



Niccolò Izzo

<https://izzo.sh>
n@izzo.sh | +39 329.1810321

LINKS

Github: [n1zzo](#)
Twitter: [@n1zzo](#)
Linkedin

COURSEWORK

MICRON

Advanced SCA (Riscure)
Modern DRAM (Mindshare)
Semiconductor Manufacturing

PHD

Summer School on Real World Crypto
Advanced Computer Security
Strategic Decision Making
Computer Ethics

GRADUATE

Computer Security
Cryptography
Code Transformation & Optimization
Formal Languages and Compilers
Advanced Computer Architectures

SKILLS

SECURITY

5+ years experience in security architectures design for CXL and SSD.
Rated Proficient to Expert (4+) on Side Channel Analysis by Riscure.
24 U.S. Patents on SW/HW Security.

PROGRAMMING

Over 10000 lines:
C • C++ • Python3
Over 5000 lines:
Java • C# • Flex/Bison
Familiar:
Verilog • LLVM

COMMUNICATION

Teaching Assistant at Politecnico di Milano, with 350+ teaching hours.
15 talks with Politecnico Open unix Labs.

LANGUAGE

Italian - Native
English - Fluent (C1)

OPEN SOURCE

GNU/LINUX

10+ years experience with GNU/Linux.

OPENRTX

Co-founder of OpenRTX, free and open source firmware for ham radios.
Website: openrtx.org

EDUCATION

POLITECNICO DI MILANO

PHD IN COMPUTER SCIENCE

Grad. Dec 2022 | Milan, Italy | Cum Laude

MSC IN COMPUTER SCIENCE AND ENGINEERING

Grad. Dec 2017 | Milan, Italy | Final Grade: 110L / 110

BS IN INGEGNERIA INFORMATICA

Grad. July 2015 | Milan, Italy | Final Grade: 95 / 110

THESES

PHD: SIDE CHANNEL ANALYSIS + SYSTEM SECURITY

Global Protection for Transient Attacks

MASTER: ROWHAMMER

Reliably achieving and efficiently preventing Rowhammer attacks

PUBLICATIONS

MICROARCHITECTURAL SIDE CHANNEL ATTACKS

A. Barengi, L. Breveglieri, N. Izzo, G. Pelosi "Exploring Cortex-M Microarchitectural Side Channel Information Leakage"
Published at: IEEE Access 9.

MOBILE DEVICES SECURITY

P. Amato, N. Izzo, C. Meijer, "Mobile Systems Secure State Management"
Published at: AHS2022, Maspalomas, Gran Canaria (Spain).

EMERGING MEMORY ENCRYPTION

N. Izzo, A. Barengi, L. Breveglieri, G. Pelosi, P. Amato "A secure and authenticated host-to-memory communication interface"
Published at: ACM International Conference on Computing Frontiers 2019 (CF19), Alghero, Sardinia, Italy, April 30 - May 2. Proceedings ACM 2019.

ROWHAMMER

A. Barengi, L. Breveglieri, N. Izzo, G. Pelosi "Software-only Reverse Engineering of Physical DRAM Mappings for Rowhammer Attacks"
Published at: 3rd International Verification and Security Workshop (IVSW), Cap Roig, Platja d'Aro, Costa Brava, Spain, July 2-4. Proceedings IEEE 2018.

64KEY

F. A. Izzo, L. Aspesi, A. Bellini, C. Pacchiarotti, F. Caimi, G. Persano, N. Izzo, P. Tordini, L. Mottola, M. Bianchini, S. Maffei "64Key - A Mesh-based Collaborative Plaform". Published at: 16th SenSys, Shenzhen, China.

EXPERIENCE

MICRON SEMICONDUCTOR S.R.L | ENGINEER, SYSTEM ARCHITECT

Oct 2021 - Present | Vimercate, Italy

Security architectures design for memory and storage products.

MICRON SEMICONDUCTOR S.R.L | COMPUTER SECURITY INTERN

Jul 2018 - Jul 2019, Oct 2020 - Oct 2021 | Vimercate, Italy

Design and evaluation of security architectures for emerging memories.

REV.NG SRLS UNIPERSONALE | SOFTWARE ENGINEER

Feb 2018 - Dec 2020 | Milan, Italy

Development of the Qualcomm Hexagon support for the QEMU emulator.

POLITECNICO DI MILANO | COMPUTER SCIENCE 101 TA

Jan 2017 - Dec 2022 | Milan, Italy

Teaching the fundamentals of computer programming and the C language.

POLITECNICO DI MILANO | FORMAL LANGUAGES TA

Sep 2019 - Dec 2021 | Milan, Italy

Teaching students how to create an educational C compiler with flex and bison.