curriculum vitæ of

Filippo Mazzoli

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ANAGRAPHICS

Born on November 21st, 1992 in Firenze (FI), Italy. Italian citizen. Pronouns: *he/him/his*.

EMPLOYMENT

Aug 2024 – present	**Assistant Professor** in Topology,	UC RIVERSIDE

Department of Mathematics, University of California Riverside, Riverside CA, USA.
Tenure track position.

Aug 2023 – Jul 2024	**Postdoctoral researcher** in Mathematics,	MPI FOR MIS

Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany.
Post-doc mentor: Anna Wienhard.

Aug 2020 – May 2023	**Whyburn Research Associate and Lecturer**,	UNIVERSITY OF VIRGINIA

Department of Mathematics, University of Virginia, Charlottesville VA, USA.
Post-doc mentor: Sara Maloni.

EDUCATION

Oct 2016 – Jul 2020	**Ph.D.** in Mathematics,	UNIVERSITÉ DU LUXEMBOURG

Thesis title: *Constant curvature surfaces and volumes of convex co-compact hyperbolic manifolds*,
Advisor: Jean-Marc Schlenker. (.pdf file available here.)

Sept 2014 – Sept 2016	**M.Sc.** in Mathematics, 110/110, summa cum laude.	UNIVERSITÀ DI PISA

Thesis advisor: Riccardo Benedetti.

Sep 2011 – Sep 2014	**B.Sc.** in Mathematics, 110/110, summa cum laude.	UNIVERSITÀ DI PISA

Thesis advisor: Paolo Lisca.

RESEARCH INTERESTS

(Higher) Teichmüller Theory, Anti-de Sitter geometry, Hyperbolic geometry, Kleinian groups, Low-dimensional topology, quantum Teichmüller space, quantum hyperbolic invariants.

PAPERS

Published

1. F. Mazzoli, A. Seppi, and A. Tamburelli. *Para-hyperKähler geometry of the deformation space of maximal globally hyperbolic anti-de Sitter three-manifolds*. Mem. Amer. Math. Soc. 306.1546, 2025, pp. v+107. URL.

2. F. Mazzoli. *Constant Gaussian curvature foliations and Schläfli formulas of hyperbolic 3-manifolds*. Ann. Sc. norm. super. Pisa - Cl. sci. 2024. URL.

3. F. Mazzoli and G. Viaggi. *Length functions in Teichmüller and anti-de Sitter geometry*. Forum Math. Sigma 11, 2023, Paper No. e101. URL.

4. F. Mazzoli. *The infimum of the dual volume of convex co-compact hyperbolic 3-manifolds*. Geom. Topol. 27.6, 2023, pp. 2319–2346. URL.

5. D. Choudhury, F. Mazzoli, and A. Seppi. *Quasi-Fuchsian manifolds close to the Fuchsian locus are foliated by constant mean curvature surfaces*. Math. Ann. 2023. URL.

6. F. Mazzoli. *The dual volume of quasi-Fuchsian manifolds and the Weil-Petersson distance*. Trans. Amer. Math. Soc. 375.1, 2022, pp. 695–723. URL.

7. F. Mazzoli. *The dual Bonahon-Schläfli formula*. Algebr. Geom. Topol. 21.1, 2021, pp. 279–315. URL.

Accepted

8. F. Mazzoli and G. Viaggi. *Volume, entropy, and diameter in* $SO(p, q + 1)$-*higher Teichmüller spaces*. to appear in Comment. Math. Helv. 2023. arXiv: 2312.17137 [math.DG].

9. F. Mazzoli and G. Viaggi. $SO_0(2, n + 1)$-*maximal representations and hyperbolic surfaces*. to appear in Mem. Amer. Math. Soc. 2022. arXiv: 2206.06946 [math.GT].

Preprints

10. S. Maloni, G. Martone, F. Mazzoli, and T. Zhang. *Topology of the space of d-pleated surfaces*. submitted, 2025. arXiv: 2508.04813 [math.GT].

11. S. Maloni, G. Martone, F. Mazzoli, and T. Zhang. *d-pleated surfaces and their shear-bend coordinates*. submitted, 2023. arXiv: 2305.11780 [math.GT].

12. F. Mazzoli. *Intertwining operators of the quantum Teichmüller space*. under revision, 2016. arXiv: 1610.06056 [math.GT].

