

# Marco Moraschini

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## Personal Data

Name **Marco**.  
Surname **Moraschini**.  
Place of Birth **Milan (MI)**.  
Date of Birth **January 21, 1991**.  
E-mail **marco.moraschini@ur.de**.  
Working Address **Fakultät für Mathematik, Universität Regensburg, 93040 Regensburg, Office M310.**

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## Positions and Titles

01/01/2019 **Postdoctoral researcher**, *University of Regensburg*, Funded by SFB Higher Invariants  
31/12/2021 1085, Mentor Prof. Dr. Clara Löh.  
01/11/2015 **Ph.D. in Mathematics**, *Università di Pisa*, Pisa, Ottimo cum Laude.  
06/12/2018  
2016-2019 **Cultore della Materia of Differential Geometry and Topology**, *Qualified as an expert in that subject - Teaching assistant*, *Università di Pisa*, Pisa.  
08/10/2013 **Master Degree**, *Università degli Studi di Milano-Bicocca*, Milano, 110/110 cum  
23/07/2015 Laude.  
24/08/2010 **Bachelor Degree**, *Università degli Studi di Milano-Bicocca*, Milano, 110/110 cum  
15/10/2013 Laude.  
09/2005 **High School Diploma**, *Liceo Scientifico L. Cremona*, Milano.  
07/2010

### Ph.D. thesis

Title *On Gromov's theory of multicomplexes: the original approach to bounded cohomology and simplicial volume*  
Advisor Prof. Roberto Frigerio

### Master thesis

Title *Topological complexity and applications*  
Advisor Prof. Davide Luigi Ferrario  
Co-Advisor Prof. Aniceto Murillo

### Bachelor thesis

Title *Weak Convergence and Wiener Measure*  
Advisor Prof. Francesco Caravenna

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## Research visiting period

25/02/2015 **Extra Project**, *Visiting student at Universidad de Málaga (UMA) with Prof. Aniceto Murillo during my master thesis*, Málaga, España.  
05/07/2015

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## Research

### Research interests

- **Simplicial volume and bounded cohomology.**
- **Low dimensional topology and hyperbolic geometry.**
- **Geometric group theory.**
- **Homotopy theory.**

### Publications

- (1) **M. Moraschini, A. Murillo**, Abstract sectional category in model structures on topological spaces, **Topology and its Applications**, 199 (2016), pp. 23-31.  
(<https://www.sciencedirect.com/science/article/pii/S0166864115005179>)
- (2) **R. Frigerio, M. Moraschini**, On volumes of truncated tetrahedra with constrained edge lengths, To appear in **Periodica Mathematica Hungarica**,  
(<https://link.springer.com/article/10.1007/s10998-018-00277-8>).
- (3) **R. Frigerio, M. Moraschini**, Ideal simplicial volumes of manifolds with boundary, To appear in **International Mathematics Research Notices (IMRN)**,  
(<https://doi.org/10.1093/imrn/rny302>).

### Preprints (submitted)

- (1) **R. Frigerio, M. Moraschini**, Gromov's theory of multicomplexes with applications to bounded cohomology and simplicial volume, (<https://arxiv.org/pdf/1808.07307.pdf>).

### Forthcoming talks

- 28/07/2019 - **TBA, Invited speaker**, Workshop on Bounded Cohomology, Universität Heidelberg.  
02/08/2019  
Heidelberg
- 03/06/2019 **TBA, Junior Geometry and Topology Seminar**, Warwick University (U. K.).  
Warwick

### Talks

- 15/04/2019 **Simplicial volume and amenable coverings**, *Colloquium of the Department of Mathematics*, Mathematical Department of Milano-Bicocca.
- 08/04/2019 **Gromov's theory of multicomplexes with applications to closed manifolds**, Karlsruhe **Invited speaker**, Workshop: Riemannian and Simplicial Volume, KIT (Karlsruher Institut für Technologie).
- 05/02/2019 **Simplicial volume and amenable coverings**, *SFB-Lectures*, Universität Regensburg.
- 22/11/2018 **Why do we care about multicomplexes?**, *Baby Geometri Seminars*, Mathematical Department of Pisa.
- 18/10/2018 **Una introducción al volumen simplicial ideal**, *VII Encuentro des Jóvenes Topólogos*, CRM de Barcelona.

