

**Date of birth:** 28/03/1994

## ● WORK EXPERIENCE

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01/02/2023 – CURRENT Vienna, Austria  
**POST-DOC TU WIEN**

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Under the FWF project [P35655](#) of Andrea Medini.  
The contract lasts 2 years.

09/05/2022 – 31/01/2023 Torino, Italy  
**POST-DOC (BORSISTA DI RICERCA) UNIVERSITÀ DI TORINO**

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Research fellowship under the project PRIN 2017 “Mathematical Logic: models, sets, computability”, prot. 2017NWTM8R.

10/2022 – 23/01/2023 Torino, Italy  
**UNIVERSITY TEACHING ASSISTANT UNIVERSITÀ DI TORINO**

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- Course: "Matematica Discreta e Logica" (12cfu), Department of Computer Science.
- Fall semester of the a.y. 2022/2023.
- 40 hours contract.
- Responsibility: teaching how to solve exercises related to the course topic, student reception, exam assistance, and other related activities.
- Usually, between 50 and 150 students per class.

01/10/2018 – 31/03/2022 Torino, Italy  
**PH.D. UNIVERSITÀ DI TORINO**

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See also "Education and training".

10/2021 – 02/2022 Torino, Italy  
**UNIVERSITY TEACHING ASSISTANT UNIVERSITÀ DI TORINO**

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- Course: "Matematica Discreta e Logica" (12cfu), Department of Computer Science.
- Fall semester of the a.y. 2021/2022.
- 40 hours contract.
- Responsibility: teaching how to solve exercises related to the course topic, student reception, exam assistance, and other related activities.
- Usually, between 20 and 50 students per class.
- Online, due to COVID.

12/2018 – 06/2021 Torino, Italy  
**WEB MANAGER LOGICGROUP - UNIVERSITÀ DI TORINO**

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I have been responsible for the development, improvement and constant update of the website of the LogicGroup of Genoa, Lausanne, Turin and Udine (<http://logicgroup.altervista.org/>), and for the creation and update of the LogicGroup youtube channel.

10/2020 – 02/2021 Torino, Italy  
**UNIVERSITY TEACHING ASSISTANT UNIVERSITÀ DI TORINO**

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- Course: "Matematica Discreta e Logica" (12cfu), Department of Computer Science.
- Fall semester of the a.y. 2020/2021.
- 40 hours contract.
- Responsibility: teaching how to solve exercises related to the course topic, student reception, exam assistance, and other related activities.
- Usually, between 50 and 100 students per class.
- Online, due to COVID.

- Course: "Matematica Discreta e Logica" (12cfu), Department of Computer Science.
- Fall semester of the a.y. 2019/2020.
- 40 hours contract.
- Responsibility: teaching how to solve exercises related to the course topic, student reception, exam assistance, and other related activities.
- Usually, between 50 and 150 students per class.

05/2017 – 07/2017 Desio, Italy  
**MATHEMATICS TEACHER FOR SUMMER COURSES AT HIGH SCHOOL** LICEO STATALE E. MAJORANA.

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01/2016 – 05/2016 Desio, Italy  
**INTERNSHIP AS MATHEMATICS TEACHER IN HIGH SCHOOL** LICEO STATALE E. MAJORANA

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## ● EDUCATION AND TRAINING

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01/10/2018 – 19/12/2022 Turin, Italy  
**PH.D. IN PURE AND APPLIED MATHEMATICS, WITH HONORS** Università di Torino

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- With scholarship.
- Main topics: logic, set theory, descriptive set theory, general topology, combinatorics, and model theory.
- Supervisor: Luca Motto Ros.
- Dissertation defense: 19 of December 2022.

**Field of study** Mat/01 (Mathematical logic and applications) | **Final grade** With honors |

**Thesis** Generalized Descriptive Set Theory at uncountable cardinals & Actions of monoids in combinatorics

31/08/2016 – 23/10/2018 Milan, Italy  
**MASTER DEGREE IN MATHEMATICS, CUM LAUDE** Università degli Studi di Milano

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**Final grade** 110/110 cum laude |

**Thesis** On cardinal characteristics of partial orders and  $p=t$ . Supervisors: Klaas Pieter Hart and Vincenzo Marra

26/08/2017 – 22/07/2018 Netherlands  
**ERASMUS+ PROJECT**

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Erasmus+ project at Leiden University joint with Mastermath Project at University of Amsterdam, Vrij University Amsterdam, Utrecht University and Radboud University.

