Alessio Borzì

Curriculum vitae

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Education

30/09/2019–09/2023	(expected) **PhD in Mathematics**, *University of Warwick, Coventry, United Kingdom.* Advisor: Diane Maclagan
18/12/2020	**Diploma of Scuola Superiore di Catania**, *Scuola Superiore di Catania,* Catania, Italy, *Summa cum laude.* Advisor: Ivan Martino, Opponent: Alicia Dickenstein
29/07/2019	**Master's degree in Mathematics**, *Università di Catania*, Catania, Italy, *Summa cum laude.* Advisor: Marco D'Anna
20/07/2017	**Bachelor's degree in Mathematics**, *Università di Catania*, Catania, Italy, *Summa cum laude.* Advisor: Marco D'Anna

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Publications and Preprints

1. Alessio Borzì. A characterization of the Arf property for quadratic quotients of the Rees algebra. *J. Algebra Appl.*, 19(7):2050127, 14, 2020.

2. Alessio Borzì. Patterns on the numerical duplication by their admissibility degree. In *Numerical semigroups*, volume 40 of *Springer INdAM Ser.*, pages 9–25. Springer, Cham, 2020.

3. Alessio Borzì. Tropical computations for toric intersection theory in Macaulay2. *arXiv preprint arXiv:2209.13414*, 2022.

4. Alessio Borzì. Weierstrass sets on finite graphs. *Electron. J. Combin.*, 29(1):Paper No. 1.4, 13, 2022.

5. Alessio Borzì, Xiangying Chen, Harshit J. Motwani, Lorenzo Venturello, and Martin Vodička. The leading coefficient of Lascoux polynomials. *Discrete Math.*, 346(2):Paper No. 113217, 2023.

6. Alessio Borzìand Alessio D'Alì. Graded algebras with cyclotomic Hilbert series. *J. Pure Appl. Algebra*, 225(12):Paper No. 106764, 9, 2021.

7. Alessio Borzì, Andrés Herrera-Poyatos, and Pieter Moree. Cyclotomic numerical semigroup polynomials with at most two irreducible factors. *Semigroup Forum*, 103(3):812–828, 2021.

8. Alessio Borzì and Ivan Martino. Set of independencies and Tutte polynomial of matroids over a domain. *arXiv preprint arXiv:1909.00332*, 2019.

Selected Talks

17/03/2022 Weierstrass sets on finite graphs, *Online Algebraic Geometry Seminar, (virtually at) Nottingham University, UK*

18/11/2021 Birational geometry of blow-ups of $\mathbb{P}^2$, *Oberseminar Geometrie*, Universität Tübingen, Germany

01/11/2021 Tropical moduli spaces and toric embeddings, $\overline{M_{0,n}}$ *seminar*, (virtually at) University of Warwick, United Kingdom

22/04/2021 Graded algebras with cyclotomic Hilbert series, *Graduate student meeting on Applied Algebra and Combinatorics*, (virtually at) Københavns Universitet, Denmark

04/02/2021 Tropical methods in toric intersection theory, *Oberseminar Geometrie*, (virtually at) Universität Tübingen, Germany

20/11/2019 Cyclotomic Numerical Semigroups, *Postgraduate Seminar*, University of Warwick, United Kingdom

17/07/2019 Face poset and Grothendieck-Tutte polynomial of matroids over a domain, *Algebra meets combinatorics in Neuchâtel*, Université de Neuchâtel, Switzerland

25/03/2019 Arf property on quadratic quotients of the Rees algebra, *Problem solving seminar*, Stockholm University, Sweden

04/09/2018 A characterization of the Arf property for quadratic quotients of the Rees algebra, *International Meeting on Numerical Semigroups (IMNS)*, Cortona, Italy

Conferences

27/06-01/07/2022 Arrangements in Ticino, Locarno and Lugano, Switzerland

13-17/06/2022 International meeting on numerical semigroups (IMNS) 2022, Rome, Italy

30/05-01/06/2022 Göran Gustafsson lectures in mathematics 2022, Institute Mittag-Leffler, Sweden

23-27/05/2022 Géométrie Algébrique en Liberté XXIX (GAeL), Université Paris-Saclay, France

04-05/05/2022 Tropical Mathematics & its Applications, Durham University, UK

28/02-04/03/2022 OSCAR developer meeting - Tropical Geometry, TU Kaiserslautern, Germany

03/12/2021 Applied Algebra and Geometry Research Network, Online Conference

24–30/10/2021 Tropical Curves, Logarithmic Structures, and Enumerative Geometry, Oberwolfach, Germany

26/07–06/08/2021 Combinatorial Algebraic Geometry, Online conference

28/06–02/07/2021	[Tropical Moduli Spaces](#), Online conference
21–23/04/2021	[Graduate student meeting on Applied Algebra and Combinatorics](#), Online conference
19/03/2021	[Birational Geometry and Thereabouts](#), Online conference
15/02–05/03/2021	[Research Encounters in Algebraic and Combinatorial Topics](#) (REACT), Online conference
08/06–24/07/2020	[Algebraic and Tropical Online Meetings](#) (ATOM), Online conference
01–05/06/2020	[Warwick Macaulay 2 Workshop](#), ~~University of Warwick, United Kingdom~~ Online conference
06/12/2019	[Tropical Differential Algebra Workshop](#), Queen Mary University of London, United Kingdom
02–04/12/2019	[Einstein Workshop on Polytopes and Algebraic Geometry](#), Freie Universität Berlin, Germany
15–17/07/2019	[Algebra meets combinatorics in Neuchâtel](#), Université de Neuchâtel, Switzerland
03–07/09/2018	[International Meeting on Numerical Semigroups](#) (IMNS), Cortona, Italy
31/05–04/06/2021	[Encounter in Topology and Algebra](#) (ET'nA), Scuola Superiore di Catania, Italy

Teaching

Winter 2022	**Teaching assistant**, for the course [MA453 Lie Algebras](#). Taught by Andrew Macpherson, *University of Warwick*
Fall 2021	**Teaching assistant**, for the course [MA131 Analysis I](#). Taught by Daniel Ueltschi, *University of Warwick*
Winter 2021	**Teaching assistant**, for the course [MA377 Rings and Modules](#). Taught by Samir Siksek, *University of Warwick*
Fall 2020	**Teaching assistant**, for the course [MA4L7 Algebraic Curves](#). Taught by Diane Maclagan, *University of Warwick*

Research visits

29/10–28/11/2021	Research period at the Universität Tübingen (Germany) in the combinatorial algebraic geometry group, under the supervision of [Hannah Markwig](#).
07/03–05/06/2019	Research period at the KTH Royal Institute of Technology (Sweden) in the combinatorics group, under the supervision of [Ivan Martino](#).

Other professional activities

Member of the [Associazione Alumni Scuola Superiore di Catania](#).

Member of the [London Mathematical Society](#) (LMS).

Member of the [GNSAGA](#)

Referee for: European Journal of Combinatorics, Journal of Commutative Algebra.

Outreach

02-03/10/2021	Speaker at the Simposio Matematico RIMSE 2021.
19–22/04/2018	**Organizer** for the Training Course for Mathematical Olympiad (fourth edition) at the Scuola Superiore di Catania.
20–23/04/2017	**Organizer** for the Training Course for Mathematical Olympiad (third edition) at the Scuola Superiore di Catania.
22–24/04/2016	**Lecturer** for the Training Course for Mathematical Olympiad (second edition) at the Scuola Superiore di Catania.