

CURRICULUM VITAE - LEONE SLAVICH

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BIRTH 22/05/1984 Genova, Italy

CURRENT POSITION Researcher (RTDB) in Mathematics, Università di Pavia, Italy (March 2020-)

PREVIOUS POSITIONS

Researcher (RTDA) in Mathematics, Università di Pisa, Italy (June 2018 - February 2020)

Post-Doc in Mathematics at Università di Pisa, Italy

(February 2016 - January 2018)

Post-Doc in Mathematics at Università di Bologna, Italy

(February 2015 - January 2016)

EDUCATION

April 2014 PhD in Mathematics

- **Institution:** Università degli Studi di Firenze, Florence (Italy).
- **Thesis:** *Hyperbolic 4-manifolds and the 24-cell*
- **Advisor:** Bruno Martelli

2011-2014 PHD student in Mathematics at Università degli Studi di Firenze, Florence (Italy).

July 2010 Master thesis in Mathematics

- **Institution:** Università di Pisa, Pisa (Italy)
- **Thesis:** *Strutture algebriche e topologiche nella musica del ventesimo secolo*
- **Advisors** Moreno Andreatta, Francesca Acquistapace

2003-2010 Undergraduate student in Mathematics at Università di Pisa, Pisa (Italy).

ATTENDED SEMINARS, CONFERENCES AND SCHOOLS

2011-2014 Cycle of PHD seminars, Università degli Studi di Firenze, Florence (Italy)
(organizer of the seminar cycle in 2012).

2011- Cycle of Geometry seminars, Università degli Studi di Pisa, Pisa (Italy).

2012 Surface groups in Paris, IHP Paris (France).

2012 Summer school on automorphisms of free groups, CRM Bellaterra (Spain).

2012 Winter Braids III, Institut Fourier, Grenoble (France).

2013 Geometry master class, Research program on Teichmüller theory,
ESI Wien (Austria).

2013 Geometric topology in Cortona, Indam meeting, Cortona (Italy).

2013 Geometric Topology in New York, Columbia University, New York (USA).

2013 9th Rowan Hamilton Geometry Workshop, Trinity college, Dublin (Ireland).

2014 Intensive period on Teichmüller theory and surfaces in 3-manifolds,
Centro De Giorgi, Pisa (Italy).

2015 Curve conference, University Paris 6, Paris (France).

2016 Advanced School on Geometric Group Theory and Low-Dimensional Topology:
Recent Connections and Advances - ICTP, Trieste (Italy).

2017 Geometric topology in Cortona, Indam meeting, Cortona (Italy).

2017 Dynamics on representation varieties, Centre Henri Lebesgue, Rennes (France).

2019 Geometric structures in Nice, Université de Nice, Nice (France).

2019 Mini-workshop *Reflection groups in negative curvature*, MFO, Oberwolfach (Germany).

2019 CUSO Summer school *Géométrie, topologie et arithmétique de façon hyperbolique*, Les Diablerets (Switzerland).

VISITING PERIODS

- 2009** October-December, Visiting Student at IRCAM, Paris (France).
2019 February 25-March 1, Department of Mathematics, Université de Neuchâtel, Neuchâtel (Switzerland).
2019 August 26-September 8, IMPA, Rio de Janeiro (Brazil).

CONFERENCE TALKS

- 2011** April 7: Conference Rencontres mathématique/musique, IRMA, Strasbourg (France)
2017 February 24: Workshop 2017: Varietà reali e complesse: geometria, topologia e analisi armonica, Scuola Normale Superiore, Pisa (Italy)
2019 April 12: Mini-workshop *Reflection groups in negative curvature*, MFO, Oberwolfach, Germany.

INVITED TALKS

- 2014** May 28, Oberseminar Geometrie, Université de Fribourg, Fribourg (Switzerland)
2019 February 26, Geometry seminars, Université de Neuchâtel, Neuchâtel (Switzerland)
2019 September 29, Geometry seminars, IMPA, Rio de Janeiro (Brazil)
2020 December 8, Topology and Dynamics seminars, University of Florida, (USA) (online seminar)

RESEARCH INTERESTS: Low-dimensional topology, geometric topology, hyperbolic geometry, Teichmüller theory, Kleinian group theory, hyperbolic manifolds in high dimensions, deformations of hyperbolic reflection groups, arithmetic group theory, Coxeter group theory

LANGUAGES

- Italian (Native language)
- English (Fluent)
- French (Basic)

