Filippo Baroni

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Education

2021 –	**DPhil**, *University of Oxford* Advisor: Marc Lackenby
2016 – 2021	Student of mathematics at *Scuola Normale Superiore di Pisa*
2019 – 2021	**Master's degree**, *University of Pisa* Advisor: Carlo Petronio Degree thesis: *Realisability of branching data with a short partition*
2016 – 2019	**Bachelor's degree**, *University of Pisa* Advisor: Riccardo Benedetti Degree thesis: *Singular homology of fibred spaces*

Publications and preprints

2024	"Uniformly polynomial-time classification of surface homeomorphisms", preprint (`arXiv:2402.00231`)
2024	"Classification of genus-two surfaces in S^3", accepted for publication in *Algebraic & Geometric Topology*
2024	"Solution of the Hurwitz problem with a length-2 partition" (with Carlo Petronio), in *Illinois Journal of Mathematics* 68.3, pp. 479-511
2022	"The Proportionality Principle via Bounded Cohomology", in *Bounded Cohomology and Simplicial Volume* (pp. 118–131), Cambridge University Press

Invited speaker

Oct 2024	"BRIJGES seminar", *University of Bristol* Talk: *Algorithmic classification of surface homeomorphisms*
Jun 2024	"Geometry seminar", *University College London* Talk: *Algorithmic classification of surface homeomorphisms*
May 2024	"Junior geometry seminar", *University of Cambridge* Talk: *Algorithmic classification of surface homeomorphisms*
Apr 2024	"Manchester geometry seminar", *University of Manchester* Talk: *Algorithmic classification of surface homeomorphisms*
Apr 2024	"Purdue topology seminar", *Purdue University* Talk: *Algorithmic classification of surface homeomorphisms*
Jan 2024	"Log cabin workshop: Big mapping class groups", *Young, AZ, USA* Talk: *Actions on hyperbolic spaces*
Nov 2023	"DAGGER seminar", *University of Warwick* Talk: *Navigating the curve graph with train tracks*

Jan 2023	"Log cabin workshop: Surfaces in 3-manifolds", *Young, AZ, USA* Talk: *The virtual fibring theorem*
Mar 2022	"BabyGeometri seminar", *University of Pisa* Talk: *An algorithm for unknot recognition*
Feb 2021	"International young seminar on bounded cohomology and simplicial volume", *online* Talk: *The proportionality principle via bounded cohomology*

Teaching

Apr–Jun 2024	Tutor for *Pure maths*, St Catherine's College, Oxford
Jan–Mar 2024	Tutor for *Pure maths and Graph theory*, St Catherine's College, Oxford
Oct–Dec 2023	Tutor for *Pure maths*, St Catherine's College, Oxford
Apr–Jun 2023	Tutor for *Graph theory*, St Catherine's College, Oxford
Jan–Mar 2023	Tutor for *Low-dimensional topology and knot theory*, University of Oxford
Oct–Dec 2022	Tutor for *Set theory*, University of Oxford
Oct–Dec 2022	Tutor for *Graph theory*, St Catherine's College, Oxford
Apr–Jun 2022	Tutor for *Graph theory*, St Catherine's College, Oxford
Jan–Mar 2022	Teaching assistant for *Low-dimensional topology and knot theory*, University of Oxford
Oct–Dec 2021	Teaching assistant for *Geometry of surfaces*, University of Oxford

Updated on October 13, 2024.