

Andrea Volpi

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Personal information

Date of birth: January 23, 1996

Place of birth: Brescia, Italy

Languages: Italian (native), English (fluent), German (B1)

Research interest

Reverse mathematics; Computability theory; Ramsey theory; Ordinal analysis

Education

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| Ph.D. student: Mathematics, University of Udine, Italy (supervisor: prof. Alberto Marcone) | from Nov 2022 (expected graduation Mar 2026) |
| Visiting scholar at UConn, Storrs, Connecticut, US (hosts: prof. Damir Dzhafarov, prof. Reed Solomon) | Jan 2023 to Apr 2023 |
| Visiting scholar at NUS, Singapore (host: dr. Jun Le Goh) | Sep 2025 to Oct 2025 |
| M.Sc.: Mathematics (L40), University of Trento, Italy | Jan 2019 to May 2021 |
| B.Sc.: Mathematics (L35), University of Trento, Italy | Aug 2015 to Nov 2018 |

Graduate schools

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| Summer School on Proof Theory | Ghent, Belgium Sep 2025 1 week |
| Reverse mathematics: new paradigms ESI | Vienna, Austria Jul 2025 to Aug 2025 1 week |
| IMS graduate summer school in logic | Singapore Jun 2023 to Jul 2023 3 weeks |
| Computability and combinatorics summer school 2023 | Hartford, Connecticut May 2023 1 week |
| Discrete mathematics and logic: between mathematics and the computer science | Marseille, France Jan 2023 1 week |
| AILA logic summer school | Gargnano, Italy Aug 2022 1 week |

Teaching experience

Teaching assistant, University of Udine, Italy:

- Geometry I, B.Sc. in mathematics, Sep 2024 to May 2025
- Linear algebra, B.Sc. in engineering, Sep 2024 to Dec 2024
- Calculus I, B.Sc. in mathematics, Nov 2023 to Dec 2023
- Calculus I, B.Sc. in informatics, Sep 2023 to Oct 2023
- Calculus I, B.Sc. in informatics and IBML, Jan 2023 to Sep 2023

Teaching assistant, University of Trento, Italy:

- Geometry and linear algebra, B.Sc. in engineering, Sep 2020 to Dec 2020
- Geometry and linear algebra, B.Sc. in engineering, Jan 2020 to May 2020
- Geometry I, B.Sc. in mathematics, Sep 2019 to Dec 2019
- Geometry and linear algebra, B.Sc. in engineering, Jan 2019 to May 2019

Publications and ongoing research

[1] **Effectiveness and strong graph indivisibility**, joint with Damir Dzhafarov and Reed Solomon, <https://arxiv.org/abs/2411.16950> (submitted)

[2] **The barrier Ramsey theorem**, joint with Alberto Marcone and Antonio Montalbán, <https://arxiv.org/abs/2505.02544> (submitted)

[3] **Reverse mathematics and dimension of posets**, joint with Marta Fiori Carones and Alberto Marcone, (work in progress)

[4] **The strength of Ramsey theorem for α -large sets**, joint with Lorenzo Carlucci and Konrad Zdanowski, (work in progress)

[5] **Classification of ultrahomogeneous graphs and posets**, joint with Jun Le Goh, (work in progress)

Conferences attended

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| Workshop on Proof Theory | Ghent, Belgium | Sep 4-5, 2025 |
| Computability in Europe 2025 | Lisbon, Portugal | Jul 14-18, 2025 |
| Reverse mathematics ESI | Vienna, Austria | 23 Jun-29 Aug, 2025 |
| Weihrauch Complexity: Structuring the Realm of Non-Computability | Schloss Dagstuhl, Germany | Mar 23-28, 2025 |
| XXVIII AILA logic meeting 2024 | Udine, Italy | Sep 3-6, 2024 |
| Models, sets and classifications PRIN meeting 2024 | Udine, Italy | Sep 2, 2024 |
| Leeds computability days 2024 | Leeds, UK | Jul 2-5, 2024 |
| Logic colloquium 2024 | Gothenburg, Sweden | Jun 24-28, 2024 |
| RaTLoCC | Pisa, Italy | Jun 11-14, 2024 |
| Computability and combinatorics conference 2023 | Hartford, Connecticut | May 19-21, 2023 |

Selected talks

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| Sapienza LOC3 seminar | University La Sapienza, Roma (Invited) | Nov 7, 2025 |
| Presentation title: | Effectiveness and strong graph indivisibility | |
| Singapore logic seminar | National University of Singapore, Singapore (Invited) | Sep 17, 2025 |
| Presentation title: | Effectiveness and strong graph indivisibility | |
| Proof society 2025 | University of Ghent, Belgium | Sep 4, 2025 |
| Presentation title: | The barrier Ramsey theorem | |
| <i>Winner of the best student presentation award of Proof Society 2025</i> | | |
| Computability in europe 2025 | University of Lisbon, Portugal | Jul 18, 2025 |
| Presentation title: | The strength of Ramsey theorem for α -large sets | |
| Logic working group | University of Udine, Italy | Feb 21, 2025 |
| Presentation title: | Effectiveness and strong graph indivisibility | |
| XXVIII AILA logic meeting 2024 | University of Udine, Italy | Sep 5, 2024 |
| Presentation title: | Reverse mathematics and dimension of posets | |
| Models, sets and classifications PRIN meeting | University of Udine, Italy | Sep 2, 2024 |
| Presentation title: | Classifying the pigeonhole property | |
| Logic colloquium 2024 | University of Gothenburg, Sweden | Jun 26, 2024 |
| Presentation title: | Largeness notions | |
| Logic working group | University of Udine, Italy | Jun 14-21, 2024 |
| Presentation title: | Transfinite Ramsey theorem | |
| Connecticut logic seminar | UConn, Storrs, Connecticut, US (Invited) | Feb 20, 2024 |
| Presentation title: | Reverse mathematics and dimension of posets | |
| Computability seminar | CUNY graduate center, New York, US (Invited) | Feb 16, 2024 |
| Presentation title: | Largeness notions | |
| Logic working group | University of Udine, Italy | May 12, 2023 |
| Presentation title: | Reverse mathematics and dimension of posets | |

Organizing activities

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| World logic day | "Le macchine di Turing" | University of Udine, Italy | Jan 14, 2025 |
| Local organizing committee | | | |
| XXVIII AILA logic meeting | University of Udine, Italy | 3-6 Sep, 2024 | |
| Local organizing committee | | | |
| World logic day | "Contare l'infinito" | University of Udine, Italy | Jan 13, 2023 |
| Local organizing committee | | | |
| Logic working group | "Sets and computability in Udine" | University of Udine, Italy | Dec 2022 to Oct 2025 |
| Website management | | | |

Memberships

Proof Society

CiE Computability in Europe

AILA Associazione italiana di logica e sue applicazioni

UMI Unione matematica italiana

ASL Association for symbolic logic

Awards and grants

Proof Society 2025, Ghent, Belgium: Best student presentation award (EUR 1000)

ASL Student travel grant 2025, Ghent, Belgium: Proof Society 2025 (USD 250)

ASL Student travel grant 2024, Gothenburg, Sweden: Logic Colloquium 2024 (EUR 300)

Bando di mobilità 2023-2024, Udine, Italy: Research visit to UConn (EUR 1500)