CURRICULUM VITAE OF ANDREA MONDINO

CURRENT POSITION

Professor of Mathematics at the University of Oxford and Tutorial Fellow at St. Hilda's college September 2022-now.

EDUCATION and PREVIOUS POSITIONS

- **Associate Professor** at the Mathematical Institute-University of Oxford and Tutorial Fellow at St. Hilda's college October 2019-August 2022.
- **Reader** at the Mathematics Institute-University of Warwick, June-September 2019
- **Associate Professor** at the Mathematics Institute-University of Warwick, July 2018-May 2019
- **Assistant Professor** at the Mathematics Institute-University of Warwick, September 2016-June 2018.
- **Lecturer** in Mathematics at Zürich University, September 2015-September 2016.
- **Huneke Fellow** during the semester program "Differential Geometry" at MSRI-Berkeley, January 2016 to May 2016.
- **Lecturer** in Mathematics at ETH-Zurich, March 2015-September 2015.
- **ETH fellow** (Prestigious Post Doc position at ETH-Zurich cofounded by Marie-Curie Actions) from March 2013 to February 2015.
- **Post Doc**: from September 2011 to March 2013 post doc at Scuola Normale Superiore (Pisa-Italy) under the ERC grant "Geometric measure theory in non euclidean spaces" directed by Prof. Luigi Ambrosio.
- **Ph. D. in Mathematics**: 3^{rd} September 2011-SISSA (Trieste, Italy).
  Supervisor: Prof. Andrea Malchiodi.
- **Master Degree in Mathematics**: 18^{th} July 2008-SISSA&Trieste University.
  Passing grade of 110 with honors. Supervisor: Prof. Andrea Malchiodi.
- **Bachelor Degree in Mathematics**: 18^{th} July 2006-Torino University (Italy).
  Passing grade of 110 with honors. Supervisor: Prof. Anna Fino.

HONORS

- **Springer editor award 2026**.
  Winner of a *Editor of Distinction Award* in 2026 by Springer for editorial work as Editor in Chief of *Calculus of Variations and Partial Differential Equations*.
- **Whitehead Prize 2020**.
  Winner of a Whitehead Prize 2020, awarded by the London Math. Society.
- **ERC Starting Grant 2018**.
  Winner of an ERC Starting Grant in July 2018. Grant awarded: 1 250 000 EURO.
- **Bartolozzi Prize 2017**.
  Prize awarded by the Italian Mathematical Union every two years to an Italian mathematician below the age of 34.
- **Bourbaki seminar by C. Villani:** 14^{th} **January 2017**.
  Bourbaki Seminar *Inégalité isopérimetriques dans les espaces métric mesurés [d'après F. Cavalletti & A. Mondino]* by Professor Cédric Villani on my joint work with F. Cavalletti on Lévy-Gromov isoperimetric inequality in non-smooth spaces.
- **Huneke Fellow at MSRI-Berkeley: January to May 2016.**
  Prestigious post-doc fellowship awarded once per semester by MSRI-Berkeley.
- **Course during the "Introductory workshop: Modern Riemannian Geometry", MSRI-Berkeley.** $18^{th} - 22^{nd}$ **January 2016.**
  Invited to give a course on synthetic notions of Ricci curvature in non-smooth spaces in such an occasion, during the semester program "Differential Geometry" at MSRI-Berkeley.
- **Cours de l'IHÉS by C. Villani 2015-2016**.
  Professor Cédric Villani gave a course at the IHÉS on synthetic notions of curvature in non-smooth spaces; the last lectures where devoted to discuss my joint work with F. Cavalletti on Lévy-Gromov isoperimetric inequality in non-smooth spaces.
- **ETH Fellow: March 2013-March 2015**.
  Prestigious post-doc fellowship awarded by ETH-Zurich to young scientists (not only Mathematicians) before the 2^{nd} year after the discussion of the Ph.D. Thesis.
- **Gioacchino Iapichino Prize 2014**.
  Award given by the Accademia Nazionale dei Lincei of Italy to a mathematician under 30 years old, author of an original work in the field of Mathematical Analysis.
- **Oberwolfach Leibniz Graduate Student: 2012-2013.**
  MFO of Oberwolfach selects few post-docs and give to them the opportunity to participate to several Workshops organized by the institute covering the expenses; on a merit base.
- **Benedetto Sciarra International Prize 2010**, 1^{st} placement ex-aequo.
  Award given by the Scuola Normale Superiore of Pisa to a student who took the master degree in Mathematics in an Italian or foreign University during the years 2008-2009.
- **Winner of the Marco Reni Prize 2009**.
  Prize given by the University of Trieste to a student who took the master degree in Mathematics in Trieste during the previous 3 years.
- **SISSA Master Degree's Fellowship: 2006-2008**.
  Fellowship assigned by SISSA through a national competition (6 fellowships at national level); the annual confirmation of the fellowship is on a merit base.
- **Premio Optime 2007**.
  Award assigned by the Industrial Union of Turin to the best students graduated in the University of Turin.
- **INDAM Bachelor Degree's Fellowship: 2003-2006**.
  Fellowship assigned by INDAM through a national competition (50 fellowships at national level); the annual confirmation of the fellowship is on a merit base.

GRANTS

- **UK Metric Geometry and Analysis Network**, joint with Cardiff, Durham, Warwick, Queen Mary University of London.
  Funded by **London Mathematical Society** grant 32327, £1,200, 2023; grant 32431, £1,500, 2024; and grant 32529, £1,500, 2025.
  Funded by **Isaac Newton Institute** through EPSRC award EP/V521929/1, £7,000, 2024-25.
- **ERC Starting Grant 2018**. 1 250 000 EURO.
  Period: 1^{st} February 2019 - 30^{th} April 2025.
  Grant Acronym: CURVATURE.
  Grant title: Optimal transport techniques in the geometric analysis of spaces with curvature bounds.
  Grant reference number: 802689.
- **EPSRC First Grant.** 126 438 GBP.
  Period: 1^{st} January 2018 - 31^{th} December 2019. RC Grant reference: EP/R004730/1.
  Grant title: Optimal transport and geometric analysis.
- **ETH Fellowship (Marie-Curie Actions)**. 206 000 CHF.
  Period: March 2013-March 2015. Grant reference: FEL -01 12-2.
  Grant title: Weak immersions of surfaces into Manifolds and the Willmore functional.

