

Irene Pasquinelli

Curriculum vitae

Personal Informations

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Academic positions

- 2022– **Leverhulme Early Career Fellow**, *School of Mathematics, University of Bristol*, Bristol, UK
- 2020–2022 **Research Associate**, *School of Mathematics, University of Bristol*, Bristol, UK
Scientific mentor: Dr. Viveka Erlandsson
- 2018–2020 **FSMP Postdoctoral Fellow**, *Institute de Mathématiques de Jussieu - Paris Rive Gauche (Sorbonne Université)*, Paris, France
Scientific mentor: Prof. Elisha Falbel
- 2016–2017 **JSPS Doctoral Fellow**, *Tokyo Institute of Technology*, Tokyo, Japan
Complex hyperbolic cone manifolds, Deligne-Mostow lattices and configuration spaces.
Host researcher: Prof. Sadayoshi Kojima

Education

- 2014–2018 **PhD in Mathematics**, *Durham University*, Durham, UK
Thesis: Complex hyperbolic lattices and moduli spaces of flat surfaces.
Advisor: Prof. John Parker
- 2013–2014 **Master 2 of Science in Mathematics: Analysis, Arithmetics and Geometry**, *Ecole Polytechnique*, Paris, France
Stage de recherche: Structure of certain $CAT(0)$ spaces.
Advisor: Prof. Ives de Cornulier
- 2012–2013 **Master 1 of Science in Pure Mathematics**, *Ecole Polytechnique*, Paris, France
Stage de recherche: Cutting sequences on Veech surfaces.
Hosting structure: University of Bristol
Advisor: Prof. Corinna Ulcigrai
- 2009–2012 **Bachelor of Science in Mathematics (Laurea Triennale)**, *Università "La Sapienza"*, Rome, Italy, Grade: 110/110 *cum laude*
Thesis: Gromov boundary and Tits metric in $CAT(\kappa)$ -spaces.
Advisor: Prof. Andrea Sambusetti

Publications and preprints

6. **Mapping class group orbit closures for non-orientable surfaces**, *V. Erlandsson, M. Gendulphe, I. Pasquinelli, J. Souto*, arXiv:2110.02644, to appear in Geometric And Functional Analysis
5. **Representations of Deligne-Mostow lattices into $\mathrm{PGL}(3, \mathbb{C})$** , *E. Falbel, I. Pasquinelli, A. Ucan-Puc*, arXiv:2108.02631, to appear in Experimental Mathematics
4. **Complex hyperbolic orbifolds and hybrid lattices**, *E. Falbel, I. Pasquinelli*, arXiv:2003.06466, Geom Dedicata (2023) Vol.217, 28
3. **Fundamental domains and presentations for the Deligne–Mostow lattices with 2-fold symmetry**, *I. Pasquinelli*, arXiv:1708.05267, Pacific Journal of Mathematics (2019) Vol. 302, No. 1, 201–247
2. **Cutting sequences on Bouw–Möller surfaces: an S-adic characterization**, *D. Davis, I. Pasquinelli, C. Ulcigrai*, arXiv:1509.03905, Annales scientifiques de l'Ecole Normale Supérieure (2019) Vol 52, No. 4, 927-1023
1. **Deligne-Mostow lattices with three fold symmetry and cone metrics on the sphere**, *I. Pasquinelli*, arXiv:1509.05320, Conformal Geometry and Dynamics (2016) Vol. 20, 235–281
- c. **Representations of Deligne-Mostow lattices into $\mathrm{PGL}(3, \mathbb{C})$ part II**, *E. Falbel, I. Pasquinelli, A. Ucan-Puc*, arXiv:2112.03684
- b. **Complex hyperbolic lattices and moduli spaces of flat surfaces**, *I. Pasquinelli*, under the supervision of Prof. *J. R. Parker*, PhD thesis
- a. **Cutting sequences in Veech surfaces**, *I. Pasquinelli*, under the supervision of Prof. *C. Ulcigrai*, arXiv:1507.02469, Master thesis

Awards

- 2022 **Early Career Fellowship**, *The Leverhulme Trust*
- 2022 **Research in pairs Grant**, *London Mathematical Society*
- 2022 **Small Grant**, *Heilbronn Institute for Mathematical Research*
- 2022 **Focused Research Grant**, *Heilbronn Institute for Mathematical Research*
- 2018 **Postdoctoral Fellowship**, *Fondation Sciences Mathématiques de Paris*
- 2017 **Willmore Pure Postgraduate Award**, *Durham University*
- 2017 **Grad internship award**, *GEAR Network*, University of Illinois at Urbana-Champaign
- 2016 **Grad internship award**, *GEAR Network*, University of Illinois at Urbana-Champaign
- 2015 **Fellowship award under the "FY2015 JSPS Postdoctoral Fellowship (short-term) for North American and European Researchers"**, *Japan Society for the Promotion of Sciences*, Tokyo
- 2015 **Quayle Postgraduate Bursary prize**, *Durham University*
- 2014–2018 **ESPRC Doctoral Scholarship**, *Durham University*