Awards and Grants

2020	Excellent Thesis Award, year 2020.	Université du Luxembourg
2020	Graduate Internship grant.	GEAR Network
2019	Travel grant for graduate students.	DPMA, Université du Luxembourg
2017	Premio di Studio *Benedetto Sciarra*, anni 2015-2016.	Scuola Normale Superiore, Pisa

Long Research Visit

Jan 2019 – Mar 2019	Supervised by Prof. Francis Bonahon.	University of Southern California

Invited Talks

Conferences and Workshops

Apr 15th-19th 2024	*Submanifolds of locally symmetric spaces: geometric, analytic and dynamical aspects,* workshop.	Autrans, France
Feb 21st-23rd, 2024	*Mini-workshop on pseudo-Riemannian geometry*, workshop.	Universitá degli Studi di Pavia
Jul 2023	*Group actions and low-dimensional topology*, conference.	ICMAT, El Barco de Ávila, Spain
Jan 27th, 2023	*Geometry, topology, and their applications*, online workshop.	MPI for MiS, Leipzig, Germany
Aug 22nd-26th, 2022	*Minimal surfaces in symmetric spaces and Labourie's conjecture*, workshop.	Autrans, France
Jul 20th, 2022	*AMS-EMS-SMF Meeting*, conference.	Université Grenoble Alpes
Mar 12th, 2022	*55th Spring Topology and Dynamics Conference*, conference.	Baylor University
Jun 2021	*Nearly Carbon Neutral Geometric Topology Conference*, online conference.	Online
Aug 2019	*Combinatorial and algebraic aspects of geometric structures*, conference.	Chiang Mai University
Dec 8th, 2020	*Parole aux jeunes géomètres dynamiques*, online workshop.	GDR Platon
Sep 2018	*Young Mathematicians Symposium of the Greater Region*, conference.	INRIA Nancy - Grand Est
May 2018	*Structures on Surfaces*, workshop.	INRIA Nancy - Grand Est

Seminars

Mar 18th, 2024	Discrete groups and geometry.	IHES
Mar 12th, 2024	Geometry and Topology Seminar.	Université du Luxembourg
Feb 15th, 2024	Séminaire de Théorie Spectrale et Géométrie.	Institut Fourier, Grenoble
Oct 10th, 2023	Geometry Seminar.	MPI for MiS
Mar 6th, 2023	Dynamics Seminar.	University of Wisconsin-Madison
Jan 13th, 2023	Colloquium talk.	UC Riverside
Nov 28th, 2022	Topology Seminar.	UT Austin
Nov 18th, 2022	Geometry-Topology Seminar.	UC Riverside
Apr 4th, 2022	Geometry Seminar.	University of Virginia
Nov 29th, 2021	Geometry-Topology Seminar.	University of Maryland
Jun 10th, 2021	Differential Geometry Seminar (online).	Heidelberg University

May 11th, 2021	Geometry Seminar.	UNIVERSITY OF VIRGINIA
Nov 3rd, 2020	Pangolin Seminar.	ONLINE
Oct 14th, 2020	Max Dehn Seminar.	UNIVERSITY OF UTAH
Feb 12th, 2020	Topology Seminar.	TEXAS A&M
Jan 30th, 2020	Geometry & Topology Seminar.	BOSTON COLLEGE
Jan 28th, 2020	Geometry & Topology Seminar.	YALE UNIVERSITY
Jan 23rd, 2020	Differential Geometry Seminar.	HEIDELBERG UNIVERSITY
Dec 12th, 2019	Séminaire de Théorie Spectrale et Géométrie.	INSTITUT FOURIER, GRENOBLE
Feb 19th, 2019	Geometry Seminar.	UNIVERSITY OF VIRGINIA

TEACHING

Fall 2025	MATH 259, Geometry and topology of surfaces, graduate course.	UC RIVERSIDE
Winter 2025	MATH 010B, Calculus of Several Variables (part 2), undergraduate course.	
	MATH 009B, First-year Calculus (part 2), undergraduate course.	
Fall 2024	MATH 009B, First-year Calculus (part 2), undergraduate course.	
Jan 2024 – Feb 2024	An introduction to anti-de Sitter geometry, mini-course.	MPI FOR MIS
Spring 2023	MATH 8720, Hyperbolic Geometry, topics course.	UNIVERSITY OF VIRGINIA
	MATH 5700, Introduction to Geometry, undergraduate course.	
Fall 2022	MATH 3310-100, Basic Real Analysis, undergraduate course.	
Spring 2022	MATH 8720, Differential Geometry, graduate course.	
	MATH 5700, Introduction to Geometry, undergraduate course.	
Fall 2021	MATH 3310-100, Basic Real Analysis, undergraduate course.	
Spring 2021	MATH 3350-001, Applied Linear Algebra, undergraduate course.	
	MATH 3350-002, Applied Linear Algebra, undergraduate course.	
Fall 2020	MATH 2310-101/201, Calculus III (TA), undergraduate course.	
Fall 2019	BASI-313, Analyse 1 (TA), undergraduate course.	UNIVERSITÉ DU LUXEMBOURG
Fall 2018	BASI-280, Analyse 1a & 1b (TA), undergraduate course.	
Spring 2018	BASI-10 Analyse 2a & 2b (TA), undergraduate course.	
Fall 2017	BASI-12, Analyse 3b (TA), undergraduate course.	