- 17/09/2018 **An introduction to ideal simplicial volume**, *Invited speaker to the session: Geometric Topology, Manifolds, and Group Actions*, Joint meeting of the Italian Mathematical Union, the Italian Society of Industrial and Applied Mathematics and the Polish Mathematical Society, University of Wrocław.
- 23/05/2018 **An introduction to ideal simplicial volume**, *Oberseminar Globale Analysis*, Universität Regensburg.
- 18/05/2018 **An introduction to ideal simplicial volume**, *AG Topologie Seminars*, KIT (Karlsruher Institut für Technologie).
- 17/05/2018 **An introduction to simplicial volume**, *Geometry graduate colloquium*, ETH Zürich.
- 11/04/2018 **An introduction to ideal simplicial volume**, *Seminari di Geometria*, Mathematical Department of Pisa.
- 02/03/2018 **Simplicial volume: when volume becomes a topological invariant**, *Insalate di Matematica*, Mathematical Department of Milano-Bicocca.
- 04/12/2017 **Lecture on mathematical good manners: the Gromov Norm**, *BAD (Borsisti, Assegnisti, Dottorandi) Seminars*, Mathematical Department of Bologna.
- 20/10/2016 **Categoría seccional abstracta en diferentes estructuras de modelo sobre los espacios topológicos**, *V Encuentro de Jóvenes Topólogos*.
- 02/12/2015 **Topological invariants in model categories**, *Baby Geometri Seminars*, Mathematical Department of Pisa.
- 25/06/2015 **On abstract topological complexity in model categories over topological spaces**, *InSeGTo (Interesantísimo Seminario de Geometría y Topología)*, Mathematical Department of Málaga.
- [Poster sessions](#)
- 19/10/2018 **Volumen simplicial ideal**, *XXV Encuentro de Topología*.
- 12/03/2018 **Ideal simplicial volume**, *Young Geometric Group Theory VII*, Congress Center.
- Les Diablerets
- 1-3/02/2018 **Ideal simplicial volume**, *Workshop 2018, Varietà reali e complesse: geometria, topologia e analisi armonica*, Scuola Normale Superiore.
- Pisa
- 11/09/2017 **Ideal simplicial volume**, *Ventotene International Workshop 2017: Moduli Spaces*.
- Ventotene
- 21/10/2016 **El volumen simplicial: una introducción**, *XXIII Encuentro de Topología*.
- Málaga
- [Workshops, Conferences and School attended](#)
- 21/02/2019 **Workshop su varietà reali e complesse: geometria, topologia e analisi complessa**, *SNS Pisa*, Pisa (Italy).
- 23/02/2019
- 22/01/2019 **Groups, geometries and spaces in honour of Alessandra Iozzi**, *ETH Zürich*,
- 25/01/2019 Zürich (Switzerland).
- 19/10/2018 **XXV Encuentro de Topología**, *Institut d'Estudis Catalans*, Barcelona (Spain).
- 20/10/2018