31/08/2013 – 19/07/2016 Milan, Italy  
**BACHELOR DEGREE IN MATHEMATICS, CUM LAUDE** Università degli Studi di Milano

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**Final grade** 110/110 cum laude

## ● LANGUAGE SKILLS

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Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C2	C2	C1	C1	B2

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## ● DIGITAL SKILLS

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Web Development HTML 5 CSS JavaScript | Programming C C++ JAVA (J2EE) | Proficient User of Latex | Microsoft Office Office 365 package | Collaboration Tools (MS Teams Zoom Webex Skype for Business)

## ADDITIONAL INFORMATION

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### COURSES AND PROFESSIONAL FORMATION

#### Ph.D. courses

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I participated in the following Ph.D. courses:

- Model theory (30h), University of Turin. Lecturer: Domenico Zambella.
- Iterated forcing (30h), University of Turin. Lecturer: Matteo Viale.
- Generalized descriptive set theory (30h), University of Turin. Lecturer: Luca Motto Ros.
- Generalized Descriptive Set Theory II (10h), University of Udine. Lecturer: Vincenzo Dimonte.
- Logic methods for Banach spaces (15h), University of Turin. Lecturer: José Iovino.
- Around finite basis results for quasi-orders (30h), University of Turin. Lecturer: Raphael Carroy.
- Infinite combinatorics, Banach spaces, and the first Baire class (30h), University of Turin. Lecturers: Rapahel Carroy and Luca Motto Ros.
- Mutually enhancing connections between Ergodic Theory, Combinatorics, and Number Theory (14h), University of Pisa. Lecturer: Vitaly Bergelson.

For the courses of model theory, iterated forcing and generalized descriptive set theory I also participated in (and passed) the final exam.

### HONOURS AND AWARDS

#### Honours and awards

- Winner of the Montagna Prize given by the AILA and UMI associations for best Ph.D. thesis in logic of the years 2022 and 2023.
- Winner of AILA 3+2 prize for best master thesis in logic, year 2019.
- Winner of the INdAM prize for the best master thesis in mathematics of the year 2018.
- Winner of one of the eight INdAM scholarships for Master Degree in 2016.

### PUBLICATIONS AND RESEARCH WORKS

#### Publications

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1. [Generalized Polish spaces at regular uncountable cardinals](#) (joint work with L. Motto Ros and P. Schlicht), Journal of the London Mathematical Society (2023). DOI: 10.1112/jlms.12797
2. [Ramsey monoids](#) (joint work with E. Colla), Transactions of the American Mathematical Society (2023). DOI: 10.1090/tran/8951
3. [On bisequentiality and spaces of strictly decreasing functions on trees](#) (joint work with J. Somaglia), Topology appl. 210 (2019), 513-523. DOI: 10.1016/j.topol.2019.03.018