INVITED LECTURES/MINI-COURSES

- **Mini-course during the "Introductory workshop: Modern Riemannian Geometry", MSRI-Berkeley.** $18^{th} - 22^{nd}$ **January 2016.**
  Invited to give a mini-course (2 h) on synthetic notions of Ricci curvature in non-smooth spaces in such an occasion, during the semester program "Differential Geometry" at MSRI-Berkeley (organizers: Colding, Donaldson, Lott, Sesum, Tian, Viaclovsky).
- **Mini-Course during the "Workshop on Geometric Analysis", IHP-Paris.** $17^{th} - 19^{th}$ **December 2018.**
  Invited to give a mini-course (2 h) on isoperimetric inequalities in non-smooth spaces satisfying Ricci curvature lower bounds.
- **Course during the "CIME-CIRM Course on New Trends on Analysis and Geometry in Metric Spaces", Levico Terme.** $24^{th} - 28^{th}$ **June 2019.**
  Invited to give a course (6 h) on optimal transport and Ricci curvature in metric measure spaces.
- **Course during the "Summer School on Curvature Constraints and Spaces of Metrics", Institut Fourier (Grenoble).** $21^{th} - 25^{th}$ **June 2021.**
  Invited to give a course (6 h) on synthetic notions of Ricci curvature in metric measure spaces and applications.
- **Lagrange Lectures**, Dipartimento di Matematica "Giuseppe Peano", Universitá di Torino. November 2023.
- **Course during the "Optimal Transport, Heat Flow and Synthetic Ricci Bounds"** summer school and conference, in honor of 2024 Nemmers Prize recipient, Luigi Ambrosio. Northwestern Univerisity (USA). $17^{th} - 21^{st}$ June 2025.
  Invited to give a course (6 h) on smooth and non-smooth spaces with Ricci curvature bounds.
- **Course during the "Geometry and Convergence in Mathematical General Relativity"** trimester at the Simons Center of Geometry and Physics, Stony-Brook. Sept. 2025.
  Invited to give a mini-course (3 h) on optimal transport and energy conditions in general relativity.

INVITED COLLOQUIA

- Mathematics Colloquium UAM-ICMAT, Madrid: 28^{th} April 2017.
- Warwick Colloquium in Mathematics: 9^{th} February 2018.
- Colloquium in Pure Mathematics, Durham: 19^{th} February 2018.
- Colloquium in Mathematics, Fribourg: 15^{th} May 2018.
- Salzburger Mathematical Colloquium, Salzburg: 17^{th} January 2019.
- Bern Mathematical Colloquium, Bern: 25^{th} April 2022.
- Fields Institute Mathematics Colloquium, Toronto: 27^{th} September 2022.
- MATH-IMS joint Pure Mathematics Colloquium Series, The Chinese University of Hong Kong: 14^{th} October 2022.
- Pure Mathematics Colloquium, Durham University, 28^{th} November 2022.
- Seminario Matematico e Fisico di Milano, 2^{nd} October 2024.
- Hausdorff Colloquium, Hausdorff Center for Mathematics, Bonn, 15^{th} January 2025.
- Mathematics and Statistics Colloquium, Maynooth University (Ireland), 26^{th} November 2025.
- Mathematics Colloquium, University of Surrey, 9^{th} October 2026.

INVITED SPEAKER IN INTERNATIONAL CONFERENCES

- Curvature, Optimal Transport, and Gravity. University of Vienna. 21^{st}-25^{th} September 2026.
- Valentia Geometrica 2026: a workshop on Geometric Analysis. University of Valencia. 20^{th}-23^{rd} April 2026.
- Geometric measure theory and metric geometry. University of Warwick. 24^{th}-27^{th} March 2026.
- Optimal Transport and metric geometry across structures. Bernoulli Center (EPFL, Lausanne). $13^{th} - 18^{th}$ October 2025.
- A new geometry for Einstein's theory of relativity and beyond. University of Vienna. 7^{th}-11^{th} July 2025.
- Gromov-Hanke-Sormani-Yu's Not Only Scalar Curvature Seminar. 7^{th} May 2025.
- Probability, Analysis and Dynamics. School of Mathematics - University of Bristol. 9^{th}-11^{th} April 2025.
- School and Conference on Metric Measure Spaces, Ricci Curvature, and Optimal Transport, Villa Monastero, Lake Como. 23^{rd} September - 1^{st} October 2024.
- Workshop on singularity theorems and related topics, Queen Mary University (London). 19^{th} June 2024.
- Geometrie-MFO, Oberwolfach. $10^{th} - 15^{th}$ June 2024.
- ESI Workshop "Synthetic Curvature Bounds for Non-Smooth Spaces: Beyond Finite Dimension", Vienna (Austria). $21^{th} - 24^{th}$ May 2024.
- 13^{th} Oxbridge PDE Conference, Oxford. $18^{th} - 22^{nd}$ March 2024.
- Partial Differential Equations-MFO, Oberwolfach. $24^{th} - 28^{th}$ July 2023.
- Calculus of Variations and Geometric Measure Theory, in honour of Luigi Ambrosio's 60th birthday, Pisa (Italy). $12^{th} - 16^{th}$ June 2023.
- Geometry and Control in Cortona, (Italy). $27^{th} - 31^{st}$ March 2023.
- ESI Workshop "Non-regular Spacetime Geometry", Schrödinger Institute, Vienna (Austria). $13^{th} - 17^{th}$ March 2023.
- Optimal transport and applications, Centro De Giorgi, Pisa (Italy). 24^{th}-28^{th} October 2022.
- Mathematical Relativity, Scalar Curvature and Synthetic Lorentzian Geometry, Fields Institute, Toronto (Canada). $3^{rd} - 7^{th}$ October 2022.

- From Dirichlet Forms to Wasserstein Geometry, Hausdorff Center for Mathematics, Bonn (Germany), plenary speaker. 29^{th} August-2^{nd} September 2022.
- AMS-SMF-EMS Meeting, Special session: Quantitative Geometry of Transportation Metrics, Grenoble (France), 19^{th} July 2022.
- Metric Geometry and Geometric Analysis Summer School, MSRI & University of Oxford, 11^{th} July 2022.
- Isoperimetric Problems, University of Pisa (Italy), 20^{th}-24^{th} June 2022.
- British Mathematical Colloquium, Analysis Workshop, King's College London (UK), 6^{th}-9^{th} June 2022.
- 100 years of Italian Mathematical Union-800 years University of Padova conference, Padova (Italy), 26^{th} May 2022.
- Analysis on metric spaces Workshop 2022, OIST-Okinawa (Japan), 23^{rd} May 2022.
- Geometric PDEs in Freiburg, a conference in honor of Ernst Kuwert's 60^{th} birthday. Freiburg (Germany), 29^{th} November - 3^{rd} December 2021.
- Regularity theory for free boundary and geometric variational problems. Levico Terme (Italy), 5^{th}-10^{th} September 2021.
- Analysis on singular spaces, Münster (Germany). 20^{th}-24^{th} September 2021.
- Regularity Theory for Free Boundary and Geometric Variational Problems, Levico (Italy). 5^{th}-10^{th} September 2021.
- International Conference on Geometric Analysis and Partial Differential Equations, joint SJTU (Shanghai)-MPI (Bonn)-Princeton. 6^{th}-11^{th} July 2021.
- Workshop on Curvature Constraints and Spaces of Metrics, Institut Fourier (Grenoble), 28^{th} June-2^{nd} July 2021.
- Singularity theorems, causality, and all that-A tribute to Roger Penrose, online conference, $14^{th} - 18^{th}$ June 2021.
- Optimal Transport: from Geometry to Numerics, Erwin Schrödinger Institute, Vienna. $13^{th} - 17^{th}$ May 2019.
- Convergence and low regularity in General Relativity, Simons Centre for Geometry and Physics, Stony Brook-New York. 29^{th} April-3^{rd} May 2019.
- Optimal Transport and Applications, Centro De Giorgi, Pisa, Italy. $12^{th} - 16^{th}$ November 2018.
- Geometric analysis in Samothrace, Chapter 2, A conference in honour of S. Gallot 70^{th} birthday. Chora Samothrace (Greece). 28^{th} May-1^{st} June 2018.
- A Geometry Day in Como, 12^{th} January 2018.
- Geometric Analysis at Roscoff, Centre Henri Lebesgue, 9^{th}-13^{th} October 2017.
- Metric measure spaces and Ricci curvature, Max Plank Institute, Bonn, 18^{th}-22^{nd} September 2017.
- Geometric Analysis in smooth and non-smooth spaces, SISSA-Trieste, 19^{th}-23^{rd} June 2017.
- 23^{rd} Rolf Nevalinna Colloquium, ETH-Zurich. 12^{th}-17^{th} June 2017.
- Curvature-dimension in Lyon 1 (Lyon, France). 15^{th}-17^{th} March 2017.
- Yearly Differential Geometry Day-Durham University. 24^{th} February 2017.
- Workshop on Geometric Partial Differential Equations-Warwick University. 12^{th}-16^{th} December 2016.
- Workshop on Heat Kernels, Stochastic Processes and Functional Inequalities-MFO, Oberwolfach. 27^{th} November -3^{rd} December 2016.
- Optimal transport and applications (Scuola Normale Superiore, Pisa, Italy). 7^{th}-11^{th} November 2016.

