

Studi

- 2020-2024 **PhD in Pure Mathematics**, *University of Leeds*
Relatori Vincenzo Mantova and H. Dugald Macpherson
Tesi Structural Investigations in some Classes of o-minimal Fields. <https://etheses.whiterose.ac.uk/id/eprint/36168>
- 2017-2019 **Laurea Magistrale in Matematica (M.S.)**, *Università di Pisa*, 110/110 cum laude
Relatore Alessandro Berarducci
Tesi Surreal Numbers, Transseries and Omega Maps.
- 2012-2016 **Laurea Triennale in Matematica (B.S.)**, *Università di Pisa*, 110/110 cum laude
Relatore Enrico Sbarra
Tesi Risoluzioni libere di ideali monomiali.
- 2007-2012 **Maturità Scientifica**, *Liceo Scientifico Archimede, Messina*, 100/100 L

Esperienza Professionale

- 2025-ora **Ricercatore**, *Università di Leeds*, Matematica pura
- 2025 **Supplente**, *IISS Antonio Pesenti, Cascina (PI), Italy*, Matematica e Fisica
- 2020-2023 **Tutor di Matematica**, *Stem-up*
- 2020 **Supplente**, *ITCG Fermi Pontedera*, Informatica

Interessi di Ricerca

Teoria dei Modelli, o-minimalità, teoria delle categorie, logica matematica.

Pubblicazioni

- 2021 Berarducci, A., Freni, P. (2021). *On the value group of the transseries*. Pacific Journal of Mathematics, 312(2), 335-354. <https://msp.org/pjm/2021/312-2/p04.xhtml>, arxiv version: <https://arxiv.org/abs/2101.04002>

Preprint

- 2023 *On Vector Spaces with Formal Infinite Sums*. <https://arxiv.org/abs/2303.08000>
- 2024 *T-convexity, Weakly Immediate Types and T-λ-Spherical Completions of o-minimal Structures*. <https://arxiv.org/abs/2404.07646>
- 2024 *On the structure of T-λ-spherical completions of o-minimal fields*. <https://arxiv.org/abs/2407.07442>
- 2024 *T-convexly valued o-minimal fields are definably spherically complete*. <https://arxiv.org/abs/2411.16706>
- 2025 (j.w. Angus Matthews) *Residually Constructible Extensions*. <https://arxiv.org/abs/2501.10033>
- 2025 *Absorbed Types and Derivations in Exponential o-Minimal Theories*. <https://arxiv.org/abs/2511.13447>

Poster

- 2022 On formal infinite linear combinations (Presented in different versions at: Model Theory and Applications, Cetraro 2022; Unimod 2022, Leeds).

Seminari

- 2025 *Cuts and Derivations in Exponential o-minimal Fields*. Leeds, Models Seminar; *Expansions of Hahn fields by Algebras of generalized power series*. Napoli, INdAM intensive period on Model theory and tame expansions of topological fields, and Bologna, Logic, Categories, and Applications Seminar; *Strong vector spaces and some torsion theories of $\text{Ind}(\text{Vect}^{\text{op}})$* . Bologna, Logic, Categories, and Applications Seminar. *Elementary (bounded) spherical completions of exponential o-minimal fields, and their structure*. Pisa, Logic seminar.
- 2024 *Weakly immediate types and spherical completions of o-minimal structures*. Burnley, 30th LYMoTS meeting; *T-convexity and T- λ -spherical completions of o-minimal structures*. Manchester Logic Seminar.
- 2023 *What Should Strong Vector Spaces be?* Online, ItaCa Fest May 2024, Leeds, Impromptu Leeds-MacMaster Model Theory days; *Summability in Algebras of Generalized Power Series*. Leeds, Postgraduate Logic Seminar; *How do you solve a system of polynomial equations?* Leeds, Postgraduate Pure Math Seminar.
- 2022 *What are Transseries?* Leeds, Postgraduate Pure Math Seminar; *Strong Vector Spaces* Minitalk at LYMoTS/SEEMOD meeting.
- 2021 *Around exponentiation in fields of generalized power series*. Leeds, Postgraduate Logic Seminar; *Gabrielov's theorem and the model completeness of reals with restricted analytic functions*. Leeds, Postgraduate Pure Math Seminar.

Esperienza di Insegnamento

- 2021 Università di Leeds. Tutorato: Numbers and Systems.
- 2022 Università di Leeds. Tutorato: Sets, Sequences and Series. Esercitazioni: Further Linear Algebra.
- 2023 Università di Leeds. Tutorato: Sets, Sequences and Series.

Altre esperienze

- 2025 Organizzatore del the Models Seminar all'Università di Leeds.
- 2023 Organizzatore della British Postgraduate Model Theory Conference 2023.
- 2022-2023 Organizzatore del Leeds Postgraduate Logic Seminar.
- 2022 Aiuto nell'organizzazione del programma Unimod 2022.

Borse e Premi

- 2020-2024 School of Mathematics Full-Time Doctoral Scholarship at the School of Mathematics, University of Leeds.
- 2010-2012 Bronze Medal at the Italian Mathematics Olympiads in years 2010, 2011, 2012.

Abilità informatiche

- Coding C, C#, octave, SQL (basic experience with C++, Java, javascript, M2, AGDA).
- Other \LaTeX , html, css, Excel.

Lingue

- Fluente Italiano (madrelingua), Inglese.
- Buono Tedesco.