
Education

- September 2024 **Ph.D. in Mathematics (Grade Magna Cum Laude)**, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany.
Thesis: Dehn functions of groups with filiform subgroups
Supervisor: Jun.-Prof. Claudio Llosa Isenrich
- August 2020 **M.Sc. in Mathematics (Grade 1.8)**, University of Bonn, Bonn, Germany.
Thesis: *Group actions on hyperbolic spaces (Grade 1.0)*
Supervisor: Prof. Dr. Ursula Hamenstädt
Second examiner: Dr. Grigori Avramidi
- April 2018 **B.Sc. in Mathematics (Grade 9.3 out of 10)**, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico.
Thesis: *Constructions of Classifying Spaces* (in Spanish)
Supervisor: Prof. Carlos Prieto.
Second examiners: Prof. Marcelo Aguilar and Prof. Omar Antolín Camarena

Awards and Scholarships

- 2022–2024 Ph.D. Scholarship from the Research Training Group (RTG) "Asymptotic Invariants and Limits of Groups and Spaces", funded by the DFG (German Research Association), KIT.
- 2018–2020 Scholarship from the Rosa Luxemburg Stiftung, Germany.

Publications and Preprints

- [1] J. García-Mejía, C. Llosa Isenrich, and G. Pallier. On the Dehn functions of central products of nilpotent groups, October 2023. **arXiv:2310.11144** [Submitted].
- [2] J. García-Mejía, A. Goldsborough, and K. Chawla. A note on Random Dehn functions, In preparation.
- [3] J. García-Mejía, M. Migliorini, and C. Yu-Chan. A large class of Bestvina Brady groups with quadratic Dehn function, In preparation.

Other work containing original research

Group actions on hyperbolic spaces, Master Thesis, University of Bonn, Unpublished.

Invited Talks

- July 2024 ***Dehn functions of nilpotent groups***, Geometric Group Theory Seminar, Oxford University, Oxford, United Kingdom.
- April 2024 ***Dehn functions of nilpotent groups***, Research seminar Model theory and groups, Münster University, Münster, Germany.
- March 2024 ***Funciones de Dehn de grupos nilpotentes (in Spanish)***, Long-distance seminar in Geometric Group Theory in Mexico, Online Seminar, Mexico.
- Jan. 2024 ***Dehn functions of central products of nilpotent groups***, Geometry and Dynamics Seminar, Université de Lille, Lille, France.

- Oct. 2022 ***The Geometry of the Word Problem***, Baby Geometri Seminar, University of Pisa - Scuola Normale Superiore, Pisa, Italy.
- May 2020 ***Group actions on hyperbolic spaces***, Junior Geometry Seminar, Heidelberg University, Heidelberg, Germany.

Contributed Talks

- Dec. 2022 ***Dehn functions of central products of nilpotent groups***, AG Seminar: Topology and Geometric Group Theory, Karlsruhe Institute of Technology, Karlsruhe, Germany.
- May 2023 ***Lightning Talk***, Conference Geometry of subgroups, Thematic program on Geometric Group Theory, Centre de Recherches Mathématiques, Montréal.
- Feb. 2023 ***Lightning Talk***, Young Geometric Group Theory XI, Münster, Germany.
- Jan. 2022 ***Bestvina-Brady Morse theory***, GCD Seminar, Karlsruhe Institute of Technology, Karlsruhe, Germany.
- Feb. 2021 ***Group actions, hyperbolic spaces and small cancellation***, AG Seminar Metric Geometry, Karlsruhe Institute of Technology, Karlsruhe, Germany.

Conference attendance

- April 2024 ***Young Geometric Group Theory XII***, University of Bristol, Bristol, United Kingdom.
- March 2024 ***Topological and Homological Methods in Group Theory 2024***, Bielefeld University, Bielefeld, Germany.
- June 2023 ***Cube complexes and combinatorial group theory***, Thematic program on Geometric group theory, Centre de Recherches Mathématiques, Montréal.
- June 2023 ***Groups around 3-manifolds***, Thematic program on Geometric group theory, Centre de Recherches Mathématiques, Montréal.
- May 2023 ***Geometry of subgroups***, Thematic program on Geometric group theory, Centre de Recherches Mathématiques, Montréal.
- Feb. 2023 ***Young Geometric Group Theory XI***, WWU Münster, Münster, Germany.
- July 2022 ***"Metric Geometry and Geometric Analysis"***, MSRI-Oxford Summer Graduate School, Oxford University, Oxford, United Kingdom.
- June 2022 ***Hyperbolic groups and their generalizations***, Institut Henri Poincaré, Paris, France.
- March 2022 ***Topological and Homological Methods in Group Theory 2022***, Bielefeld University, Bielefeld, Germany.
- Feb. 2022 ***Workshop on Finiteness properties***, Karlsruhe Institute of Technology, Karlsruhe, Germany.

Teaching Experience

My teaching experience covers preparing exercise-sheets, presenting solutions in front of the class, and grading. All of this in Spanish, English, and German.

Service

- August 2024 Organizer of the Workshop *Profinite Rigidity*, joint with the University of Münster, Regensburg University, and the Karlsruhe Institute of Technology, Karlsruhe, Germany.

- April 2022 Organizer of the RTG "Asymptotic Invariants and Limits of Groups and Spaces"
Seminar: *Group (co)homology, KIT and Heidelberg University*, Germany.
- Oct. 2021 - Sept. 2022 Speaker of the RTG "Asymptotic Invariants and Limits of Groups and Spaces", *KIT and Heidelberg University*, Germany.