- Geometric Analysis on Riemannian and Metric Spaces (RIMS, Kyoto, Japan). 5^{th}-9^{th} September 2016.
- Analysis and Numerics in Curvature Energies-Meeting (Freiburg, Germany). 26^{th}-27^{th} July 2016.
- Workshop on Calculus of Variations-MFO, Oberwolfach. 11^{th}-15^{th} July 2016.
- Invited to give a mini-course at the "Introductory workshop: Modern Riemannian Geometry" during the semester program "Differential Geometry", MSRI-Berkeley. $18^{th} - 22^{nd}$ January 2016.
- Partial Differential Equations-MFO, Oberwolfach. 3^{th}-7^{th} August 2015.
- Workshop on curvature and global shape (Münster, Germany). 26^{th} July-1^{st} August 2015.
- International workshop on Optimal Transport and Geometry (Montpellier, France). $22^{th} - 26^{th}$ June 2015.
- Geometric Analysis, Free Boundary Problems and Measure Theory (Leipzig, Germany). $15^{th} - 17^{th}$ June 2015.
- Geometric Flows: Recent Developments and Applications (BIRS, Banff, Canada). $12^{th} - 17^{th}$ April 2015.
- ERC Workshop on Optimal Transportation and Applications (Centro De Giorgi, Pisa, Italy). $26^{th} - 31^{st}$ October 2014.
- 37^{th} Süddeutsches Kolloquium über Differentialgeometrie (Ulm, Germany). $11^{th} - 12^{th}$ July 2014.
- Isoperimetric Problems Between Analysis and Geometry, Scuola Normale Superiore (Pisa, Italy). $16^{th} - 20^{th}$ June 2014.
- Workshop on mass transport in analysis and probability, YEP XI, EURANDOM (Eindhoven, The Netherlands). $10^{th} - 14^{th}$ March 2014.
- Geometric Variational Problems-BIRS (Banff, Canada). $15^{th} - 20^{th}$ December 2013.
- Partial Differential Equations-MFO, Oberwolfach. $4^{th} - 10^{th}$ August 2013.
- The Willmore Functional and the Willmore Conjecture-MFO, Oberwolfach. $21^{th} - 27^{th}$ July 2013.
- Variational Problems and Geometric PDE'S (Granada, Spain). $17^{th} - 21^{th}$ June 2013.
- Submanifolds and Spin Geometry at Nancy (France). $13^{th} - 15^{th}$ May 2013.
- Heat Kernels, Stochastic Processes and Functional Inequalities-MFO, Oberwolfach. $5^{th} - 11^{th}$ May 2013.
- Interaction between analysis and geometry-Workshop "Analysis on metric spaces". IPAM-UCLA, Los Angeles. $12^{th} - 15^{th}$ March 2013.
- Workshop on Calculus of Variations-MFO, Oberwolfach. $22^{nd} - 27^{th}$ July 2012.
- Variational and perturbative methods for nonlinear differential equations- Venice. $20^{th} - 22^{nd}$ January 2011
- Oberwolfach seminars: The Willmore functional-MFO, Oberwolfach. $24^{th} - 30^{th}$ October 2010.
- International Conference on the Isoperimetric Problem of Queen Dido and its Mathematical Ramifications-Carthage, Tunisia. $21^{st} - 30^{th}$ May 2010.
- Geometric Flows and Geometric Operators-CRM De Giorgi, Pisa. June 2009.

INVITED SEMINARS

- London Analysis Seminar, King's College London, 25^{th} April 2024.
- Analysis Seminar, University of Warwick (UK), 19^{th} October 2023.
- Geometry, Analysis and Gravitation Seminar, Queen Mary University of London (UK), 17^{th} October 2023.
- Oberseminar Analysis, Universität Bielefeld (Germany). 7^{th} December 2022.
- Spectral geometry in the clouds, online seminar across King's College London, University of Bristol, and Université Laval (Canada). 20^{th} June 2022.
- Seminário de EDP e de Mátematica Aplicada, online cluster across Brazil, Chile, Portugal, Perú, Spain. 1^{st} June 2022.
- Geometric and functional inequalities and applications, Brown University and University of Connecticut, USA, 9^{th} May 2022.
- Geometric structures research seminar, SISSA-Trieste, Italy, 31^{st} March 2022.
- Irish Geometry Seminar, 22^{nd} March 2022.
- Cardiff Analysis & PDE Seminar, University of Cardiff, UK, 14^{th} March 2022.
- Online Seminar on Geometric Analysis, Joint Freiburg-Halle-Pittsburgh-Salzburg, 19^{th} October 2021.
- Zoom Analysis Seminar, University of Trento (Italy), 30^{th} March 2021.
- Geometry and Analysis Seminar, University of Oxford, UK, 16^{th} November 2020.
- Geometric Analysis Seminar, Notre Dame University, Indiana (US), 29^{th} October 2020.
- Columbia Geometry & Analysis Seminar, Columbia University, New York, 9^{th} October 2020.
- Metric measure spaces & convergence, Oaxaca University of Mexico, 25^{th} September 2020.
- Geometry & Topology Seminar, University of Toronto, 21^{st} September 2020.
- Geometry & Topology Seminar, Stony Brook University, 7^{th} July 2020.
- Geometric Analysis and PDE Seminar, University of Cambridge (UK), 20^{th} January 2020.
- London Analysis Seminar, Imperial College of London, 16^{th} January 2020.
- Analysis Seminar, University of Edinburgh, 4^{th} March 2019.
- Geometry and Analysis Seminar, Queen Mary University of London, 5^{th} February 2019.
- Seminar on Differential Geometry & Analysis, joint Hannover-Magdeburg, 24^{th} January 2019.
- Mathematics Seminar, Intern. Center for Theor. Physics (ICTP), Trieste, 8^{th} January 2019.
- Oberseminar Dynamische Systeme, Ruhr-Universität Bochum, 3^{rd} July 2018.
- Geometric Analysis Seminar, Bern, 16^{th} May 2018.
- Analysis & Geometry Seminar, Bristol, 24^{th} April 2018.
- Analysis Seminar, Durham, 19^{th} February 2018.
- PDE Seminar, Oxford, 29^{th} January 2018.
- Analysis Seminar, SISSA-Trieste, 16^{th} May 2017.
- Analysis Seminar, University of Bath, 6^{th} April 2017.
- Analysis Seminar, University of Jyväskylä (Finland), 29^{th} March 2017.
- Geometry Seminar, University of Leeds. 1^{st} March 2017.
- Differential Geometry Seminar, University of Münster. 16^{th} January 2017.
- Geometry Seminar, King's College of London and University College of London. 5^{th} October 2016.
- Analysis Seminar, RWTH Aachen University. 5^{th} July 2016.
- Analysis Seminar, University of Texas at Austin. 7^{th} March 2016.