PUBLICATIONS

- *A geometrically bounding hyperbolic link complement*, Algebraic & Geometric Topology 15-2 (2015) 1175-1197; doi: 10.2140/agt.2015.15.1175
- *Some hyperbolic 4-manifolds with low volume and number of cusps*, Topology and its Applications 191 (2015) 1-9; doi: 10.1016/j.topol.2015.05.004
- A. Kolpakov, L. Slavich: *Symmetries of hyperbolic 4-manifolds*, International Mathematics Research Notices, Volume 2016, Issue 9, 2677-2716; doi: 10.1093/imrn/rnv210
- A. Kolpakov, L. Slavich: *Hyperbolic 4-manifolds, colorings and mutations*, Proc. London Math. Soc. 113 (2) (2016): 163-184. doi: 10.1112/plms/pdw025
- *The complement of the figure-eight knot geometrically bounds*, Proceedings of the American Mathematical Society 145(3) (2017), 1275-1285; doi: 10.1090/proc/13272
- A. Kolpakov, A. Reid, L. Slavich, *Embedding arithmetic hyperbolic manifolds*, Math. Res. Lett. 25 (2018), 1305-1328; doi: 10.4310/MRL.2018.v25.n4.a12
- S. Riolo, L. Slavich: *New hyperbolic 4-manifolds of low volume*, Algebraic & Geometric Topology 19-5 (2019) 2653-2676; doi: 10.2140/agt.2019.19.2653
- B. Martelli, S. Riolo, L. Slavich: *Compact hyperbolic manifolds without spin structures*, Geometry & Topology 24, Issue 5 (2020), 2647-2674, doi:10.2140/gt.2020.24.2647
- A. Kolpakov, S. Riolo, L. Slavich: *Embedding non-arithmetic hyperbolic manifolds*, to appear on Math. Res. Lett. preprint [arXiv:2003.01707](https://arxiv.org/abs/2003.01707)
- B. Martelli, S. Riolo, L. Slavich: *Convex plumbings in closed hyperbolic 4-manifolds*, Geometriae Dedicata 212 (2020), 243-259 <https://doi.org/10.1007/s10711-020-00557-z>.

- L. Ferrari, A. Kolpakov, L. Slavich: *Cusps of hyperbolic 4-manifolds and rational homology spheres*, Proceedings of the London Mathematical Society (2021), doi.org/10.1112/plms.12421. preprint arXiv:2009.09995
- M. Belolipetski, N. Bogachev, A. Kolpakov, L. Slavich: *Subspace stabilisers in hyperbolic lattices*, preprint arXiv:2105.06897

TEACHING

- 2015** Minicourse: The geometry and topology of low-dimensional manifolds,
Department of Mathematics - Università di Bologna (10 hours)
- 2016** Geometria 1 (Linear algebra),
Department of Physics - Università di Pisa with prof. Mario Salvetti (10 hours)
- 2016** Geometria e algebra lineare (Linear algebra),
Department of Engineering - Università di Pisa with prof. Carlo Petronio (20 hours)
- 2017** Analisi 1 (Calculus),
Department of Engineering - Università di Pisa with prof.ssa Maria Stella Gelli (20 hours)
- 2018-2019** Geometria e algebra lineare (Linear algebra),
Department of Engineering - Università di Pisa with prof. Carlo Petronio (47 hours)
- 2018-2019** Matematica (General Mathematics),
Department of Pharmacy - Università di Pisa with prof. Marcello Mamino (10 hours)
- 2019-2020** Analisi Matematica (Calculus),
Department of Computer Science - Università di Pisa (60 hours)
- 2019-2020** Algebra lineare (Linear algebra),
Department of Engineering - Università di Pisa with prof. Roberto Dvornicich (12 hours)
- 2019-2020** Geometria 2 (Geometry 2),
Department of Mathematics - Università di Pavia with prof. Alessandro Ghigi (28 hours)
- 2019-2020** PHD course: “Argomenti scelti di geometria iperbolica” (Hyperbolic Geometry),
Department of Mathematics - Università di Pisa with prof. Bruno Martelli (20 hours)
- 2020-2021** Algebra lineare (linear algebra),
Department of Mathematics and Physics - Università di Pavia with prof. Giampietro Pirola (28 hours)
- 2020-2021** Istituzioni di Geometria,
Department of Mathematics - Università di Pavia with prof. Francesco Bonsante (24 hours)
- 2020-2021** Complementi di Matematica per Scienze Chimiche (Mathematics),
Department of Chemistry - Università di Pavia with prof. Stefano Lisini (24 hours)