

Tommaso Cremaschi – Résumé

Nationality Italian **Email** cremasch@usc.edu

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Position

2019-2022 Assistant Professor (NTT), University of Southern California, Los Angeles, CA.

Fall 2020 Viterbi PostDoc at MSRI for the program: Random and Arithmetic Structures in Topology.

Education

2014-2019 PhD candidate, Boston College, Chestnut Hill, MA.
Supervisor: Martin Bridgeman, Ian Biringer.
Thesis Title: Hyperbolization of infinite-type 3-manifolds.

2013-2014 MAst in Mathematics, Part III, University of Cambridge, Cambridge, UK.
Essay: *The Coloured Jones Polynomial*, J.Rasmussen.

2010-2013 Bsc in Mathematics, University of Rome, Rome, IT.
Thesis: *2-Dimensional TQFT and Frobenius Algebra*, Advisor M.Manetti.

Research Interests

- **Hyperbolic Geometry, Teichmüller Theory and Moduli space.**
- **Low dimensional topology.**

Publications and Preprints

1. *A locally Hyperbolic 3-manifold that is not hyperbolic*, *Proc. Amer. Math. Soc.* 146 (2018), 5475-5483.
2. *Discrete groups without finite quotients*, with Juan Souto, *Topology and its Applications*, 2018, Vol.248, pp.138-142.
3. *A locally hyperbolic 3-manifold not homotopy equivalent to any hyperbolic manifold*, *Conform. Geom. Dyn.* 24 (2020), 118-130.
4. *Hyperbolicity of links complements in Seifert fibered spaces*, with José Andrés Rodríguez Migueles, accepted for publication on *Algebraic and Geometry Topology*, expected 2020.
5. *Hyperbolization of infinite type 3-manifolds*, 107 pages 2019 under revision at *Memoirs of the AMS*.
6. *On Volumes of collections of filling multi-curves*; with José Andrés Rodríguez Migueles and Andrew Yarmola, 2019 pre-print, submitted.
7. *Hyperbolic limits of Cantor set complements in the sphere*, with Franco Vargas-Pallete, 2020 pre-print, submitted.

Awards, Grants, Memberships

August 2020 Zumberge individual Award

September 2021 *Research award from USC, amount \$30000*

May 2016 GEAR Summer REGS

June 2016 *Title: Hyperbolic 3-manifolds of infinite type, Summer Research Grant*
Supervisor: Juan Souto, Rennes 1

2014 AMS member

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Talks

Title: Volume of Hyperbolic knot complements in Seifert-fibered manifold.

- Claremont-McKenna Seminar, February 2020.
- AMS sectional meetings, October 4th 2020.

Title: On hyperbolic 3-manifolds with non-finitely generated fundamental group.

- Yale Topology and Geometry Seminar, 9th October 2018.
- Princeton Topology Seminar, 4th October 2018.
- GSTGC, The University of Illinois at Chicago, 7th April 2018.
- Toulouse Topology and Geometry seminar, 13th February 2018.
- Luxembourg Topology and Geometry seminar, 22nd January 2018.
- Wild objects in analysis and low-dimensional geometry and topology, University of Rennes, October 2017.
- Gear Junior Retreat, Stanford August 2017.
- 32 Summer Topology Conference, Dayton June 2017.
- Boston College Graduate Seminar.

Talk: TQFT in low dimensions.

- Boston College Graduate Seminar.
- Cambridge: Part III Seminar Series:

Teaching Experience

Instructor for:

- Business Calculus (USC), Spring 2020.
- Pre-Calculus (USC), Fall 2019.
- Calculus 1 (BC), Fall 2018.
- Finite Probability (BC), Fall 2017.
- Finite Probability (BC), Fall 2016.

Teaching assistant for:

- TA for Multivariable Calculus (BC), Spring 2016.
- TA for Calculus 1 (BC), Fall 2015.
- TA for Probability (BC), Spring 2015.
- TA for Calculus 2 (BC), Fall 2014.

Service

- Co-organizer of fall 2020 MSRI virtual semester.
- Topology and Geometry seminar organiser USC 2019-2020.
- Organizer of joint weekly Caltech-USC geometry seminar fall 2020.
- As president of the BC math society I started an informal seminar as a platform is to discuss issues of gender, racial, and sexual inclusivity in STEM fields.
- Founder and co-organiser the Boston Graduate Mathematics Colloquium, FKA Charles River Graduate Student Joint Mathematics Colloquium 2017-2019.
- President, treasure, secretary of the Boston College graduate student math society 2015-2019.

Skills

■ Programming Languages

Latex
Mathematica - basic
Python - basic

■ Languages

English - Fluent
Italian - Native

References

Research:

Name Ian Biringer
Position Assistant Professor, Boston College
Contact ian.biringer@bc.edu

Name Juan Souto
Position Professor, IRMAR Rennes, CNRS
Contact jsoutoc@gmail.com

Name Martin Bridgeman
Position Professor, Boston College
Contact bridgem@bc.edu

Name Francis Bonahon
Position Professor, University of Southern California
Contact fbonahon@usc.edu

Name Yair Minsky
Position Professor, Yale
Contact yair.minsky@yale.edu

Name Richard Canary
Position Professor, University of Michigan
Contact canary@umich.edu