- Brussels-London geometry seminar about "Lower bounds on Ricci curvature" 12^th January 2016.
- Seminars on Geometric Analysis and Mathematical General Relativity, Tubingen University. 5^{th} November 2015.
- Seminario di Analisi e Geometria, Pavia. 6^{th} October 2015.
- Geometry and Dynamics seminar-EPFL, Lausanne. 25^{th} March 2015.
- Analysis and PDEs Seminar-University of Sussex. 16^{th} March 2015.
- Department of Mathematics-University of Bath. 28^{th} January 2015.
- Department of Mathematics-Warwick University. 14^{th} January 2015.
- Institute of Science and Tecnology-Vienna. 8^{th} January 2015.
- Department of Mathematics-University of Bonn. 10^{th} December 2014.
- Geometry Seminar-ETH, Zurich. 12^{th} November 2014.
- Geometry & Analysis Seminar, joint Frankfurt & Karlsruhe. 7^{th} May 2014.
- Seminario di Equazioni Differenziali, Roma 2 (Tor Vergata). 14^{th} January 2014.
- Analysis Seminar, Basel. 25^{th} September 2013.
- Seminario di Matematica pura ed applicata, Pavia. 11^{th} June 2013.
- CVGMT seminar-Pisa Department of Mathematics. 30^{th} January 2013.
- Topics in Geometric Analysis-Max Planck Institute and Potsdam University, Berlin. 15^{th} November 2012.
- Geometry Seminar-Institute de Mathématiques de Jussieu, Paris. 1^{st} October 2012.
- Analysis Seminar-Warwick Department of Mathematics. 17^{th} May 2012.
- Seminario de Geometría-Granada Department of Mathematics. 7^{th} March 2012.
- Analysis and Geometry Seminar-Imperial College, London. 26^{th} January 2012.
- CVGMT seminar-Pisa Department of Mathematics. 23^{rd} October 2011.
- Analysis Seminar-ETH, Zurich. 4^{th} October 2011.
- Geometric Analysis seminar-Freiburg Department of Mathematics. 19^{th} October 2010.
- Geometric Analysis seminar-Freiburg Department of Mathematics. 21^{st} April 2010.
- Analysis Seminar-Turin Department of Mathematics. 14^{th} May 2009.

TEACHING EXPERIENCE

- Fall semester 2013: Teaching assistant of the course "Differential Geometry I" at ETH-Zurich (titular of the course Prof. Eichmair).
- Spring semester 2014: Teaching assistant of the course "Differential Geometry II" at ETH-Zurich (titular of the course Prof. Eichmair).
- Spring semester 2015: I taught "Introduction to Geometric Measure Theory" at ETH-Zurich, a master-graduate course focusing on BV functions and Finite Perimeter Sets.
- Fall semester 2015: I taught "Analytical aspects of Riemannian geometry" at the University of Zurich, a master-graduate course covering the following topics: variational theory of geodesics, existence of a min-max closed geodesic, Bochner tecnique and applications, spectral bounds, laplacian and volume comparison theorems, Cheeger-Gromoll Splitting theorem, Gromov-Hausdorff convergence and some ideas of Cheeger-Colding theory of limits of manifolds with Ricci curvature lower bounds.
- Spring semester 2016: invited to give a mini-course at MSRI Berkeley about metric measure spaces satisfying Ricci curvature lower bounds, during the thematic semester "Differential Geometry".

- Fall semester 2016, 2017, 2018: I taught "Introduction to geometry", a first year course covering the following topics: the Euclid axioms of plane geometry, isometries of the plane, congruence of triangles, ruler and compass constructions, spherical geometry, inversion and stereographic projection, conformal maps.
- **Highly commented teaching 2017** award from the University of Warwick.
- Hilary (i.e. Spring) Term 2021, 2022, 2023, 2026: I taught the master level course "Fixed Point Methods for Nonlinear PDEs" at the University of Oxford. This advanced course in Analysis covers the following topics: examples of nonlinear differential equations and variational inequalities, Contraction Mapping Theorem and applications, Brouwer's fixed point theorem (proof via Calculus of Variations and Null-Lagrangians), compact operators and Schauder's fixed point theorem, applications of Schauder's fixed point theorem to nonlinear elliptic equations, variational inequalities and monotone operators, applications of monotone operator theory to nonlinear elliptic equations.
- Every year, since 2019: I taught tutorials for first year courses in Analysis at St. Hilda's college (3 hours per week, each term).
- Michealmas (i.e. Fall) term 2024, 2025 and 2026: I taught the master course "Functional Analytic Methods for PDEs" at the University of Oxford. The course covers the basics of Sobolev spaces and second order linear elliptic PDEs.

SUPERVISION

Past Ph.D. Students:

- Daniele Semola, co-supervision with Prof. Luigi Ambrosio (Scuola Normale Superiore, Pisa). Graduated in September 2020. Now full Professor in Mathematics at the University of Vienna.
- Christian Scharrer. Graduated in 2021 at the University of Warwick. Now Emmy Noether Junior Group Leader in Bonn.
- Aidan Browne. Graduated in 2021 at the University of Warwick. Now working in a high-tech company in Australia.
- Dimitri Navarro. Graduated in 2023 at the University of Oxford. Now Pan Visiting Assistant Professor at University of California in Santa Cruz.
- Francesco Fiorani. Graduated in 2025 at the University of Oxford. Now working in the finance sector in London.
- Alessandro Cucinotta. Graduated in 2026. Now post-doc in Vienna. Now post-doc at the University of Vienna.
- Vanessa Emily Ryborz. Graduated in October 2026 at the University of Oxford. Now post-doc at the University of Vienna.

Past Post Docs:

- Daniele Semola, October 2020-September 2022 at the University of Oxford. Now full Professor in Mathematics at the University of Vienna.
- Alexis Michelat, October 2020-September 2022 at the University of Oxford. Now assistant professor in Mathematics at Gakushuin University (Japan).
- Krzysztof Ciosmak, July 2020-August 2022 at the University of Oxford. Now tenure track professor in Mathematics at BIMSA (China).
- Clemens Saemann, October 2022-June 2024 at the University of Oxford. Now tenure-track professor in Mathematics in Vienna.
- Mattia Magnabosco, January 2024-September 2026 at the University of Oxford. Now Society of Science Postdoctoral Fellow at the University of Notre-Dame (USA).

Current Ph.D. Students:

- Jethro Warnett, started in October 2023 at the University of Oxford. Joint with J. Carrillo.
- Gabriele Cassese, started in October 2024 at the University of Oxford. Joint with . J. Kristensen.