### TALKS

#### Invited talks and seminars:

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- *Topology and generalized descriptive set theory*, SSLPS Annual Meeting 2023, Lausanne (France), 29-09-2023.
- *Combinatorial statements from a compact right topological semigroup of types*, University of Pisa, Pisa (Italy), 27-04-2023.
- *From algebra to combinatorics through dynamics: some results in Ramsey theory*, TU Wien, Vienna (Austria), 17-03-2023.
- *A characterization of metrizability through games*, Università di Torino and online on LogicGroup (Universities of Genoa, Lausanne, Turin, and Udine), Torino (Italy), 20-01-2023.
- *From the (generalized) Baire space to Polish-like spaces, both at regular and singular cardinals*, Czech Academy of Sciences, Prague (Czech Republic), 26-04-2022.
- *On some extensions of theorems in combinatorics*, Czech Academy of Sciences, Prague (Czech Republic), 20-04-2022.
- *Colorful monoid actions*, Cornell University, Ithaca (Online - USA), 28-02-2022.
- *Coloring the numbers, and other funny things to do*, Insalate di Matematica, Università di Milano Bicocca, 20-10-2021.
- *Complete metrizability at uncountable cardinals*, Czech Academy of Sciences, Prague (Online - Czech Republic), 25-05-2021.
- *Large cardinals, elementary embeddings and "generalized" ultrafilters*, Università di Torino and Università di Udine (Online - Italy), 06-11-2020 and 13-11-2020.
- *A generalization of Polish spaces*, SQuID, Università di Genova, Genova (Italy), 18-12-2019.
- *Life is more fun if you play (topological) games*, Università di Torino, Torino (Italy) 23-10-2019.
- *Introduction to Polish spaces*, PhD Days, Università degli Studi di Milano, Milano (Italy), 04-10-2019.
- *Cardinal characteristics of partial orders and  $p=t$* , Università di Torino, Torino (Italy), 29-10-2018, 05-11-2018, 12-05-2018.

#### Contributed talks and seminars:

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- *Colorful actions of monoids, finite and infinite*, UMI23, Pisa (Italy), 06-09-2023.
- *On standard Borel spaces in GDST*, Sixth workshop on generalised Baire space, Vienna (Austria), 27-07-2023.
- *Generalized Descriptive Set Theory at uncountable cardinals & actions of monoids in combinatorics*, Ph.D. defense and part of Descriptive set theory and combinatorics workshop, Torino (Italy), 19-12-2022.
- *Polish-like spaces and descriptive set theory at uncountable cardinals*, XXVII Incontro di Logica AILA, Caserta (Italy), 15 September 2022.

- *Colorful actions of monoids, finite and infinite*, Ultramath 2022, Pisa (Italy), 10-06-2022.
- *Polish-like spaces and descriptive set theory at uncountable cardinals*, 100 years of UMI and 800 years of UniPD, Padova (Italy), 26-05-2022.
- *A characterization of metrizable through games*, Winter School in Abstract Analysis 2022 - section Set Theory & Topology, Hejnice (Czech Republic), 03-02-2022.
- *An algebraic characterization of Ramsey monoids*, Logic Colloquium 2021, Poznań (Online - Poland), 24-07-2021.
- *A characterization of Ramsey monoids*, 22nd Graduate Student Conference in Logic, Champaign (Online - USA), 21-03-2021.
- *A characterization of finite Ramsey monoids*, RIMS Workshop 2020 - Set Theory: Reals and Topology, Kyoto (Online - Japan), 17-11-2020.
- *Continuous image of closed sets*, Università di Turin, Torino (Online - Italy), 21-05-2020.
- *On a class of Polish-like spaces*, Catania Set Theory and Topology Conference 2020, Catania (Italy), 20-02-2020.
- *On a class of Polish-like spaces*, Fifth Workshop on Generalised Baire Spaces, Bristol (UK), 03-02-2020.
- *On a class of Polish-like spaces*, Winter School in Abstract Analysis 2020 - section Set Theory & Topology, Hejnice (Czech Republic), 27-01-2020.
- *Generalized descriptive set theory and Polish spaces* (poster session), Politecnico di Torino, Torino (Italy), 22-11-2019.
- *On the cardinal characteristics  $p$  and  $t$* , Young Set Theory Workshop, Vienna (Austria), 28-06-2019.
- *Spazi di funzioni decrescenti su alberi*, Università degli studi di Milano, Milano (Italy), 26-07-2018.
- *Introduzione alla teoria delle distribuzioni*, Università degli studi di Milano, Milano (Italy), 11-07-2016.

26/09/2019

## Notte dei Ricercatori

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I took part in the event "Notte dei Ricercatori" (Researcher Night), an event intended to present the work of researchers to people outside academia and make the scientific culture accessible to everyone.

## CONFERENCES AND SCHOOLS

05/09/2022 – 07/09/2022

## PhDs in Logic XIII

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Member of the organizing committee of the XIII edition of the conference "PhDs in Logic", which took place from the 5th to the 7th of September, 2022, in Turin.