MENTORING AND OUTREACH

Jan-Jun 2024	ENS Lyon Internship,	MPI MIS
	Mentee: Antoine Ablondi. Topic: *Pseudo-Riemannian hyperbolic geometry*.	
Oct 2022	Arbeitsgemeinschaft on Higher Teichmuller theory,	OBERWOLFACH
	Mentee: Ferndando Camacho Cadena. Topic: *Symplectic structures on the Hitchin component*.	
Oct 2022	Geometry Lab,	UNIVERSITY OF VIRGINIA
	Topic: *Hyperbolic geometry*. Organizer: Sara Maloni.	
Summer 2021	Research Experience for Undergraduates (REU),	UNIVERSITY OF VIRGINIA
	Co-advisor: Sara Maloni. Students: K. Betts, T. Larsen, J. Utley, A. Vanis.	
	Project: *The tri-pants graph of the twice-punctured torus*. Preprint arXiv:2111.07136.	
2018-19	Science Comic: Through the Looking Glass, Reflections of Science in Luxembourg,	UNIVERSITÉ DU LUXEMOBURG
	Title: *Number theory in the past, present, and future*. Comic book available here.	

ORGANIZING

SEMINARS

2024-2025	Colloquium talks committee,	UC RIVERSIDE, RIVERSIDE CA, U.S.A.
	Co-organizers: Yat Tin Chow, Brian Collier, Qian Zhang.	
Sep 2023 - Apr 2024	Geometry Seminar,	MPI FOR MIS, LEIPZIG, GERMANY
	Co-organizers: Samantha Fairchild, James Farre, Konstantinos Tsouvalas.	

CONFERENCES AND WORKSHOPS

Oct 2024	*2024 Fall Western Sectional Meeting*, conference.	UC RIVERSIDE, RIVERSIDE, USA
	Session: *Geometry, topology and dynamics of character varieties*. Co-organizers: Brian Collier.	
Jul 2024	*2nd AMS-UMI International Joint Meeting 2024*, conference.	PALERMO, ITALY
	Session: *Anosov representations and higher Teichmüller theory*. Co-organizers: Sara Maloni, Andrea Tamburelli.	
Aug-Sep 2023	*Metrics on higher Teichmüller spaces*, workshop.	FRÉJUS, FRANCE
	Co-organizers: Christian El Emam, Nathaniel Sagman.	
June 2022	*Nearly Carbon Neutral Geometric Topology Conference 2022*, online conference.	ONLINE
	Session: *Anosov representations*. Co-organizers: Gabriele Viaggi.	
Nov 2021	*Virginia Topology Conference*, conference.	UNIVERSITY OF VIRGINIA
	Co-organizers: Thomas Koberda, Sara Maloni, Mark Pengitore.	

PRESENTATIONS

Fall 2021	Reading seminar,	UNIVERSITY OF VIRGINIA
	An introduction to Higgs bundles, with the Geometry group at UVA.	
Fall 2020-Spring 2021	Reading seminar,	UNIVERSITY OF VIRGINIA
	Anosov representations, with Sara Maloni and Alec Traaseth.	
Fall 2018	Reading seminar,	UNIVERSITÉ DU LUXEMBOURG
	A hyperKähler extension of the Teichmüller space, with Andrea Seppi	
Apr 2018	Ph.D. Seminar,	UNIVERSITÉ DU LUXEMBOURG
	About the McShane identity.	
Sep 2017	Ph.D. Away Days,	UNIVERSITÉ DU LUXEMBOURG
	Classical applications of the H-Cobordism theorem.	
Sep 2017	Geometry and Topology seminar,	UNIVERSITÉ DU LUXEMBOURG
	Intertwining operators of the quantum Teichmüller space.	
Apr 2017	Ph.D. Seminar,	UNIVERSITÉ DU LUXEMBOURG
	A parametrization of complex projective structures on surfaces.	
Sep 2015	Seminari dei Baby Geometri,	UNIVERSITÁ DI PISA
	Sulle Geometrie in dimensione 3.	

SERVICE

Referee for the acamedic journals *Geometric and Functional Analysis*, *Mathematische Annalen*, *Advances in Mathematics*, *International Mathematics Research Notices IMRN*, *Journal of Differential Geometry*, *Journal of Topology*, *Algebraic & Geometric Topology*, *Geometry & Topology*, *Transactions of the American Mathematical Society*.

SKILLS

Speaking	Italian (native), English (fluent), French (intermediate).
Languages	C Language, LaTeX, Matlab.

References

Research

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Teaching

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