Master Dissertation Supervision:

- Yue Jiang, master dissertation in academic year 2022/23.
- Henry Roskill, master dissertation in academic year 2025/26.
- Danyal Khan, master dissertation in academic year 2026/27.

Master OMMS Supervision:

- a.y. 2020/21; Syed Sameed Ahmed and Andrei Crisan.
- a.y. 2021/22: Den Waidmann.
- a.y. 2022/23: Suleika Norrbom
- a.y. 2023/24: Carlos Sampaio Cherto and Huy Vo

College graduate advisor

- a.y. 2021/22: Michael Curran, Joel Dyer, Erik Hormann, Jamie Rees, Harry Reynolds.
- a.y. 2022/23: Michael Curran, Erik Hormann, Jamie Rees, Yuan Yin
- a.y. 2023/24: Michael Curran, Erik Hormann, Jamie Rees, Yuan Yin

Undergraduate Supervision:

- Mustafa Alper Gunes, summer research project 2021. As a result of the project, we produced the joint paper "A reverse Hölder inequality for first eigenfunctions of the Dirichlet Laplacian on RCD(K,N) spaces" preprint arXiv:2110.00292.
- Julian Gonzales, summer research project 2021.

Advanced Mentorship

- Career Development Review of Antonio Esposito (post doc in Oxford), March 2023.

SERVICES

- **Editorial Boards**.
  - From May 2019: Associate editor of the Journal of Dynamical and Control Systems.
  - From March 2020: : Associate editor of the Proceedings of the Royal Society of Edinburgh Section A: Mathematics.
  - From April 2020: Associate editor of the Journal of Nonlinear Analysis, Theory, Methods and Applications.
  - From March 2021: **Editor-in-Chief** of Calculus of Variations and Partial Differential Equations.
  - From April 2022: Associate editor of Communications in Mathematical Analysis and Applications.
- **Organization** of activities:
  - Co-organizer of the weekly seminar of Geometric Analysis at MSRI-Berkeley during the spring semester 2016;.
  - Co-organizer of the workshop "Optimal Transportation", Hausdorff Institut of Mathematics, Bonn, 29^{th} August-2^{nd} September 2016.
  - Organizer of the Warwick Analysis seminar, fall term 2017.
  - Co-organizer of the Analysis seminar in Warwick for the whole academic year 2018-19.
  - Organizer of the conference "Optimal Transport and Geometric Analysis", Venice 1-5 April 2019. Website of the conference: https://otgeoan.wixsite.com/venice.
  - Organizer of the Oxford PDE seminar for the whole academic years 2020-21, 2021-22, 2022-23.
  - Organizer of the workshop "Metric measure Spaces with Symmetry and Lower Ricci Curvature Bounds" at BIRS-Mexico, 7^{th}-12^{th} August 2022.

- Co-organizer of the "2024 National PDE Network Meeting: Nonlinear PDEs of Mixed Type in Geometry and Mechanics" at Oxford, 18^{th}-20^{th} March 2024.
- Co-organizer of the "13^{th} Oxbridge PDE Conference" at Oxford, 21^{st}-22^{rd} March 2024.
- Co-organizer of the "UK Metric Geometry & Analysis Network 2^{nd} meeting" at Cardiff, 12^{th} April 2024.
- Organizer of the trimester program "Metric Analysis" at the Hausdorff Institute for Mathematics in Bonn, January-April 2025.
- Organizer of the Conference "Differential geometry beyond Riemannian manifolds" at the Hausdorff Institute for Mathematics in Bonn, March 24 – 28, 2025.
- Organizer of the "UK Metric Geometry & Analysis Network 3^{rd} meeting" at Oxford, 16^{th} April 2024.
- Organizer of the program "Geometry and Convergence in Mathematical General Relativity", at the Simons Centre of Geometry and Physics (Stony Brook-New York), August 25 – Oct 3, 2025.
- Organizer of the workshop "Geometric Measure Theory on Metric Spaces with Applications to Physics and Geometry", at the Simons Centre of Geometry and Physics (Stony Brook-New York), September 15 – 19, 2025.

- **Examiner of Habilitation Thesis**
  - December 2022: external examiner for the Habilitation Thesis of Eva Kopfer (University of Bonn).
- **Examiner of Ph.D. Thesis**.
  - September 2018: Internal examiner for the Ph.D. thesis of Andrew Mc Leod (University of Warwick, supervisor: Peter Topping).
  - February 2019: external examiner for the Ph.D. thesis of Anna Kausamo (University of Jyvaskyla, supervisor: Tapio Rajala).
  - December 2019: external examiner for the Ph.D. thesis of Nicolas Marque (University of Paris-Sorbonne, supervisor: Paul Laurain)
  - June 2020: internal examiner for the Ph.D. thesis of Cristiana De Filippis (University of Oxford, supervisor: Jan Christensen)
  - July 2021: internal examiner for the Ph.D. thesis of Andre Guerra (University of Oxford, supervisor: Jan Christensen).
  - October 2021: external examiner for the Ph.D. thesis of Fabian Rupp (University of Ulm, supervisor: Anna Dall'Acqua).
  - April 2022: external examiner for the Ph.D. thesis of Mattia Vedovato (University of Trento, supervisor: Francesco Serra Cassano).
  - May 2022: internal examiner for the Ph.D. thesis of Jeremy Wu (University of Oxford, supervisor: José Carrillo).
  - September 2022: external examiner for the Ph.D. thesis of Sara Farinelli (SISSA-Trieste, supervisor: Fabio Cavalletti).
  - July 2023: internal examiner for the Ph.D. thesis of Tommaso Seneci (University of Oxford, supervisor: Jan Christensen).
  - October 2023: external examiner for the Ph.D. thesis of Mattia Magnabosco (University of Bonn, supervisor: Karl Theodor Sturm).
  - July 2024: external examiner for the Ph.D. thesis of Tobias Beran (University of Vienna, supervisor: Michael Kunzinger).
  - September 2024: external examiner for the Ph.D. thesis of Camillo Brena (Scuola Normale Superiore, Pisa. Supervisors: Luigi Ambrosio and Nicola Gigli).
- **Examiner for transfer/confirmation of status thesis (during Ph.D. in Oxford)**.

- March 2020: examiner for the confirmation of status of Krzystof Ciosmak (supervisor Z. Qian)
- April 2020: examiner for the confirmation of status of Joseph Hogg (supervisor L. Nguyen)
- July 2020: examiner for Transfer of Status of Federico Trinca (supervisor J. Lotay)
- November 2020: examiner for the Confirmation of Status of Jonah Duncan (supervisor L. Nguyen).
- January 2021: examiner for the Confirmation of Status of James Kohout (supervisor M. Rupflin).
- January 2021: examiner for the Transfer of Status of Chris Irving (supervisor J. Kristensen).
- July 2021: examiner for the confirmation of status of Jeremy Wu (supervisor J. Carrillo)
- November 2022: examiner for Transfer of Status of Alfred Holmes (supervisor J. Lotay).
- November 2023: examiner for Transfer of Status of John Hughes (supervisor J. Lotay).
- December 2023: examiner for Transfer of Status of Carlos Alberto Ochoa Flores (supervisor J. Lotay).
- October 2025: examiner for Confirmation of Status of John Hughes (supervisor J. Lotay).