- 16/10/2018 **VII Encuentro des Jóvenes Topólogos**, *CRM de Barcelona*.  
 18/10/2018  
 Barcelona
- 17/09/2018 **Joint meeting of the Italian Mathematical Union, the Italian Society of Industrial and Applied Mathematics and the Polish Mathematical Society**, *University of Wrocław*.  
 20/09/2018  
 Wrocław
- 02/07/2018 **Representation varieties and geometric structures in low dimensions**, *Mathematics Institute, Warwick University, Coventry (U.K.)*.  
 06/07/2018
- 03/03/2018 **Topological and Homological Methods in Group Theory**, *Faculty of Mathematics, Bielefeld University, Bielefeld (Germany)*.  
 06/03/2018
- 12/03/2018 **Young Geometric Group Theory VII**, *Congress Center, Les Diablerets (Switzerland)*.  
 16/03/2018
- 1/02/2018 **Workshop 2018, Varietà reali e complesse: geometria, topologia e analisi armonica**, *Scuola Normale Superiore, Pisa (Italy)*.  
 3/02/2018
- 25/09/2017 **Higher Invariants: Manifolds and Groups**, *Universität Regensburg, Regensburg (Germany)*.  
 29/09/2017
- 11/09/2017 **Ventotene International Workshop 2017: Moduli Spaces**, *Centro Polivalente, Venototene (Italy)*.  
 16/09/2017
- 19/06/2017 **Group Actions and Cohomology in Non-Positive Curvature**, *Isaac Newton Institute, Cambridge (U.K.)*.  
 24/06/2017
- 04/06/2017 **Indam Meeting: Geometric Topology in Cortona**, *Palazzone, Cortona (Italy)*.  
 10/06/2017
- 20/03/2017 **Young Geometric Group Theory Meeting VI**, *Mathematical Institute, Oxford (U.K.)*.  
 24/03/2017
- 21/10/2016 **XXIII Encuentro de Topología**, *Universidad de Málaga, Málaga (Spain)*.  
 22/10/2016
- 18/10/2016 **V Encuentro de Jóvenes Topólogos Espanoles**, *Universidad de Málaga, Málaga (Spain)*.  
 20/10/2016
- 20/06/2016 **Geometric Analysis, Metric Geometry and Topology**, *Institut Fourier, Grenoble (France)*.  
 01/07/2016
- 23/05/2016 **Advanced School on Geometric Group Theory and Low-Dimensional Topology: Recent Connections and Advances**, *ICTP, Trieste (Italy)*.  
 03/06/2016
- 29/06/2015 **4th Spanish Young Topologists Meeting**, *Universidad Complutense, Madrid (Spain)*.  
 02/07/2015

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## Scholarships and Grants

- 01/01/2015 **Ph.D. Scholarship**, *Università di Pisa*.  
 31/10/2018
- 16/04/2018 **Teaching Support**, *Istituzioni di Geometria (Differential Geometry)*, Mathematics, Pisa.  
 30/06/2018
- 01/06/2017 **Teaching Support**, *Geometry I*, Physics, Pisa.  
 30/09/2017

20/10/2016 **Teaching Support**, *Geometry I*, Physics, Pisa.

20/12/2016

2015 **Scholarship for writing the master thesis abroad**, *Extra Project*, Università degli studi di Milano-Bicocca.

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## Teaching

Academic Year **Teaching Support**, *Istituzioni di Geometria (Differential Geometry)*, Mathematics, Pisa.

2016/2017

Second

Semester

2017/2018 **Examination Board - Cultore della Materia**, *Geometry and Differential Topology*, Mathematics, Pisa.

Academic Year **Teaching Support**, *Geometry I*, Physics, Pisa.

2016/2017

Second

Semester

Academic Year **Teaching Support**, *Geometry I*, Physics, Pisa.

2016/2017

First Semester

2016/2017 **Examination Board - Cultore della Materia**, *Geometry and Differential Topology*, Mathematics, Pisa.

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## Other Activities

01/10/2016 **Co-organizers of Seminari dei Baby Geometri**, *Università di Pisa*,

31/10/2018 <http://people.dm.unipi.it/babygeometri/>.

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## Languages

Italian Native Speaker

English *ETS - Toeic Listening and Reading (B2 Level)* Total score 830/990, Listening 405/495 and Reading 425/495 (06/11/2014)

French *Diplôme d'études en langue française (DELFF) (B1 Level)* (22/06/2009); *École de langues "Langue Onze Toulouse" (B2 Level)* (30/07/2012 - 10/07/2012)

Spanish B2 Level

German A1 Level

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## Mathematical software

Basic knowledge in programming with SageMath and MatLab