## Conferences and schools

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- *SSLPS Annual Meeting 2023*, EPFL, Lausanne (Switzerland), 29-30 September 2023. Invited by the EPFL.
- *UMI23*, Università di Pisa e scuola normale superiore di Pisa, Pisa (Italy), 04-09 September 2023.
- *Sixth workshop on generalised Baire space*, TU Wien, Vienna (Austria), 26-28 July 2023.
- *Logic Colloquium 2023*, Università degli Studi di Milano, Milano (Italy), 6-10 June 2023.
- *Young Set Theory Workshop*, University of Münster, Münster (Germany), 29 May - 3 June 2023.
- *Descriptive set theory and combinatorics workshop*, Università di Torino, Torino (Italy), 19-20 December 2022.
- *XXVII Incontro di Logica AILA*, Università della Campania Luigi Vanvitelli, Caserta (Italy), 12-15 September 2022.
- *PhDs in Logic XIII*, Università di Torino, Torino (Italy), 5-7 September 2022.
- *European Set Theory Conference 2022*, Università di Torino, Torino (Italy), 29 August - 2 September 2022.
- *36th Summer Topology Conference*, University of Vienna, Vienna (Austria), 18-22 July 2022.
- *Ultramath 2022*, Università di Pisa, Pisa (Italy), 6-11 June 2022.
- *100 years of UMI and 800 years of UniPD*, Università di Padova, Padova (Italy), 23-27 May 2022.
- *Winter School in Abstract Analysis 2022 - section Set Theory & Topology*, Hejnice (Czech Republic), 29 January-5 February 2022.
- *XVI International Luminy Workshop in Set Theory*, CIRM Luminy, Marseille (France), 13-17 September 2021.
- *Logic Colloquium 2021*, Adam Mickiewicz University, Poznań (Poland - Online), 19-24 July 2021.
- *22nd Graduate Student Conference in Logic*, University of Illinois at Urbana-Champaign Champaign, (IL, USA - Online), 20-21 March 2021.
- *RIMS Workshop 2020 - Set Theory: Reals and Topology*, Kyoto University Research Institute for Mathematical Sciences, Kyoto (Japan - Online), 16-20 November 2020.
- *Catania Set Theory and Topology Conference 2020*, Università di Catania, Catania (Italy), 18-21 February 2020.
- *Fifth Workshop on Generalised Baire Spaces*, University of Bristol, Bristol (UK), 3-4 February 2020.
- *Winter School in Abstract Analysis 2020 - section Set Theory & Topology*, Hejnice (Czech Republic), 25 January-1 February 2020. Supported by the winter school and its sponsors.
- *SQuID 2019*, Università di Genova, Genova (Italy), 18 December 2019. Supported by Università di Genova.
- *PhD days 2019*, Milano (Italy), 3-4 October 2019.
- *XXI Congresso dell'Unione Matematica Italiana*, Università di Pavia, Pavia (Italy) 2019, 5-6 September 2019.
- *AILA summer school 2019*, Gargnano (Italy), 26-31 August 2019. Supported by AILA (AILA 3+2 Prize).
- *Seventh European Set Theory Conference*, University of Vienna, Vienna (Austria), 1-5 July 2019. Supported by the GNSAGA, INdAM.
- *Twelfth Young Set Theory Workshop*, University of Vienna, Vienna (Austria), 26-29 June 2019. Supported by the University of Vienna.
- *Logic Fest in the Windy City*, University of Illinois at Chicago, Chicago (USA), 28 May-2 June 2019. Supported by the University of Illinois at Chicago.

## NETWORKS AND MEMBERSHIPS

### Memberships

- Member of the Associazione Italiana per la Logica e le sue Applicazioni (AILA).
  - Member of the Gruppo Nazionale per le Strutture Algebriche, Geometriche e le loro Applicazioni (GNSAGA) of the Istituto Nazionale di Alta Matematica (INdAM).
  - Member of Unione Matematica Italiana (UMI).
  - Member of the European Set Theory Society (ESTS).
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27/10/2023