

Giulio Bresciani

Scuola Normale Superiore
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Born in Milan, Italy, on February 26, 1990.

Education

- 2014 - 2018 **PhD in Mathematics**, *Scuola Normale Superiore di Pisa*, exam passed cum laude
Thesis: Topics in Anabelian Geometry. Advisor: Prof. Angelo Vistoli
- 2009 - 2014 **Studente ordinario in Mathematics**, *Scuola Normale Superiore di Pisa*
Diploma di licenza, 70/70 cum laude.
- 2012 - 2014 **MSc in Mathematics**, *Università di Pisa*, 110/110 cum laude
Thesis: Nori's fundamental group scheme. Advisor: Prof. Angelo Vistoli.
- 2009 - 2012 **BSc in Mathematics**, *Università di Pisa*, 110/110 cum laude
Thesis: Rational homotopy groups of spheres. Advisor: Prof. Filippo Callegaro

Employment

- 2023 - pres. **Researcher**, *Scuola Normale Superiore*
- 2021 - 2023 **Postdoc researcher**, *Scuola Normale Superiore*, CRM de Giorgi
- 2018 - 2021 **Postdoc researcher**, *Freie Universität Berlin*, research group of H. Esnault

Articles

- [12] **The field of moduli of sets of points in \mathbb{P}^2** , *Archiv der Mathematik*, 122 (2024), 513-519, doi:[10.1007/s00013-024-01984-0](https://doi.org/10.1007/s00013-024-01984-0)
- [11] **The field of moduli of a divisor on a rational curve**, *Journal of Algebra*, 647 (2024), 72-98, doi:[10.1016/j.jalgebra.2024.02.021](https://doi.org/10.1016/j.jalgebra.2024.02.021)
- [10] **The field of moduli of varieties with a structure**, *Bollettino dell'Unione Matematica Italiana*, (2023), doi:[10.1007/s40574-023-00399-z](https://doi.org/10.1007/s40574-023-00399-z)
- [9] **Fields of moduli and arithmetic of tame quotient singularities**, with A. Vistoli, *Compositio Mathematica*, 160 (2024), no. 5, 982-1003, doi:[10.1112/S0010437X2400705X](https://doi.org/10.1112/S0010437X2400705X)
- [8] **On the birational section conjecture with strong birationality assumptions**, *Inventiones mathematicae*, 235 (2024), no. 1, 129-150, doi:[10.1007/s00222-023-01220-6](https://doi.org/10.1007/s00222-023-01220-6)
- [7] **An arithmetic valuative criterion for proper maps of tame stacks**, with A. Vistoli, *Manuscripta Mathematica*, 173 (2024), no. 3, 1061-1071, doi:[10.1007/s00229-023-01491-6](https://doi.org/10.1007/s00229-023-01491-6)
- [6] **The arithmetic of tame quotient singularities in dimension 2**, *International Mathematics Research Notices*, 2024 (2024), no. 3, 2017-2043, doi:[10.1093/imrn/rnad079](https://doi.org/10.1093/imrn/rnad079)
- [5] **The genericity theorem for the essential dimension of tame stacks**, with A. Vistoli, *Pure and Applied Mathematics Quarterly*, 18 (2022), no. 4, 1365-1377, doi:[10.4310/PAMQ.2022.v18.n4.a4](https://doi.org/10.4310/PAMQ.2022.v18.n4.a4)
- [4] **On the Bombieri-Lang Conjecture over finitely generated fields**, *Algebra & Number theory*, 16 (2022), no. 10, 2409-2414, doi:[10.2140/ant.2022.16.2409](https://doi.org/10.2140/ant.2022.16.2409)
- [3] **On the section conjecture and Brauer-Severi varieties**, *Mathematische Zeitschrift*, 300 (2022), no. 2, 1291-1296, doi:[10.1007/s00209-021-02835-2](https://doi.org/10.1007/s00209-021-02835-2)
- [2] **Essential dimension and pro-finite group schemes**, *Annali della Scuola Normale Superiore di Pisa, Classe di Scienze (5)*, XXII (2021), no. 4, 1899-1936, doi:[10.2422/2036-2145.202005_020](https://doi.org/10.2422/2036-2145.202005_020)
- [1] **Some implications between Grothendieck's anabelian conjectures**, *Algebraic Geometry*, 8 (2021), 231-267, doi:[10.14231/AG-2021-005](https://doi.org/10.14231/AG-2021-005)

