

CURRICULUM VITAE

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(a) Education

University College London	Mathematics	Ph.D., 2017-2021
University of Oxford	Math. and Theor. Physics	M.Sc. <i>Distinction</i> , 2016-2017
St Hugh's College, Oxford		Alumnus, 2016-2017
Università degli Studi di Pavia	Physics	B.Sc. <i>magna cum laude</i> , 2013-2016
Collegio Ghislieri, Pavia		Alumnus, 2013-2016

(b) Publications

1. F. Di Giovanni*, J. Rowbottom*, et al. *Graph neural networks as gradient flows*, arXiv preprint arXiv:2206.10991, 2022
2. F. Di Giovanni*, G. Luise*, et al., *Heterogeneous manifolds for curvature-aware graph embedding*, arXiv preprint arXiv:2202.01185, 2022.
3. C. Bodnar, F. Di Giovanni, et al., *Neural Sheaf Diffusion: A Topological Perspective on Heterophily and Oversmoothing in GNNs*, arXiv preprint arXiv:2202.04579, 2022.
4. J. Topping*, F. Di Giovanni* et al., *Understanding over-squashing and bottlenecks on graphs via curvature*, **Outstanding Paper Honorable Mention** (top 0.3 %) at ICLR22, 2022.
5. F. Di Giovanni, *Convergence of Ricci flow solutions to Taub-NUT*, Communications in Partial Differential Equations, 2021.
<https://doi.org/10.1080/03605302.2021.1883651>.
6. B.P.Chamberlain*, J. Rowbottom*, D. Eynard, F. Di Giovanni, et al., *Beltrami Flow and Neural Diffusion on Graphs*, Advances in Neural Information Processing Systems 34, 2021.
7. F. Di Giovanni, *Rotationally symmetric Ricci flow on \mathbb{R}^{n+1}* , Advances in Mathematics, 381, 2021.
<https://doi.org/10.1016/j.aim.2021.107621>
8. F. Di Giovanni, *Ricci flow of warped Berger metrics on \mathbb{R}^4* , Calculus of Variations and Partial Differential Equations, 59, 162, 2020.
<https://doi.org/10.1007/s00526-020-01823-4>

(c) Experience

- Teaching Assistant at Department of Mathematics, UCL, 2017-present.
Courses: Analysis 1, Analysis 2, Algebra 1, Algebra 2, Algebra 3, Complex Analysis, Logic.
- Academic Tutor at Department of Engineering, Università degli Studi di Pavia, 2015-2016.

(d) Scholarships and Awards

- UCL 4-year Ph.D. Teaching Assistantship, 2017-2021.
- Archibald Richardson Scholarship, UCL, 2020.
- Mayer de Rothschild Scholarship, UCL, 2018.
- National Scholarship University for outstanding undergraduate students, 2013-2016.