PIGOLA Stefano

Education and Career

2020 - , Associate Professor, MAT/05 Analisi, Università di Milano-Bicocca
2014 - 2020, Associate Professor, MAT/03 Geometria, Università dell'Insubria
2005 - 2014, Assistant Professor, MAT/03 Geometria, Università dell'Insubria
2004, PhD in Mathematics, Università degli Studi di Milano. Thesis: "Maximum and comparison principles at infinity on Riemannian manifolds". Advisor: Marco Rigoli.
1998/99, B.A. in Mathematics, Università degli Studi di Milano.

National Scientific Habilitations

Full professor, MAT/03 Geometria, dal 28/03/2017 al 28/03/2023
Full professor, MAT/05 Analisi, dal 28/03/2017 al 28/03/2023

Research interests

Geometric Analysis, Global Analysis

Selected talks and mini-courses

1. "Some vanishing and finiteness results on complete manifolds: a generalization of the Bochner technique". Caramanico Terme, May 2007. Convegno Nazionale di Analisi Armonica.
2. "Some analytic and geometric aspects of the p-Laplacian on Riemannian manifolds". Bardonecchia, June 2009. Convegno Nazionale di Analisi Armonica.
3."p-Laplacian and topology of manifolds". Santiago de Compostela, December 2010. Conference in Geometry and Global Analysis.
4. "Global divergence theorems in nonlinear PDEs and Geometry". Fortaleza, January 2012. Mini-course for the Summer School in Differential Geometry.
5. "Stochastic properties of manifolds: Liouville-type aspects". Maceiò, February 2012. II workshop of Differential Geometry.
6. "Height estimates for graphs of constant mean curvature." A meeting with Louis Nirenberg, Varese 10-13 June 2014.
7. "Some geometric aspects of parabolicity, stochastic completeness and Feller property". Topics in Geometric Analysis, Potsdam, June 19th 2014.
8. "Geometric aspects of recurrence, non-explosion and Feller property of a Riemannian manifold". XVIII Escola de Geometria Diferencial, Brasilia, July 28th-1st August 2014.
9. "The Dirichlet problem for harmonic maps into convex supporting balls". Workshop 2015, Varietà reali e complesse: geometria, topologia e analisi armonica. SNS di Pisa, 5-7 March, 2015.
10. "Extending manifolds past their boundaries". A Differential Geometry Day in memory of Sergio Console. Torino, 13 May 2016.
11. Riemannian manifolds with boundary and smooth domains. Geometric Analysis in Samothrace, a tribute to Gerard Besson. May 30-June 4, 2016.
12. Potential theory on Riemannian manifolds: some recent results and possible perspectives. Workshop on Geometry, Analysis and Probability. Beijing, October

26--30, 2017.

13. Subsolutions at infinity of nonlinear PDEs: decay, compact support and global Sobolev regularity. Geometric Analysis, Submanifolds and Geometry of PDE's. Politecnico di Torino, September 9-13, 2019.

14. Halfspace and intersection properties of weighted minimal hypersurfaces in the Gaussian space. Recent Trends in Geometric Analysis and Applications. SNS Pisa, November 25-28, 2019.

15. On the global $W^{2,p}$ regularity of solutions of the Poisson equation on complete manifolds. Seminaire Théorie Spectrale et Géométrie, Grenoble, February 20, 2020.

PhD students under my direction

1. Giona Veronelli, with a thesis entitled "Some analytic and geometric aspects of the p-Laplacian on Riemannian manifolds", 2010.

2. Michele Rimoldi, with a thesis entitled "Rigidity results for Lichnerowicz-Bakry-Emery Ricci tensors", 2011.

Post-doc students under my supervision

1. Davide Bianchi, 2018 - 2019. Post-doc for 1 year working on the following project: *a nonlinear Feller property in complete manifolds with applications to the qualitative study of positive and bounded solutions at infinity of nonlinear PDEs driven by the p-Laplacian*.

2. Leandro de Freitas Pessoa, 2015 - 2016. Post-doc for 10 months with Brazilian grant, working on the following project: *localized geometric conditions fo the validity of an L1 Liouville property for superharmonic functions*.

3. Michele Rimoldi, 2011 - 2013. *Post-doc for 2 years working on the following project: analytic and geometric aspects of manifolds with density with applications to Ricci solitons*.

Professional service

Referee for: Note di Matematica, American Journal of Mathematics, Manuscripta Mathematica, Journal of Differential Equations, Journal of Mathematical Analysis and Applications, Journal of Geometry and Physics, Communications in Contemporary Mathematics, Monatshefte fur Mathematik, Geometriae Dedicata, Journal of Geometric Analysis, Differential Geometry and its Applications, Publicationes Mathematicae Debrecen, Annali della Scuola Normale Superiore di Pisa, Potential Analysis, Journal of Differential Equations, Annals of Global Analysis and Geometry, Paciffic Journal of Mathematics, Journal of Nonlinear Analysis, International Mathematics Research Notices.

Organizational activities

1. *A Geometry Day in Como*. A one-day Workshop that took place regularly from

2013 to 2019 in the first half of January at the Università dell'Insubria.
http://www.dfm.uninsubria.it/pigola/geometryday.html

2. *Geometric Analysis on Riemannian and Singular Metric Measure Spaces*.
Summer School at Villa del Grumello in Como. Editions
2013: https://gams.lakecomoschool.org
2016: https://arms.lakecomoschool.org
2019: https://arms2019.lakecomoschool.org

3. *Einstein Equations: Physical and Mathematica Aspects of General Relativity*.
Summer school at Collegio Rosmini in Domodossola. Editions
2018: http://www.univco.it/domoschool/Edition-2018
2019: http://www.univco.it/domoschool/edition-2019

4. *Topologia e Geometria Differenziale*. Special Session, XXI Congresso UMI, 2019.

Last updated: January 2021