Preprints

- [6] **Uniform bounds for fields of definition in projective spaces**, [arxiv:2405.03621](#)
- [5] **Real versus complex plane curves**, [arxiv:2309.12192](#)
- [4] **On Grothendieck's section conjecture for curves of index 1**, [arxiv:2305.10088](#)
- [3] **The field of moduli of plane curves**, [arxiv:2303.01454](#)
- [2] **A higher dimensional Hilbert irreducibility theorem**, [arxiv:2101.01090](#)
- [1] **On the section conjecture over fields of finite type**, [arxiv:1911.03234](#)

Undergraduate students

- 2022 Tianzhi Yang, FU Berlin, Master's degree. Thesis: *Rational points of the universal curve over $\mathcal{M}_{g,n}$* .

Graduate students

- 2022 - pres. Tianzhi Yang, Scuola Normale Superiore di Pisa. Research topic: Fields of moduli and arithmetic of quotient singularities

Teaching Experience

Graduate courses

- 2024 - 25 The étale fundamental group, 40 hours, Scuola Normale Superiore.

Undergraduate courses

- 2024 - 25 Complementi di matematica, 20 hours, Scuola Normale Superiore.
2023 - 24 Complementi di matematica, 16 hours, Scuola Normale Superiore.
2022 - 23 Supplementary teaching in Scheme Theory, 10 hours, Scuola Normale Superiore
2017 - 18 Supplementary teaching in Matematica for Biotechnology students, 6 hours, Università di Pisa.
2016 - 17 Supplementary teaching in Aritmetica for Biology students, 6 hours, Università di Pisa.
2016 - 17 Supplementary teaching in Topics in Homological Algebra, 20 hours, Scuola Normale Superiore.
2015 - 16 Tutoring activity for bachelor students, Scuola Normale Superiore di Pisa.
2015 - 17 Tutoring activity for high school students, university orientation courses organized by Scuola Normale Superiore.

Invited talks

- 2024 *tba*, conference *Anabelian Geometry and Representations of Fundamental Groups*, Mathematisches Forschungsinstitut Oberwolfach, Germany, September 29 - October 4.
2024 *tba*, workshop *Anabelian and Motivic Homotopy Theory*, Universität Heidelberg, Germany, September 23-28.
2024 *Fields of definition in projective spaces*, Université de Montpellier, France, May 30.
2024 *Real versus complex plane curves*, Università la Sapienza, Rome, Italy, January 31.
2023 *Fields of moduli of plane curves*, ISAAC congress, Riberão Preto, Brazil, July 17-21.
2023 *Fields of moduli of plane curves*, workshop *Geometric and Arithmetic Frontiers of Orbifolds II*, Université de Strasbourg, France, June 5-9.
2022 *Fields of moduli and arithmetic of quotient singularities*, École Polytechnique, Paris, France, October 21.
2022 *Two results about Grothendieck's section conjecture*, Università di Pisa, Italy, May 18.
2021 *Is there any polynomial bijection $\mathbb{Q} \times \mathbb{Q} \rightarrow \mathbb{Q}^?$* , University of Bath, United Kingdom, March 2.
2021 *Is there any polynomial bijection $\mathbb{Q} \times \mathbb{Q} \rightarrow \mathbb{Q}^?$* , Institut de Recherche Mathématique Avancée, Université de Strasbourg, France, February 11.
2019 *On the section conjecture over fields of finite type*, Goethe Universität, Frankfurt am main, Germany, October 23.

2019 *Essential dimension and pro-finite group schemes*, Humboldt-Universität zu Berlin, Germany, April 23.

2018 *The dimensional section conjecture*, Università degli Studi di Firenze, Italy, June 27.

Funds

2022-pres. PRIN 2020 “Derived and underived algebraic stacks and applications”, member.

2018-2021 DFG priority program SPP 1786 “Homotopy theory and algebraic geometry”, member.

Pisa, July 13, 2024

A handwritten signature in black ink, consisting of a stylized 'G' followed by a long horizontal line and a small flourish at the end.