- 2013 **Prize for the research internship** (Prix d'option de stage de recherche), *Ecole Polytechnique*, Paris
- 2012–2014 **Scholarship “Fundraising - Mérite”**, *Ecole Polytechnique*, Paris
- 2010–2012 **“Excellence Course” in Mathematics**, *Università “La Sapienza”*, Roma
- 2011–2012 **Collaboration scholarship**, *Università “La Sapienza”*, Roma
- 2009–2012 **Tax exoneration for merits**, *Università “La Sapienza”*, Roma

References

Professor Viveka Erlandsson, *University of Bristol*, v.erlandsson@bristol.ac.uk, +44 (0) 117 428 4959

Professor Elisha Falbel, *IMJ - Sorbonne Université*, elisha.falbel@imj-prg.fr, +33 (0)1 44 27 53 46

Professor John R. Parker, *Durham University*, j.r.parker@durham.ac.uk, +44 (0) 191 334 3057

Professor Corinna Ulcigrai, *Universität Zürich*, corinna.ulcigrai@math.uzh.ch, +41 (0)44 635 58 46

Teaching experiences

- 2022–2023 **Teaching assistant for Analysis course**, (*first year Bachelor course*), University of Bristol
- 2021–2022 **Teaching assistant for Analysis course**, (*first year Bachelor course*), University of Bristol
- 2019–2020 **Lectures and tutorials for Topology and Differential Calculus course**, (*third year Bachelor course, fully online*), *Ecole Polytechnique*
- 2019–2020 **Lectures for General Preparation and Methodology course**, (*course for foreign students*), *Ecole Polytechnique*
- 2017–2018 **Teaching assistant for Geometric Topology course**, (*second year Bachelor course*), *Durham University*
- 2017–2018 **Teaching assistant for Calculus & Probability course**, (*first year Bachelor course*), *Durham University*
- 2015–2016 **Teaching assistant for Linear Algebra course**, (*first year Bachelor course*), *Durham University*

Invited talks and minicourses

- Sept 2023 **Developments in Modern Mathematics**, *Göttingen*, Germany
- Jul 2023 **Lattices in Negative Curvature**, *Les Diablerets*, Switzerland
- Jul 2023 **Group actions and low-dimensional topology**, *El Barco de Avila*, Spain
- May 2023 **Coloquio**, *Universidad Nacional Autonoma de Mexico*, Cuernavaca, Mexico
- Mar 2023 **Fry conference series: new perspectives in pure mathematics**, *University of Bristol*, UK

- Mar 2023 **Non-positive curvature in manifolds and groups**, *Alma Mater Studiorum Università di Bologna*, Italy
- Nov 2022 **Séminaire de géométrie**, *Nantes Université*, France
- Jul 2022 **AMS-EMS-SMF Joint International Meeting**, *Université Grenoble-Alpes*, France
- Jul 2022 **Complex hyperbolic geometry and related topics**, *CIRM*, Luminy, France
- Dec 2021 **Young meeting in Geometry and Dynamics**, *Universidad Nacional Autonoma de Mexico*, Cuernavaca, Mexico
- Nov 2021 **Bristol Junior Geometry Seminar**, *University of Bristol*, UK
- Nov 2021 **Pure Mathematics Colloquium**, *Durham University*, UK
- Nov 2021 **Selected Topics in Mathematics - Online Edition**, *Liverpool*, UK, online seminar
- Jun 2021 **Complex Hyperbolic Geometry Workshop**, *Chungnam National University*, Korea, online workshop
- Feb 2021 **Geometry and topology seminar**, *Florida State University*, USA, online seminar
- Oct 2020 **Ergodic Theory and Dynamical Systems Seminar**, *Universität Zürich*, Switzerland
- Oct 2020 **Séminaire Groupes et Analyse**, *Université de Neuchâtel*, Switzerland
- Jun 2020 **Nearly Carbon Neutral Geometric Topology Conference**, online event
- May 2020 **Séminaire Géométrie, Topologie et Dynamique**, *Université Paris-Saclay*, France, online seminar
- Feb 2020 **Dynamics and Group Geometry Early Researchers Seminar**, *University of Warwick*, UK
- Nov 2019 **Geometry and Topology Seminar**, *Durham University*, UK
- Nov 2019 **Geometry Seminar**, *Università di Pisa*, Italy
- Oct 2019 **Forum des Jeunes Mathématicien-ne-s, Géométrie et interactions**, *Institut Henri Poincaré*, Paris, France
- Apr 2019 **Geometry and Topology seminar**, *Université d'Avignon et des pays de Vaucluse*, Avignon, France
- Apr 2019 **Seminaire de Systèmes Dynamiques, Analyse et Géométrie**, *University of Luxembourg*, Luxembourg
- Mar 2019 **Oberseminar Geometrie**, *Université de Fribourg*, Fribourg, Switzerland
- Nov 2018 **Rencontre Paroles aux jeunes chercheurs 2018: groupes et géométrie du GdR Platon**, *Université Claude Bernard Lyon 1*, Lyon, France
- Nov 2018 **Séminaire d'analyse et géométrie**, *Institut de Mathématiques de Jussieu*, Paris, France
- Jul 2018 **Summer school in Dynamics (Introductory and Advanced)**, *ICTP*, Trieste, Italy, minicourse
- Jun 2018 **Summer school Teichmüller dynamics, mapping class groups and applications**, *Institut Fourier*, Grenoble, France
- Mar 2018 **Joint Hyperbolic geometry & Geometry and Topology Seminar**, *City University of New York*, New York, USA
- Mar 2018 **Dynamical Systems Seminar**, *University of Bristol*, Bristol, UK