- **Member of hiring committees**
  - January 2018: Member of the hiring committee for 2 post doc positions at Warwick under the ERC grant of F. Rindler.
  - February 2019: member of the hiring committee for 1 post doc position at Warwick under the ERC grant of F. Rindler.
  - March 2020: member of the hiring committee for a post of Associate Professor/tutorial fellow at St. Hilda's college.
  - March 2023: member of the hiring committee for an Associate Professor in Applied Mathematics at the University of Oxford, and Tutorial Fellow at St. Hilda's college.
  - April 2023: member of the hiring committee for the Development Director of St. Hilda's college.
  - A.A. 2019/20, 2020/21, 2021/22, 2022/23, 2023/24, 2024/25: member of the hiring committee of new Ph.D. students in Mathematics at Oxford.
  - December 2023/January 2024: member of the hiring committee for the Titchmarsh postdoctoral fellowship at the Mathematical Institute of the University of Oxford.
  - December 2024/January 2025: member of the hiring committee for the Titchmarsh postdoctoral fellowship at the Mathematical Institute of the University of Oxford.
  - January 2026: member of the hiring committee for 2 post-doc positions at the Mathematical Institute of the University of Oxford (under ERC grant of M. Gubinelli).
- **Member of Departmental committees**
  - Member of the "Project committee" for the academic years 2021/22, 2022/23, 2023/24, 2024/25, 2025/26.
  - Member of the "Department Committee" (one of the four elected members among all professors of the department). 2023-2026.
- **Member of College committees**
  - Member of the Governing Body of St. Hilda's college since October 2019.
  - Member of the Tutorial Committee of St. Hilda's college since October 2019.
  - Member of the Development Advisory Committee of St. Hilda's college, from MT 2022 to TT 2026.
  - Member of the investment Committee of St. Hilda's college, from MT 2026 to TT 2030.
- **Engagement during "Open Day" events**

  - TT 2020: helped in presenting Analysis courses of Part B and C in the virtual open day (Mathematical Institute-University of Oxford).
  - MT 2020, MT2021, MT2022, MT2023: helped in presenting the PhD program in the Graduate Students Open Day in November (Mathematical Institute-University of Oxford).
  - TT 2021: helped in the preparation of videos advertising the Part B and Part C modules of the Analysis Panel.
  - June 2023: helped in the open day at St. Hilda's college for future first year students.
  - June 2024: helped in the open day at St. Hilda's college for future first year students.
  - TT 2025: helped in presenting Analysis courses of Part C in the open day (Mathematical Institute-University of Oxford).

- **Reviewer** for the American Mathematical Society.
- **Referee** services for the following journals: Advances in Mathematics, American Journal of Mathematics, Analysis and Geometry in metric spaces, Analysis and PDEs, Annales Scientifiques de l'École Normale Supérieure, Annales IHP-Analyse Non Linèaire, Annali di Matematica Pura ed Applicata, Annali della Scuola Normale Superiore-Classe di Scienze, Annals of Probability, Calculus of Variations and Partial Differential Equations, Communications in Analysis and Geometry, Communications in Pure and Applied Analysis, Communications in Pure and Applied Mathematics, Communications in Mathematical Physics, Communications in Partial Differential Equations, Discrete and Continuous Dynamical System - A, Duke Math. Journ., Geometriae Dedicata, Intern. Math. Res. Not., Inventiones Math., Journal of the AMS, Journal de l'École Polytecnique, Journ. Amer. Math. Soc., Journ. Europ. Math. Soc., Journal of London Math. Soc., Journal de Mathématiques Pures et Appliquées, Journal of Geometric Analysis, Journal of Functional Analysis, Geometric and Functional Analysis (GAFA), Geometric Flows, Geometry and Topology, Math. Annalen, Memoirs of AMS, Mathematical Communications, Nonlinear Analysis: Theory, Methods & Applications, Potential Analysis, Proceedings of the American Math. Soc., Proceedings of London Math. Soc., Publicacions Matematiques, Publications Math. IHÉS, Revista Matemática Iberoamericana, Transactions of AMS.
- **Referee for funding bodies:** EPSRC (3x), Israel Science Foundation, EC Marie-Curie Actions, ERC Starting Grant, ERC Consolidator Grant, Austrian FWF (3X).

MONOGRAPHS

1. L. Ambrosio, A. Mondino, G. Savaré, *Nonlinear diffusion equations and curvature conditions in metric measure spaces*, Memoirs Amer. Math. Soc., Vol. 262, (2019), no. 1270, v+121.
2. A. Mondino, D. Semola, *Weak Laplacian bounds and minimal boundaries in non-smooth spaces with Ricci curvature lower bounds*, Memoirs Amer. Math. Soc., Vol. 310, (2025), no. 1568, v+117.
3. D. Barilari, A. Mondino, L. Rizzi, *Unified synthetic Ricci curvature lower bounds for Riemannian and sub-Riemannian structures*, preprint arXiv:2211.07762, pp. 1–148, (2022). To appear in Memoirs of the American Math. Society.

PUBLICATIONS

4. A. Mondino, *Some results about the existence of critical points for the Willmore functional*, Math. Zeit., Vol. 266, Num. 3, (2010), pp. 583-622
5. A. Mondino, *The conformal Willmore Functional: a perturbative approach*, Journal of Geometric Analysis, Vol. 23, (2013), no. 2, pp. 764–811.
6. A. Mondino, *The Willmore and other L^p curvature functionals in Riemannian manifolds*, Ph. D. Thesis (2011), SISSA digital library.
7. N. Gigli, A. Mondino, *A PDE approach to non linear potential theory,* Journal de Mathématiques Pures et Appliquées, Vol. 100, (2013), no. 4, pp. 505–534.
8. A. Mondino, *Existence of Integral m-Varifolds minimizing $\int |A|^p$ and $\int |H|^p$ in Riemannian Manifolds*, Calculus of Variations and Partial Differential Equations, Vol. 49, (2014), no. 1-2, pp. 431–470.
9. E. Kuwert, A. Mondino, J. Schygulla, *Existence of immersed spheres minimizing curvature functionals in compact 3-manifolds*, Math. Annalen, Vol. 359, (2014), no. 1, pp. 379-425.
10. A. Mondino, T. Rivière, *Immersed Spheres of Finite Total Curvature into Manifolds*, Advances in Calculus of Variations, Vol. 7, (2014), no. 4, pp. 493–538.
11. A. Mondino, J. Schygulla *Existence of immersed spheres minimizing curvature functionals in non-compact 3-manifolds*, Annales de l'Institut Henri Poincaré / Analyse non linéaire, Vol. 31, (2014), pp. 707–724.
12. A. Mondino, T. Rivière, *Willmore Spheres in Compact Riemannian Manifolds*, Advances in Mathematics, Vol. 232, (2013), no.1, pp. 608–676.
13. A. Carlotto, A. Mondino, *Existence of generalized totally umbilic 2-spheres in perturbed 3-spheres*, Int. Math. Res. Not., Vol. 2014, (2014), no. 21, pp. 6020–6052.
14. N. Garofalo, A. Mondino, *Li-Yau and Harnack type inequalities in $RCD^*(K,N)$ metric measure spaces* , Nonlinear Analysis: Theory, Methods & Applications Vol. 95, (2014), pp. 721 – 734
15. L. Keller, A. Mondino, T. Rivière, *Embedded surfaces of arbitrary genus minimizing the Willmore energy under isoperimetric constraint*, Arch. Rational Mech. Anal., Vol. 212, (2014), pp. 645–682.
16. A. Mondino, H. T. Nguyen, *A Gap Theorem for Willmore Tori and an application to the Willmore Flow*, Nonlinear Analysis: Theory, Methods & Applications, Vol. 102, (2014), pp. 220–225.
17. A. Mondino, A. Naber, *Structure Theory of Metric-Measure Spaces with Lower Ricci Curvature Bounds*, Journal of the European Math. Soc., Vol. 21, no. 6, (2019), pp. 1809–1854.
18. P. Laurain, A. Mondino, *Concentration of small Willmore spheres in Riemannian 3-manifolds*, Analysis & PDE, Vol. 7, (2014), no. 8, pp. 1901–1921.
19. L. Ambrosio, N. Gigli, A. Mondino, T. Rajala, *Riemannian Ricci curvature lower bounds in metric measure spaces with σ-finite measure,* Trans. Amer. Math. Soc. 367 (2015), no. 7, pp. 4661–4701.
20. N. Gigli, A. Mondino, T. Rajala, *Euclidean spaces as weak tangents of infinitesimally Hilbertian metric spaces with Ricci curvature bounded below*, Journal fur die Reine und Angew. Math. (Crelle's journal), Vol. 705, (2015), pp. 233–244.
21. A. Mondino, *A new notion of angle between three points in a metric space*, Journal fur die Reine und Angew. Math. (Crelle's journal), Vol. 706, (2015), pp. 103–121.

