Cristian Assaiante

Curriculum vitae

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Personal Data

Nationality:	Italian
email:	assaiante@diag.uniroma1.it
Personal Page:	cristianassaiante.github.io

Employment

Nov. 2021 - present	PhD student, Engineering in Computer Science *Sapienza University of Rome, Italy* Advisor: Prof. Leonardo Querzoni
Jan. 2020 - present	Organizer and Training Coordinator, CyberChallenge.IT *Sapienza University of Rome, Italy*
Mar. 2021 - May 2021	Training Coordinator and Challenges Author, Olicyber.IT

Education

Sep. 2019 - Oct. 2021	M.Sc., Engineering in Computer Science (in English) *Sapienza University of Rome, Italy* Final grade: 110/110 with honors (*summa cum laude*) Thesis: A Study of the Completeness of Debug Symbols in Optimizing Compilers
Sep. 2016 - Jul. 2019	B.Sc., Computer and Control Engineering *Sapienza University of Rome, Italy* Final grade: 110/110 with honors (*summa cum laude*) Thesis: A Micro-Architectural Red Pill

Research Interests

My research interests spans over several aspects of compilers, and software and system security, the main focus at the moment is software testing. I currently work on source-level debugging of optimized code, finding bugs in compiler toolchains related to inaccurate debug information generation and testing the effects of optimizations of software debuggability. I am passionate about compilers optimizations, program analysis techniques (sometimes applied to malware analysis), operating systems and micro-architectural attacks.

Teaching

2024 Adjunct Professor for *Sistemi di Calcolo* (3CFU module) course (Spring 2024), Sapienza University of Rome.

2023 Adjunct Professor for *Sistemi di Calcolo* (3CFU module) course (Spring 2023), Sapienza University of Rome.

2022 Teaching Assistant for *Sistemi di Calcolo* course (Spring 2022), Sapienza University of Rome.

Service

Conferences and Workshops

2022 Shadow Program Committee member for EuroSys'23 - 18th European Conference on Computer Systems.

Artifact Evaluation Committee member for EuroSys'23 - 18th European Conference on Computer Systems.

Journals

2023 Reviewer for Computers & Security (COSE).

Reviewer for SoftwareX (SOFTX).

Publications

Conferences and Workshops

2024 **C. Assaiante**, S. Nicchi, D. C. D'Elia, L. Querzoni. *Evading Userland API Hooking, Again: Novel Attacks and a Principled Defense Method.* To appear In Proceedings of the 21st Conference on Detection of Intrusions and Malware & Vulnerability Assessment (**DIMVA** '24). [CORE23 RANK: C.]

2023 **C. Assaiante**, D. C. D'Elia, G. A. Di Luna, L. Querzoni. *Where Did My Variable Go? Poking Holes in Incomplete Debug Information.* In Proceedings of the 28th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (**ASPLOS** '23). [CORE23 RANK: A*.]

Honors and Awards

2024 **finalist** with mhackeroni, DEFCON 32 *CTF Finals*, Las Vegas, USA

2023 **winner** with mhackeroni, Hack-a-Sat 4 *CTF Finals*, Las Vegas, USA

finalist with mhackeroni, DEFCON 31 *CTF Finals*, Las Vegas, USA

2022 **winner**, BlackHat ASIA cybersecurity conference *Student Scholarship*, Singapore

2021 **winner**, 42ND IEEE Symposium on Security and Privacy conference *Student Travel Grant Award*, Online

awarded, M.Sc. in Engineering in Computer Science *Honors Program*, Rome, Italy

finalist with mhackeroni, DEFCON 29 *CTF Finals*, Las Vegas, USA

winner with TheRomanXpl0it, CSAW '21 *Embedded Cybersecurity Challenge Finals*, Online

2020 **winner**, 15TH CLUSIT thesis prize to *A Micro-Architectural Red Pill*, Online

winner, BlackHat EU cybersecurity conference *Student Scholarship*, Online

finalist with mhackeroni, DEFCON 28 *CTF Finals*, Las Vegas, USA

winner with TheRomanXpl0it, CSAW '20 *Embedded Cybersecurity Challenge Finals*, Online

2019 **5th place** with mhackeroni, DEFCON 27 *CTF Finals*, Las Vegas, USA

awarded, B.Sc. in Computer and Control Engineering *Honors Program*, Rome, Italy

1st place with TheRomanXpl0it, CSAW '19 *Embedded Cybersecurity Challenge Finals*, Valence, France

Fundings

2022 Ph.D. starting grant for the project: Practical Control-Flow Integrity for Software Security

Talks and Presentations

2024 **C. Assaiante**, S. Nicchi, D. C. D'Elia, L. Querzoni. *Evading Userland API Hooking, Again: Novel Attacks and a Principled Defense Method.* Presented at **ITASEC '24**, Salerno, Italy

Languages

English: Fluent (Certified: B2)
Italian: Native