



Luca Fiorindo, MSc

Scientific Interests





- Comm. Algebra  Koszul algebras, Vasconcelos number, Lefschetz properties, Betti numbers
- Combinatorics  Simplicial complexes, Stanley-Reisner rings

Education


- 2022 – now  **Ph.D. student**, *University of Genoa*, Italy
Supervisor: Aldo Conca
- 2022  **Percorso Formativo comune**, *SISSA*, Trieste, Italy
Joint MSc curriculum between SISSA and University of Trieste.
www.math.sissa.it/content/msc-mathematics
- 2020 – 2022  **Laurea Magistrale in Matematica (Master)**, *University of Trieste*, Italy
Final mark: 110\110 magna cum laude
Thesis title: *Polynomials with vanishing Hessian and Lefschetz properties*
Supervisor: Emilia Mezzetti
- 2017 – 2020  **Laurea in Matematica (Bachelor)**, *University of Trieste*, Italy
Final mark: 110\110 magna cum laude
Thesis title: *The axioms of the Projective Space*
Supervisor: Emilia Mezzetti
- 2012 – 2017  **Technical institute diploma**, *ITTS Vito Volterra*, San Donà di Piave, Italy.
Curriculum: informatics and telecommunications.
Final mark: 95\100.

Research Publications



Pre-prints

-  *A theorem on the asymptotic behaviour of the generalised v -number*, 2024. arXiv: 2401.17815.
-  *On the asymptotic behaviour of the vasconcelos invariant for graded modules*, 2024. arXiv: 2401.16358, with D. Ghosh.
-  *An isomorphism theorem for arithmetic complexes*, 2023. arXiv: 2309.17416, with E. Reed and S. Roshan-Zamir and H. Yu.
-  *Hilbert functions and jordan type of perazzo artinian algebras*, To appear in: "Lefschetz Properties: Current and New Directions", 2023. arXiv: 2303.16768, with N. Abdallah and N. Altafi and P. De Poi and A. Iarrobino and P. Macias Marques and E. Mezzetti and R. M. Miró-Roig and L. Nicklasson.





Journal Articles

-  "Perazzo 3-folds and the weak lefschetz property," *Journal of Algebra*, vol. 626, pp. 56–81, 2023, with E. Mezzetti and R. M. Miró-Roig.

Awards, Grants and Scholarships

- Nov 2022 - Oct 2025  **PhD Scholarship**, *University of Genoa, Italy*
- 2017  **CoopAlumni fellowship**, *Coop Adriatica 3.0*

Teaching Activities

- Sep 2023 - Feb 2024  **Tutor of Geometry**, *Mechanical Eng. Department, University of Genoa (italy)*
Course coordinator: Prof Victor Lozovanu
- Feb 2022 - Jun 2022  **Tutor of Geometry 3**, *Math. Department, University of Trieste (italy)*
Course coordinator: Prof Mattia Mecchia
- Sep 2021 - Jan 2022  **Tutor of Algebra 1**, *Math. Department, University of Trieste (italy)*
Course coordinator: Prof Maria Cristina Pedicchio
- Nov 2020 - Feb 2021  **Tutor of Analysis 1**, *Physics Department, University of Trieste (italy)*
Course coordinator: Prof Alessandro Fonda







Scientific Visits

- Jan 2024 - Apr 2024  **Prof Volkmar Welker**, *Philipps-Universität Marburg, Germany*


Talks

- ▶ **Strongly Koszul algebras**
Seminar: Philipps-Universität Marburg, Germany (invited) Feb 28, 2024
- ▶ **Perazzo algebras and the weak Lefschetz property**
Seminar: *Algebra & Geometry seminars*, University of Genoa, Italy (invited) Mar 15, 2023
Seminar: *Problem solving for Mathematics*, University of Stockholm, Sweden (invited) Jan 30, 2023
- ▶ **Straightedge-compass vs origami**
Seminar: *PhD Seminars*, University of Genoa, Italy Feb 9, 2023


Attended conferences

- Jul 2024  **Summer School in Algebraic Combinatorics**, *MPI Leipzig, Germany*
- Apr 2024  **Recent Developments in Commutative Algebra**, *SLMath Berkeley, California (USA)*
- Jun 2023  **Pragmatic 2023 - Cohomology and Frobenius**, *University of Catania, Italy*
- May 2023  **Metric Algebraic Geometry**, *MFO Oberwolfach, Germany*
-  **Workshop on Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics**, *Fields institute Toronto, Canada*
- Sep 2022  **The Strong and Weak Lefschetz Properties**, *Palazzone Cortona, Italy*





Organizational Experience

Feb 2023-now  **PhD Seminars**, *University of Genoa, Italy*
biweekly seminars among PhD students and Postdocs, founded and organized with S. Galanda and G. Schmid






Membership

Jan 2023 - now  **Gruppo Nazionale per le Strutture Algebriche, Geometriche e le loro Applicazioni**, *Istituto Nazionale di Alta Matematica, Italy.*


Language skills


Italian  **native**
English  **fluent**
German  **basics**, three years practice in school
Japanese  **basics**, A2 level, EDISON school, December 20, 2021

Skills

Coding  Macaulay 2, Java, PHP, Python, SQL, \LaTeX .
Web Dev  HTML5, CSS, JavaScript.
Certificate  ECDL certificate (May 9, 2014), CISCO certificate.
Music  Clarinet (since 2010).
Sport  Judo (2006-2014), fencing (2020-2022), muay-thai (2024-)

References

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Prof Emilia Mezzetti
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Prof Rosa Maria Mirò-Roig
Full professor
Universidad de Barcelona (Spain),
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September 2024