22. N. Gigli, A. Mondino, G. Savaré, *Convergence of pointed non-compact metric measure spaces and stability of Ricci curvature bounds and heat flows,* Proc. London Math. Soc., Vol. 111, Num. 5, (2015), pp. 1071–1129.

23. A. Mondino, H. T. Nguyen, *Global conformal invariants for submanifolds*, Annales de l'Institut Fourier, Vol. 68 (2018), no. 6, pp. 2663-2695.

24. A. Mondino, S. Nardulli, *Existence of Isoperimetric regions in non-compact Riemannian manifolds under Ricci curvature conditions*, Communications in Analysis and Geometry, Vol. 24, (2016), no. 1, pp. 115–136.

25. A. Mondino, T. Rivière,*A frame energy for immersed tori and applications to regular homotopy classes*, Journal of Differential Geometry, Vol. 104, (2016), no.1, pp. 143–186.

26. L. Ambrosio, A. Mondino, G. Savaré *On the Bakry-Émery condition, the gradient estimates and the Local-to-Global property of $RCD^*(K,N)$ metric measure spaces*, Journal of Geometric Analysis, Vol. 26, (2016), pp. 24–56.

27. A. Mondino, G. Wei, *On the universal cover and the fundamental group of an $RCD^*(K,N)$-space*, J. Reine Angew. Math., Vol. 753, (2019), 211–237.

28. F. Cavalletti, A. Mondino, *Measure rigidity of Ricci curvature lower bounds*, Advances in Mathematics, Vol. 286, (2016), pp. 430–480.

29. L. Ambrosio, A. Mondino, *Gaussian-type Isoperimetric Inequalities in $RCD(K,\infty)$ probability spaces for positive K*, Rend. Lincei Mat. Appl., Vol. 27, (2016), pp. 497–514 Special volume dedicated to the memory of E. De Giorgi.

30. N. Ikoma, A. Malchiodi, A. Mondino, *Embedded area-constrained Willmore tori of small area in Riemannian 3-manifolds I: minimization*, Proc. Lond. Math. Soc., Vol. 115, (2017), no. 3, pp. 502–544.

31. N. Ikoma, A. Malchiodi, A. Mondino, *Embedded area-constrained Willmore tori of small area in Riemannian 3-manifolds II: Morse Theory*, Amer. J. Math., Vol. 139, (2017), no. 5, pp. 1315–1378.

32. F. Cavalletti, A. Mondino, *Sharp and rigid isoperimetric inequalities in metric-measure spaces with lower Ricci curvature bounds*, Inventiones Math., Vol. 208, (2017), no. 3, pp. 803–849.

33. F. Cavalletti, A. Mondino, *Sharp geometric and functional inequalities in metric measure spaces with lower Ricci curvature bounds*, Geometry & Topology, Vol. 21, (2017), no. 1, pp. 603–645.

34. A. Carlotto, A. Mondino, *A non-existence result for minimal catenoids in asymptotically flat spaces*, Journal of London Math. Society, Vol. 95, (2017), no. 2, pp. 373–392.

35. F. Cavalletti, A. Mondino, *Optimal maps in essentially non-branching spaces*, Communications in Contemporary Math. Vol. 19, (2017), no. 6, 27 pp.

36. A. Mondino, E. Spadaro, *On a isoperimetric-isodiametric inequality*, Analysis and PDE, Vol. 10, (2017), no. 1, pp. 95–126.

37. B. Han, A. Mondino, *Angles between curves in metric measure spaces*, Anal. Geom. Metr. Spaces, Vol. 5, (2017), pp. 47–68.

38. M. Kell, A. Mondino, *On the volume measure of non-smooth spaces with Ricci curvature bounded below*, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5), Vol. 18, (2018), no. 2, 593–610.

39. C. Ketterer, A. Mondino, *Sectional and intermediate Ricci curvature lower bounds via Optimal Transport*, Advances in Math., Vol. 329, (2018), pp. 781-818.

40. F. Cavalletti, A. Mondino, *Almost euclidean Isoperimetric Inequalities in spaces satisfying local Ricci curvature lower bounds*, International Mathematics Research Notices (IMRN), (2020), no. 5, 1481–1510.

41. F. Cavalletti, F. Maggi, A. Mondino, *Rigidity for critical points in the Levy-Gromov inequality*, Math. Z., Vol. 289, (2018), no. 3-4, 1191–1197.

42. F. Cavalletti, A. Mondino, *Isoperimetric inequalities for finite perimeter sets under lower Ricci curvature bounds*, Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl., Vol. 29, (2018), no. 3, 413–430.

43. F. Galaz-Garcia, M. Kell, A. Mondino, G. Sosa, *On quotients of spaces with Ricci curvature bounded below*, J. Funct. Anal., Vol. 275, (2018), no. 6, 1368–1446.

44. F. Cavalletti, F. Maggi, A. Mondino, *Quantitative isoperimetry á la Levy-Gromov*, Communications on Pure and Applied Mathematics, Vol. 72, (2019), no. 8, 1631–1677.

45. N. Ikoma, A. Malchiodi, A. Mondino, *Foliation by area-constrained Willmore spheres near a non-degenerate critical point of the scalar curvature*, International Mathematics Research Notices (IMRN), Vol. 2020, no.19, October 2020, pp 6539–6568.

46. A. Lerario, A. Mondino, *Homotopy properties of horizontal loop spaces and applications to closed sub-riemannian geodesics*, Transactions of the Amer. Math. Soc. Series B, Vol. 6, (2019), 187–214.

47. A. Mondino, S. Suhr, *An optimal transport formulation of the Einstein equations of general relativity*, Journal of the European Math. Society (JEMS), Vol. 25, no. 3, (2023), 933–994.

