

Hossam ElAtali



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Education

PhD Computer Science – Platform Security 2021 – present
University of Waterloo, CrySP Group

Topics: Hardware-assisted defenses, trusted execution environments, run-time attacks, side channels
Skills: *Computer architecture development, Verilog/Chisel, RISC-V, LLVM, C++, Assembly, Linux*
Supervisor: Prof. N. Asokan

M.Sc. INFOTECH – Computer Hardware and Software Engineering 2012 – 2015
Universität Stuttgart

Final GPA: 1.3 (i.e., Very Good)

B.Sc. Information and Engineering Technology – Electronics 2007 – 2012
German University in Cairo

Final GPA: 0.74 (i.e., A+), **ranked 3rd**

Professional Experience

Technical Lead 2020 – 2021
Senior Software Development Engineer 2018 – 2020
Software Development Engineer 2015 – 2018
Mentor, a Siemens Business

- Developed our Multimedia solutions, C++ GUI-based applications used with Mentor's emulation hardware to verify designs under test (DUTs) implementing multimedia protocols such as HDMI.
- Developed a brand-new product to verify the protocol layer of Optical Transport Networks (OTN).

Relevant skills

C++, Linux, Qt, GUI, Bash, Verilog, HW/SW Interface, Custom Firmware, GDB/Valgrind, Python

Publications

- H. ElAtali, L. J. Gunn, H. Liljestrang, N. Asokan, "BliMe: Verifiably Secure Outsourced Computation with Hardware-Enforced Taint Tracking", Network and Distributed Systems Symposium (NDSS), San Diego, CA, USA. 2024. <http://doi.org/10.14722/ndss.2024.24105>.
- H. ElAtali, "Configurable Shared Cache and Memory Model for Parallel NoC Simulation", Master's thesis, University of Stuttgart, 2015.
- H. ElAtali, "Simulation of Realistic Defects for Validating Test-and Diagnosis-Algorithms", Bachelor's thesis, University of Stuttgart, 2011, <http://doi.org/10.18419/opus-2852>.

Awards

- Best Poster Award (2022) – Cybersecurity and Privacy Institute, University of Waterloo
- Entrance Scholarship (2021) – University of Waterloo
- DAAD Scholarship (2012-2015) – German Academic Exchange Service