- Feb 2018 **Dynamical Systems Seminar**, *University of Liverpool*, Liverpool, UK
- Feb 2018 **Singularity Theory Seminar**, *University of Liverpool*, Liverpool, UK
- Nov 2017 **Algebra Seminar**, *University of Warwick*, Warwick, UK
- Sep 2017 **Geometry Seminar**, *Heidelberg University*, Heidelberg, Germany
- May 2017 **Complex Analysis and Dynamics Seminar**, *City University of New York*, New York, USA
- May 2017 **Geometry and Topology of Ball Quotients and Related Topics**, *Hunter College*, New York, USA
- May 2017 **Geometry and Topology Seminar**, *Temple University*, Philadelphia, USA
- May 2017 **Geometry Seminar**, *University of Virginia*, Charlottesville, USA
- Apr 2017 **British Mathematical Colloquium**, *Durham University*, Durham, UK
- Jan 2017 **Seminari Borsisti, assegnisti e dottorandi**, *Alma Mater Studiorum Università di Bologna*, Bologna, Italy
- Jan 2017 **Department research seminar**, *Hunan University*, Changsha, China
- Dec 2016 **Topology Seminar**, *University of Tokyo*, Tokyo, Japan
- Dec 2016 **Durham-Hiroshima Graduate students workshop**, *Hiroshima University*, Hiroshima, Japan
- Oct 2016 **Complex Analysis Seminar**, *Tokyo Institute of Technology*, Tokyo, Japan
- Jan 2016 **Séminaire théorie spectrale et géométrie**, *Institut Fourier*, Grenoble, France
- Dec 2015 **Geometry and topology seminars**, *University of Warwick*, Warwick, UK
- Nov 2015 **LMS Graduate meeting**, London, UK
- Nov 2015 **Research in the UK afternoon**, *Cambridge university*, Cambridge, UK
- May 2015 **Geometry and Topology seminar**, *Durham University*, Durham, UK

Outreach activities

- 2022 **Penne amiche della scienza**, *letters exchange*, Italy
- 2020 **STEM careers presentation in Schools**, Paris, France
- 2015 **Celebrate Science festival volunteer**, Durham, UK
- 2010 **Organisation assistance for Mathematical Olympiad**, *La Sapienza Università di Roma*, Rome, Italy

Other services

Research Representative for the School of Mathematics, *University of Bristol*
Organisation of the women and non-binary people lunches, *University of Bristol*
Organisation of the Geometry and Topology seminar, *University of Bristol*
Referee for *Geometriae Dedicata* and *Geometric And Functional Analysis*
Organisation of reading groups, *Tokyo Institute of Technology* and at the *Institut de Mathématique de Jussieu*
Assistant in the Mathematics Department administration office, *La Sapienza Università di Roma*

— Languages

Italian	<i>Native</i>
English	<i>Fluent</i>
French	<i>Fluent</i>
Spanish	<i>Intermediate</i>

— Other skills

Programming skills (C++, Python, Sage)
First aid training, including BLS(D)
Disaster relief training