48. A. Mondino, D. Semola, *Polya-Szego inequality and Dirichlet p-spectral gap for non-smooth spaces with Ricci curvature bounded below*, Journal de Mathématiques Pures et Appliquées, Vol. 137, (2020), 238–274.

49. F. Cavalletti, A. Mondino, *New formulas for the Laplacian of distance functions and applications*, Analysis & PDE, Vol. 13, (2020), 2091–2147.

50. N. De Ponti, A. Mondino, *Sharp Cheeger-Buser type inequalities in $RCD(K,\infty)$ spaces*, The Journal of Geometric Analysis, Vol. 31 (3), (2021), 2416–2438.

51. A. Mondino, C. Scharrer, *Existence and Regularity of Spheres Minimising the Canham-Helfrich Energy*, Arch. Rational Mech. Anal., Vol. 236, (2020), 1455–1485.

52. F. Cavalletti, A. Mondino, D. Semola, *Quantitative Obata's Theorem*, Analysis & PDE, Vol. 16, (2023), no. 3, 1389-1431.

53. V. Kapovitch, A.Mondino, *On the topology and the boundary of N-dimensional $RCD(K,N)$ spaces*, Geometry & Topology, Vol. 25, (2021), 445-495.

54. A. Mondino, M. Vedovato, *A Talenti-type comparison theorem for $RCD(K,N)$ spaces and applications*, Calc. Var. PDE, Vol. 60, Num. 157, (2021), 43 pp. DOI:10.1007/s00526-021-01971-1.

55. N. De Ponti, A. Mondino, D. Semola, *The equality case in Cheeger's and Buser's inequalities on RCD spaces*, Journ. Funct. Analysis, Volume 281, Issue 3, 1 August 2021, 36 pp.

56. A. Mondino, C. Scharrer, *A strict inequality for the minimisation of the Willmore functional under isoperimetric constraint*, Advances in Calculus of Variations, vol. 16, no. 3, 2023, pp. 529-540.

57. N. De Ponti, A. Mondino, *Entropy-Transport distances between unbalanced metric measure spaces*, Probab. Theory Relat. Fields, Vol. 184, (2022), no. 1-2, 159–208

58. I. Mondello, A. Mondino, R. Perales, *An upper bound on the revised first Betti number and a torus stability result for RCD spaces*, Commentarii Mathematici Helvetici, Vol. 97 (2022), no. 3, 555–609.

59. A. Mondino, A. Templeton-Browne, *Some rigidity results for the Hawking mass and a lower bound for the Bartnik capacity*, J. Lond. Math. Soc. (2) 106 (2022), no. 3, 1844–1896.

60. B. G. De Luca, N. De Ponti, A. Mondino, A. Tomasiello, *Cheeger bounds on spin-2 fields*, Journal of High Energy Physics (JHEP), (2021), no. 12, Paper No. 217, 50 pp.

61. A. Michelat and A. Mondino, *Quantization of the Willmore Energy in Riemannian Manifolds*, preprint arXiv:2112.13831, pp. 1–82, (2021). To appear in Advances in Mathematics.

62. M. A. Gunes and A. Mondino, *A reverse Hölder inequality for first eigenfunctions of the Dirichlet Laplacian on $RCD(K,N)$ spaces*, Proc. Amer. Math. Soc., Vol. 151 (2023), no. 1, 295–311.

63. F. Cavalletti and A. Mondino, *A review of Lorentzian synthetic theory of timelike Ricci curvature bounds*, General Relativity and Gravitation 54 (2022), no. 11, Paper No. 137, 39 pp.

64. F. Fiorani, A. Mondino, D. Semola, *Monotonicity formula and stratification of the singular set of perimeter minimizers in RCD spaces*, preprint arXiv:2307.06205, pp. 1–37, (2023). To appear in Commentarii Mathematici Helvetici.

65. A. Mondino and D. Navarro, *Moduli spaces of compact $RCD(0,N)$-structures*, Mathematische Annalen, Vol. 387, (2023). pp. 1435–1480.

66. E. Brué, A. Mondino, D. Semola, *The metric measure boundary of spaces with Ricci curvature bounded below*, Geometric and Functional Analysis (GAFA), Vol. 33, 593–636 (2023).

67. B. G. De Luca, N. De Ponti, A. Mondino, A. Tomasiello, *Gravity from thermodynamics: optimal transport and negative effective dimensions*, SciPost Physics,15, 039 (2023). pp. 1-55.

68. N. Gigli, A. Mondino, D. Semola, *On the notion of Laplacian bounds on* RCD *spaces and applications*, Proc. Amer. Math. Soc. 152 (2024), 829–841.

69. B. G. De Luca, N. De Ponti, A. Mondino, A. Tomasiello, *Harmonic functions and gravity localization*, J. High Energ. Phys. 2023, 127 (2023). pp. 1–40.

70. F. Cavalletti, A. Mondino, *Optimal transport in Lorentzian synthetic spaces, synthetic timelike Ricci curvature lower bounds and applications*, Cambridge Journal of Mathematics, 12 (2) 417–534, (2024).

71. A. Mondino and D. Semola, *Lipschitz continuity and Bochner-Eells-Sampson inequality for harmonic maps from $RCD(K,N)$ spaces to $CAT(0)$ spaces*, preprint arXiv:2202.01590, pp. 1–48, (2022). To appear in American Journal of Mathematics.

72. B. G. De Luca, N. De Ponti, A. Mondino, A. Tomasiello, *Can you hear the Planck mass?*, J. High Energ. Phys. 2024, 123 (2024). 32 pp.

73. S. Honda and A. Mondino, *Poincaré inequality for one forms on four manifolds with bounded Ricci curvature,* Arch. Math. 124, No. 4, (2025), pp. 449–455

74. A. Mondino and V. Ryborz, *On the equivalence of distributional and synthetic Ricci curvature lower bounds*, Journal of Functional Analysis, Volume 289, Issue 8, (2025). 59 pp.

75. A. Cucinotta and A. Mondino, *Half Space Property in* $\mathsf{RCD}(K,N)$ *spaces,* Annali SNS, to appear. https://doi.org/10.2422/2036-2145.202405_027. Preprint arXiv:2402.12230. pp. 1–39.

76. S. Honda and A. Mondino, *Gap phenomena under curvature restrictions*, Indagationes Mathematicae, https://doi.org/10.1016/j.indag.2025.03.008. Preprint arXiv:2410.04985. pp. 1–18.

77. F. Cavalletti, D. Manini, A. Mondino, *Optimal transport on null hypersurfaces and the null energy condition*, Commun. Math. Phys. 406, 212 (2025). pp.1–62.

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80. A. Cucinotta and A. Mondino, *A splitting theorem for manifolds with a convex boundary component and applications* arXiv:2406.09784, pp. 1–27, (2024). Revista Matemática Iberoamericana, to appear.

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84. F. Cavalletti, D. Manini and A. Mondino, *On the geometry of synthetic null hypersurfaces*, arXiv:2506.04934, pp.1–52, (2025).

85. B. G. De Luca, N. De Ponti, A. Mondino, A. Tomasiello, *Cheng's eigenvalue comparison on metric measure spaces and applications*, arXiv:2507.23671, pp.1–27, (2025).

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88. F. Cavalletti and A. Mondino, *A singularity theorem in terms of asymptotic expansion*, arXiv:2606.11825, pp. 1–28, (2026).

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