Valentina **Astore**

PHD STUDENT

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Date of birth: 21/01/2000 · Nationality: Italian

Education

PhD in Computer Science   *Palaiseau, France*
INRIA PARIS-SACLAY & ÉCOLE POLYTECHNIQUE   *Oct. 2024 - Present*
- Supervisors: Alain Couvreur and Martino Borello
- Research Areas: Algebraic Coding Theory, Finite Fields, Finite Geometry, and applications to Cryptography.

Master of Science in Mathematics, curriculum Cryptography   *Trento, Italy*
UNIVERSITY OF TRENTO   *Sept. 2021 - March 2024*
- Highly selective Master program (10 students per year, with admission test).
- Attended courses, held in English (with scores out of 30):
  - *Algebra and its applications*: Advanced Number Theory (30 with honour), Advanced Coding Theory (30), Algebraic Cryptography (28), Applied Cryptography (30 with honour), Coding Theory and Applications (30 with honour), Computational Algebra (28).
  - *Computer science*: Advanced Programming of Cryptographic Methods (30 with honour), Formal Techniques for Cryptographic Protocol Analysis (30), Introduction to Computer and Network Security (30), Scientific Computing (29). Known programming languages: MAGMA, C, Java, Python, MatLab (base level) and R (base level).
  - *Information theory*: Data Hiding (30 with honour), Digital Signal Processing (29), Stochastic Processes (28).
  - *Foreign languages:* English - Level C1.
- Graduation grade: 110 with honour/110.

Master's Project   *Saint-Denis, France*
UNIVERSITY OF PARIS 8 - LAGA   *Oct. 2023 - Dec. 2023*
- Topics: Coding Theory, Rank-Metric Codes, Distinguishers, Castelnuovo-Mumford Regularity.
- Supervisors: Martino Borello (University of Paris 8) and Marco Calderini (University of Trento).

Bachelor of Science in Mathematics   *Trento, Italy*
UNIVERSITY OF TRENTO   *Sept. 2018 - Sept. 2021*
- Attended courses: Algebra, Analysis, Classical Physics, Computer Science, Geometry, Probability and Statistics.
- Bachelor's project: "Paillier Cryptosystem", Supervisor: Nadir Murru (University of Trento).
- Graduation grade: 108/110.

Workshops and Courses

WORKSHOPS

Contributed talk. 14-16 February 2024, Caserta (Italy).
Event: OpeRa 2024 - Open Problems on Rank-Metric Codes
Topics: Latest advancements in rank-metric code theory.
Title of the talk: *Castelnuovo-Mumford Regularity in the Rank Metric*.

COURSES

PQCifris 2022 School on Post-Quantum Cryptography. October 2022, Trento (Italy).
Organizers: University of Trento and De Componendis Cifris (Italian national association).
Topics: introduction to post-quantum cryptography, multivariate-based, code-based, isogeny-based, and lattice-based methods.

De Cifris Trends in Modern Cryptography. March 2022 - May 2022, Trento (Italy).
Organizer: De Componendis Cifris (Italian national association).
Topics: post-quantum cryptography, cloud encryption and secure multiparty computation.

Professional Experience

Substitute Teacher   *Bassano del Grappa (VI), Italy*

Scuola Primaria Marconi   *May 2024*

- On-call work
- Sector: Education (primary school).

Research and Development Programmer   *Milano, Italy*

BV TECH S.p.A.   *March 2023 - July 2023*

- Internship experience, held remotely.
- Sector: IT Services and IT Consulting.
- Tasks: Analyze and improve the security strength of a communication service for messages and VoIP calls.

Administrative assistant   *Torquay, United Kingdom*

Essential 6 Ltd   *August 2017- Sept. 2017*

- Internship experience.
- Sector: First Aid & Safety Training .
- Tasks: Management of electronic and paper mail, production and revisions of costumer's certificates, organization of team building events for the staff.

Additional Information

Periods of Unemployment

- April 2024, June 2024 - September 2024

- July 2018 - August 2018

References

- Alain Couvreur (INRIA & LIX)

- Martino Borello (University Paris 8)

- Marco Calderini (University of Trento)