



Matteo Marini

EDUCATION AND TRAINING

Ph.D. Cybersecurity

Sapienza University of Rome [01/11/2022 – Current]

Conducting research on advanced software sanitization techniques to enhance bug detection efficiency, with a strong emphasis on optimizing their application in fuzz testing frameworks.

Master degree in Engineering in Computer Science

Sapienza University of Rome [23/07/2020 – 25/10/2023]

Final grade: 110/110 cum laude | Thesis: Automated Reconstruction of Network Protocols for Malware Communication via Coverage-guided Fuzzing

Honour Program M.Sc.

Sapienza University of Rome [01/03/2022 – 25/10/2023]

Studying the challenges of uninitialized-memory errors detection, with a focus on binary software.

Bachelor degree in Engineering in Computer Science

Sapienza University of Rome [24/09/2017 – 23/07/2020]

Final grade: 110/110 cum laude | Thesis: Securing DBI based Analysis Systems against Adversarial Techniques

Honour Program B.Sc.

Università degli studi di Roma La Sapienza [28/02/2018 – 06/07/2020]

Integrated novel malware unpacking with DBI hardening to strengthen defenses against evasion.

High School Diploma in Telecommunications

I.T.I.S. Enrico Fermi [06/09/2012 – 09/07/2017]

City: Rome | Country: Italy | Final grade: 100/100

Presented a project on an automated TOR router and access point, implemented on Raspberry Pi.

WORK EXPERIENCE

 **Vrije Universiteit Amsterdam** – Amsterdam, Netherlands

City: Amsterdam | Country: Netherlands

Visiting Ph.D. Student

[06/03/2025 – 01/09/2025]

Collaborating with the host research group on new software sanitization solutions in automated testing.

 **Università degli studi di Roma La Sapienza** – Rome, Italy

City: Rome | Country: Italy

Intern

[04/03/2020 – 06/07/2020]

Collaborated with a research team to develop a secure malware unpacking tool enhanced with anti-evasion techniques.

 **ABB S.P.A.** – Rome, Italy

City: Rome | Country: Italy

Intern

[10/2016]

Four-weeks-long training internship focussed on the production of breakers for alternating current.

 **ATAC S.P.A.** – Rome, Italy

City: Rome | Country: Italy

Intern

[10/2015]

Two-weeks-long training internship focussed on the maintenance of the Rome's metro lines's IT infrastructures.

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

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

PUBLICATIONS

QMSan: Efficiently Detecting Uninitialized Memory Errors During Fuzzing

Marini, Matteo, Daniele Cono D'Elia, Mathias Payer, and Leonardo Querzoni. "QMSan: Efficiently Detecting Uninitialized Memory Errors During Fuzzing." In Proceedings of the Network and Distributed System Security (NDSS) Symposium 2025. 2025.

Designing robust API monitoring solutions

D'Elia, Daniele Cono, Simone Nicchi, Matteo Mariani, Matteo Marini, and Federico Palmaro. "Designing robust API monitoring solutions." IEEE Transactions on Dependable and Secure Computing 20, no. 1 (2021): 392-406.