analysis Seminar, Max-Planck-Institut, Leipzig.

Academic service

Committee member:

1. 2024, Lehigh University. *PhD thesis proposal committee for Huanwen Shen (April 19th).*
2. 2023-2024, Bocconi University. *Committee of the MSc "Data Science and Business Analytics" (DSBA).*
3. 2023-2024, Bocconi University. *Three search committees to hire Postdocs at the DEC.*
4. 2023, University of Maryland. *Committee to Review the Chair of the Department of Mathematics.*
5. 2023, University of Maryland. *PhD Dissertation Examining Committee for Lucas Christopher Bouck (March 29th) and for Xiaoyu Zhou (August 17th).*
6. 2023, Universidade de São Paulo. *PhD Dissertation Committee for Reinaldo Resende (July 21st).*
7. 2022-2023, University of Maryland. *AMSC Graduate Faculty Committee.*
8. 2022-2023, University of Maryland. *Merit Pay Committee.*
9. 2022-2023, University of Maryland. *AMSC PhD Admission Committee.*
10. 2022-2023, University of Maryland. *Policy Committee.*
11. 2021-2023, University of Maryland. *Committee for the PhD Preliminary Oral Exam of Lucas Christopher Bouck (May 7th, 2021), Vlasios Mastrantonis (December 7th, 2021) and Michael Rozowski (March 8th, 2023).*
12. 2020, Paris-Sud University. *Jury for the PhD defense of Camille Labourie (January 6th).*
13. 2020-2021, University of Maryland. *Policy Committee*
14. 2020-2021, University of Maryland. *MATH PhD Admission Committee.*

Peer review panel member:

2023 National Science Foundation (NSF) 2023.

Conference organizer:

1. *Geometric Measure Theory and applications.* June 17-21, 2024.
   Palazzone SNS, Cortona, Italy.
   Co-organized with G. Caldini, L. De Masi, A. Marchese and A. Massaccesi.
2. *Recent developments in Geometric Measure Theory.* January 4-7, 2023.
   Joint Mathematics Meetings 2023, Boston, USA.
   Co-organized with C. De Lellis and L. Spolaor.
3. *Special session on elliptic PDEs and geometric variational problems.* June 5-9, 2020.
   13th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Atlanta, USA.
   Co-organized with H. Yu. Cancelled due to COVID-19.
4. *New Trends in Geometric Measure Theory.* March 22-24, 2019.
   Spring AMS Sectional Meeting, University of Hawaii at Manoa, Honolulu, USA.
   Co-organized with L. Spolaor.
5. *Transport problems in Zurich.* April 24-26, 2017.
   University of Zurich, Switzerland.
   Co-organized with M. Colombo, A. Marchese and A. Massaccesi.

Seminar organizer:

2020-2023 *PDE-Applied Math Seminar.* University of Maryland, USA.

2020-2023 *Informal Geometric Analysis Seminar.* University of Maryland, USA.

2020-2021 *RIT on Applied PDE.* University of Maryland, USA.

2018-2020 *Geometry and geometric analysis working group.* Courant Institute, NYU, USA.

Research affiliation:

Since 2023 Member of the American Mathematical Society.

2020-2021 Full Member of Sigma Xi: The Scientific Research Honor Society.

Referee for journals:

Comm. Pure App. Math., JEMS, Duke Math. J., ARMA, Ars Inveniendi Analytica, Forum Math. Pi, Ann. Sci. de l'Ecole Norm. Superieure, J. Funct. Anal., Adv. Math., Calc. Var. Partial Differential Equations, Quart. Appl. Math., Anal. PDE, AMS-PCMI lecture notes, Discrete Contin. Dyn. Syst., Pure Appl. Anal., ESAIM: COCV, Ann. Mat. Pur. Appl., J. Geom. Anal., Adv. Calc. Var, Netw. Heterog. Media, J Differ Equ., Vietnam J. Math, Indiana Univ. Math. J., J. London Math. Soc., Math. Eng., Math. Oper. Res., Math. Ann.