

Curriculum Vitae

Federica Fanoni

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Positions

Nov 2019 – Chargée de recherche CNRS at the University Paris-Est Créteil
Oct 2018 – Oct 2019 Chargée de recherche CNRS at the University of Strasbourg
Oct 2017 – Sep 2018 Postdoc at Heidelberg University
Apr 2017 – Sep 2017 Postdoc at the Max Planck Institute for Mathematics in Bonn
Oct 2016 – Mar 2017 Postdoc at Heidelberg University
Jul 2015 – Sep 2016 SNSF Early Postdoc.Mobility Fellow (postdoc) at the University of Warwick

Education

Jan 2011 – Jul 2015 PhD student in Mathematics at the University of Fribourg, under the supervision of Prof. Hugo Parlier
Sep 2008- - Sep 2010 Master in Mathematics at the University of Milan (summa cum laude)

Research interests

Hyperbolic and topological surfaces of finite and infinite type, Teichmüller and moduli spaces, mapping class groups

Publications

F. Fanoni, S. Hensel, *A note on the pure mapping class group of an infinite-type surface of finite genus*, available at fanoni.perso.math.cnrs.fr/Multitwistsdontgenerate.pdf

F. Fanoni, *Isospectral hyperbolic surfaces of infinite genus*, International Mathematics Research Notices, 2022

F. Fanoni, T. Ghaswala and A. McLeay, *Homeomorphic subsurfaces and the omnipresent arcs*, Annales Henri Lebesgue 4 (2021), 1565–1593

S. Hensel, F. Fanoni and N. Vlamis, *Big mapping class groups acting on homology*, Indiana University Mathematics Journal 70 (2021), no. 6, 2261–2294

M. Durham, F. Fanoni and N. Vlamis, *Graphs of curves on infinite-type surfaces with mapping class group actions*, Annales de l'Institut Fourier 68 (2018), no. 6, 2581–2612

F. Fanoni and B. Pozzetti, *Basmajian-type inequalities for maximal representations*, Journal of Differential Geometry 116 (2020), no. 3, 405–458

P. Cahn, F. Fanoni and B. Petri, *Mapping class group orbits of curves with self-intersections*, Israel Journal of Mathematics 223 (2018), no. 1, 53–74

V. Erlandsson and F. Fanoni, *Simplicial embeddings between multicurve graphs*, Michigan Journal of Mathematics 66 (2017), no. 3, 549–567

F. Fanoni and H. Parlier, *Filling sets of curves on punctured surfaces*, New York Journal of Mathematics 22 (2016), 653–666

F. Fanoni and H. Parlier, *Systoles and kissing numbers of finite area hyperbolic surfaces*, Algebraic & Geometric Topology 15 (2015), no. 6, 3409–3433

F. Fanoni, *The maximum injectivity radius of hyperbolic orbifolds*, Geometriae Dedicata 175 (2015), 281–307

Longer term research visits

- Jan 2015 – Jun 2015: CUNY Graduate Center, New York
- Mar 2013: Schrödinger Institute for Mathematics and Physics, Vienna

Grants and awards

- Idex Attractivité (Jun 2019 – May 2021)
- SNF Early Postdoc.Mobility (Jul 2015 – Dec 2016)
- GEAR Network Graduate Internship (Jan 2015 – Jun 2015)
- Best talk Award at the 11th Graduate Colloquium (Sep 9 – 10, 2013, Fribourg, Switzerland)
- CSWM Continued Education grant (Mar 2013)

Teaching

At the University of Fribourg: teaching assistant for

- *Analysis I* (autumn semester 2014)
- *Mathematical Methods for Computer Scientists I/II – Discrete Mathematics* (academic year 2013/2014)
- *Algebra and Geometry I/II* (academic year 2012/2013)
- *Linear Algebra I/II* (academic year 2011/2012)
- Student seminar *Graph Theory Proseminar* (autumn semester 2011)
- Exercise class: *Geometry of surfaces* (spring semester 2011)

At the University of Heidelberg: teacher of a Master course (*Translation surfaces*, summer semester 2018)

At the University of Paris-Est Créteil Val-de-Marne:

- teaching assistant for *Mathématiques pour la physique 3* (spring semester 2020)
- teaching assistant for *Fonctions de plusieurs variables* (spring semester 2021)
- teacher of two Master classes, *Basics in Mathematics: Geometry and Discrete aspects of geometry and topology* (autumn semester 2021)
- teacher of two Master classes, *Basics in Mathematics: Geometry and Discrete aspects of geometry and topology* (autumn semester 2022)

Student supervision

Mareike Pfeil, Master student at Heidelberg University (academic year 2016/2017)

Outreach

- Talk at the seminar *Des mathématiques*, École Normale Supérieure (Oct 27, 2021)
- Presentation and speed meeting at the Journée "Filles et maths/info : une équation lumineuse", University of Paris-Est Créteil Val-de-Marne (Feb 4, 2020)
- *Speed meeting* at the *Rendez-vous des Jeunes Mathématiciennes*, Strasbourg University (Oct 21-23, 2019)
- Talk at the *Rendez-vous des Jeunes Mathématiciennes*, Strasbourg University (Oct 22-24, 2018)
- Member of the *Upstream Program* at Heidelberg University and co-organizer of a one-day event for Bachelor and Master students (*Upstream Perspectives*, Dec 14, 2016)
- Presentation at the *Littlebrook Science Expo*, Littlebrook Elementary School, Princeton (May 19, 2016)
- Talk at the *5th Annual Women in Math and Computing Day*, CUNY York College (Apr 24, 2015)
- Laboratories for elementary to high school students at the *Centro Matematita* (Interuniversity Research Center for the Communication and Informal Learning of Mathematics) in Milan (Nov 2007-May 2008)

Responsibilities

Coordinator of the *Images and Geometry* research area of the *Labex Bézout* (since Sep 2022)

Organization

- *Colloque de Géométrie*, at the University of Paris-Est Créteil
- Conference *Paroles aux jeunes chercheuses et chercheurs en géométrie et dynamique*, at the Paris-Saclay University (Nov 23-25, 2022)
- Two sessions of the online conference *Geometry & TACoS*
- Online seminar *Big Surf(aces)* (2020-2021)
- Mini-conference *Geometry Day in Créteil*, at the University of Paris-Est Créteil Val-de-Marne (Nov 5, 2021)
- Mini-conference *Geometry Day in Créteil*, at the University of Paris-Est Créteil Val-de-Marne (Jan 20, 2020)
- Conference *Geometric Analysis meets Geometric Topology* at Heidelberg University (Feb 25-28, 2019)
- German chapter conference of the European Women in Mathematics (May 3-4, 2018)
- Geometry Seminar at Heidelberg University
- Geometry and Topology seminar at the University of Warwick

Language skills

- Italian: native speaker
- English and French: fluent
- Dutch and German: basic