Alessio Borzì

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Homepage https://alessioborzi.github.io/

Current position



Since PhD student at the University of Warwick

September 30, 2019 Mathematics Institute Advisor: Diane Maclagan

Education



July 29, 2019 Master's degree in Mathematics

University of Catania, Summa cum laude

Advisor: Marco D'Anna

July 20, 2017 Bachelor's degree in Mathematics

University of Catania, Summa cum laude

Advisor: Marco D'Anna

December 18, 2020 Diploma of Scuola Superiore di Catania

Scuola Superiore di Catania, Summa cum laude

Advisor: Ivan Martino

Opponent: Alicia Dickenstein

Languages

Mother tongue Italian

Foreign languages **English** (IELTS 7.5)

Talks

April 22, 2021 Graded algebras with cyclotomic Hilbert series, Graduate student meeting on Applied Algebra and Combinatorics, (virtually at) University of Copenhagen, Denmark

February 4, 2021 Tropical methods in toric intersection theory, Oberseminar Geometrie, (virtually at) University of Tübingen, Germany

November 20, 2019 Cyclotomic Numerical Semigroups, Postgraduate Seminar, University of Warwick, UK

July 17, 2019 Face poset and Grothendieck-Tutte polynomial of matroids over a domain, Algebra meets combinatorics in Neuchatel, Neuchatel, Switzerland

March 25, 2019 Arf property on qudratic quotients of the Rees algebra, Problem solving seminar, Stockholm University, Sweden

September 3 - 7, 2018 A characterization of the Arf property for quadratic quotients of the Rees algebra, International Meeting on Numerical Semigroups (IMNS), Cortona, Italy

Attended conferences

- *July 26 August 6, 2021* Combinatorial Algebraic Geometry, Online conference
 - June 28 July 2, 2021 Tropical Moduli Spaces, Online conference
 - *April 21-23, 2021* Graduate student meeting on Applied Algebra and Combinatorics,
 Online conference
 - March 19, 2021 Birational Geometry and Thereabouts, Online conference
- February 15 March 5, Research Encounters in Algebraic and Combinatorial Topics (REACT), 2021 Online conference
 - *June 8 July 24, 2020* Algebraic and Tropical Online Meetings (ATOM), Online conference
 - *June 1-5, 2020* Warwick Macaulay 2 Workshop, University of Warwick, UK Online conference
 - December 6, 2019 <u>Tropical Differential Algebra Workshop</u>, Queen Mary University of London, UK
 - December 2-4, 2019 <u>Einstein Workshop on Polytopes and Algebraic Geometry</u>, Freie Universitat Berlin, Germany
 - July 15-17, 2019 Algebra meets combinatorics in Neuchatel, Neuchatel, Switzerland
 - September 3 7, 2018 International Meeting on Numerical Semigroups (IMNS), Cortona, Italy
- May 31 June 4, 2017 Encounter in Topology and Algebra (ET'nA), Catania, Italy

Publications and Preprints

- June 12, 2018 "A characterization of the Arf property for quadratic quotients of the Rees algebra",

 Journal of Algebra and Its Applications, arXiv:1806.04448
- *January* 29, 2019 "Patterns on the numerical duplication by their admissibility degree", Numerical Semigroups Springer INdAM Series, arXiv:1901.10571
- September 1, 2019 "Set of independencies and Tutte polynomial of matroids over a domain", with Ivan Martino, arXiv:1909.00332
 - May 19, 2020 "Graded algebras with cyclotomic Hilbert series", with Alessio D'Alì, Journal of Pure and Applied Algebra, arXiv:2005.09708
- January 21, 2021 "Cyclotomic numerical semigroup polynomials with few irreducible factors,", with <u>Andrés Herrera-Poyatos</u> and <u>Pieter Moree</u>, <u>Semigroup Forum</u>, <u>arXiv:2101.08823</u>
 - April 14, 2021 "Weierstrass sets on finite graphs", arXiv:2104.07121
 - June 24, 2021 "The leading coefficient of Lascoux polynomials", with Xiangying Chen, Harshit J. Motwani, Lorenzo Venturello and Martin Vodička, arXiv:2106.13104

Teaching

Fall 2021 Teaching assistant for the course <u>Analysis I</u>, University of Warwick

Winter 2021 Teaching assistant for the course <u>Rings and Modules</u>, University of Warwick

Fall 2020 Teaching assistant for the course <u>Algebraic Curves</u>, University of Warwick

Visits

March 7- June 5, 2019 Research period at the <u>KTH (Stockholm-Sweden)</u> under the supervision of <u>Ivan Martino</u>, supported by the <u>Scuola Superiore di Catania</u>.

Outreach

October 2-3, 2021 Speaker at the Simposio Matematico RIMSE 2021

Second Edition: Lecturer (second edition) and Organizer (third and fourth edition) of a April 22-24, 2016 Training Course for Mathematical Olympiad at the Scuola Superiore di

Third Edition: Catania.

April 20-23, 2017 Fourth Edition: April 19-22, 2018