

Francesco Fournier-Facio

Curriculum Vitae

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Education

- since Feb 2020 **PhD Mathematics**, Eidgenössische Technische Hochschule Zürich (ETHZ). Advisor: Prof. Dr. A. Iozzi.
- Sep 2021 - Dec 2021 Awarded the ETH Doc.Mobility Grant for a joint project with Yash Lodha at Universität Wien.
- Sep 2018 - Jan 2020 **MSc Mathematics**, ETHZ. 6/6 GPA: With distinction. Winner of the Willi-Studer-Preis.
- Sep 2015 - Jul 2018 **BSc Mathematics**, Ecole Polytechnique Fédérale de Lausanne (EPFL). 5.37/6 GPA.

Preprints

- Nov 2021 *Second bounded cohomology of groups acting on 1-manifolds and applications to spectrum problems*. Joint with Yash Lodha.
- Nov 2021 *Bounded cohomology and binate groups*. Joint with Clara Löh and Marco Moraschini.
- Jun 2021 *Bounded cohomology of finitely generated groups: Vanishing, non-vanishing and commutability*. Joint with Clara Löh and Marco Moraschini.
- May 2021 *Ultrametric analogues of Ulam stability of groups*.
- Nov 2020 *Normed amenability and bounded cohomology over non-Archimedean fields*.
- Jan 2020 *Infinite sums of Brooks quasimorphisms and cup products in bounded cohomology*. Master Thesis; Supervisor: Prof. Dr. A. Iozzi.
- Jan 2019 *Comments on "Discrete groups, expanding graphs and invariant measures" by Alexander Lubotzky*. Semester paper; Supervisor: Prof. Dr. A. Iozzi.

Book

- 2021 *Bounded cohomology and simplicial volume*. Edited jointly with Caterina Campagnolo, Nicolaus Heuer and Marco Moraschini. To appear in the LMS Lecture Note Series.

Talks

- Nov 2021 SFB Seminar at Universität Regensburg. *A dynamical approach to bounded cohomology vanishing*.
- Nov 2021 Baby Geometri Seminar at Unipi. *Stable commutator length e i suoi valori*.
- Oct 2021 Geometry and Analysis on Groups Research Seminar at Universität Wien. *Stable commutator length and its values*.

- Sep 2021 Contributed talk for the Young Topologists and Geometers section of DMV-ÄÜMG-Jahrestagung 2021. *New examples in the bounded cohomology of finitely generated groups.*
- Sep 2021 Lightning talk at Ventotene International Workshop V. *New examples in the bounded cohomology of finitely generated groups.*
- July 2021 Lightning talk at YGGT X. *Ultrametric analogues of Ulam stability.*
- Apr 2021 ETHZ-UZH, Zürich Graduate Colloquium. *What is... group stability?*
- Mar 2021 IAS Princeton, Stability and Testability seminar. *Ultrametric stability problems.*
- Feb 2021 University of Hawai'i, Topological Groups seminar. *Normed p -adic amenability and bounded cohomology.*
- Jan 2021 International "What is?" seminar on bounded cohomology and simplicial volume. *Extension of quasicocycles from hyperbolically embedded subgroups.*
- Oct 2020 ETHZ, Geometry Graduate Colloquium. *What can one do with bounded cohomology?*
- Jun 2020 Universität Regensburg, LKS seminar. *Normed p -adic amenability.*
- Apr 2020 International young seminar on bounded cohomology and simplicial volume. *Combinatorics of infinite sums of Brooks quasimorphisms.*
- Dec 2019 Karlsruher Institut für Technologie (KIT), Geometry groups and topology seminar. *Decompositions of the free group and cup products in bounded cohomology.*

Conferences and workshops attended

- Nov 2021 *Groups in Madrid.* ICMAT.
- Sep 2021 *Counting problems.* Ventotene International Workshop.
- Jul 2021 *Young Geometric Group Theory X.* Newcastle University - Online.
- Oct 2020 *Measured and geometric group theory, rigidity, operator algebras.* Centre international de rencontres mathématiques (CIRM) - Online.
- Sep 2020 *Bounded cohomology and simplicial volume.* Universität Regensburg - Online.
- Jun 2020 *Virtual geometric group theory.* CIRM - Online.
- Jun 2020 *Nearly Carbon Neutral Geometric Topology Conference (NCNGT).* Online.
- Nov 2019 *Holomorphic Differentials in Mathematics and Physics.* Mathematical Sciences Research Institute (MSRI).
- Sep 2019 *Of coarse! Quasi-isometries and groups: rigidity and classification.* Ventotene International Workshop.
- Aug 2019 *Groups with hyperbolic features.* ETHZ.
- Feb 2019 *Super Strong Approximation in Groups.* Hebrew University of Jerusalem.
- Jan 2019 *Groups, geometries, and spaces in honour of Alessandra Iozzi.* ETHZ.

Organizing

- 2021 Co-organizer of the *International young seminar on bounded cohomology and simplicial volume.*
- 2020-2021 Co-organizer of the *International "What is?" seminar on bounded cohomology and simplicial volume.*
- 2020 ETHZ: Co-organizer of the *Online Geometry Seminar.*

Teaching

- 2020 ETHZ: Course organizer and Teaching assistant (TA) in Groups acting on trees.
- 2020 ETHZ: TA in Complex Analysis.
- 2019, 2020 ETHZ: TA in Topology.
- 2016-2018 EPFL: Organizer and lecturer of Bachelor Seminars.
- 2018 EPFL: TA in Mathematics for the *Mise á niveau* class.
- 2016, 2017 EPFL: TA in Calculus I for Electrical Engineering and Material Sciences (2016); Mechanical Engineering, Electrical Engineering, Material Sciences and Chemistry (2017).
- 2016-2017 EPFL: TA in Mathematics for Architecture.

Music

- Education Composition Classes with Riccardo Panfili (2011-2015) and Fabio Vacchi (2015-2018). Composition Masterclasses with Giorgio Battistelli (2012) and Luis Bacalov (2013-2014) at Accademia Chigiana di Siena, with Jean-Jacques Nattiez (2013) at Université de Montréal.
- Catalogue 14 compositions for chamber ensemble and orchestra. Performed in Italy, Argentina, Germany and Canada. Five times transmitted on national radio channels (Italian and German).
- Awards Winner of the International Composition Award *Bialas Förderpreis* from the Academy of Fine Arts of Munich, Germany (2016).
- Album *Sound of Light and Shadow* for *Fonè* (2013).
- Cinema Arranger for composer Pasquale Catalano in 2017, for the soundtracks of the films *Sono tornato* and *Napoli Velata*. The latter soundtrack was nominated to the Italian *David di Donatello*.

Languages

- Italian Mother tongue
- Spanish Second mother tongue
- English Fluent (C2)
- French Fluent (C2)
- German Advanced (B2-C1)