

François De Keersmaecker

francois.dekeersmaecker@uclouvain.be

 François De Keersmaecker

 0000-0002-4967-4132
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PUBLICATIONS

- [1] François De Keersmaecker, Rémi Van Boxem, Cristel Pelsser, and Ramin Sadre. The forest behind the tree: Revealing hidden smart home communication patterns, 2025. <https://arxiv.org/abs/2502.08535>.
- [2] François De Keersmaecker, Ramin Sadre, and Cristel Pelsser. Supervising Smart Home Device Interactions: A Profile-Based Firewall Approach. In *2024 IFIP Networking Conference (IFIP Networking)*, pages 413–422, 2024.
- [3] François De Keersmaecker, Yinan Cao, Gorby Kabasele Ndonga, and Ramin Sadre. A Survey of Public IoT Datasets for Network Security Research. *IEEE Communications Surveys & Tutorials*, 25(3):1808–1840, 2023.

REPOSITORIES

- smart-home-firewall
- firewall-blocklist
- profile-translator-blocklist
- pcap-fuzzer
- pyyaml-loaders
- lorawan-smart-lln
- zeek-plugins/mdns
- zeek-plugins/igmp

AWARDS

BEST POSTER AWARD

TMA 2024 PhD School

May 22, 2024 | Dresden, Germany

BEST POSTER

GRASCOMP 2024 Doctoral Day

September 9, 2024 | Louvain-la-Neuve, Belgium

SKILLS

LANGUAGES

 French: native •  English: B2
 Dutch: B1

PROGRAMMING

Shell • Assembly • C • C++ • Java • Python
Ruby • Scala • JavaScript • Android • Matlab
LaTeX • Erlang • SystemVerilog

TOOLS

Linux • Windows • Git • SQL • Docker • CI/CD
VirtualBox • Vagrant • GDB • Jinja • Arduino
Ghidra • Zeek • LTspice • LabView
Intel Quartus Prime

DESKTOP

Word • Excel • PowerPoint

EXPERIENCE

UCLouvain | Teaching Assistant

September 2021 - Present | Louvain-la-Neuve, Belgium

- Computer System Security (Graduate)
- Computer Systems (Undergraduate)
- Programming Languages Paradigms (Undergraduate)
- Bases of Computer Science II (Undergraduate)

UCLouvain | Developer and Course Administrator

Summer 2021 | Louvain-la-Neuve, Belgium

- Updated the syllabus and created new exercises for a computer science course
- Extensively used Docker containers for tool configuration and development
- Extended the features of VSCode for the Oz programming language

UCLouvain | Academic Tutor

Sept. 2019 - May 2021 | Louvain-la-Neuve, Belgium

- Supervised practical sessions of bachelor students
- Graded students' assignments
- Had meetings with teachers every week to manage the course

City Job | Android Developer

March 2019 - June 2021 | Louvain-la-Neuve, Belgium

- Worked with 3 other students on the creation of a start-up
- Developed an Android application to be launched on the Play Store
- Participated in the 11th edition of Mind & Market, to present the start-up to potential investors

EDUCATION

PhD in Computer Engineering

UCLouvain | ICTeam - INGI

Expected grad. March 2026 | Louvain-la-Neuve, Belgium

F.R.S.-FNRS candidate

Research topic: Smart Home network security

MS in Computer Engineering

UCLouvain | Louvain School of Management

Grad. June 2021 | Louvain-la-Neuve, Belgium

Major: Networks & Security

Languages: courses fully in English

Summa Cum Laude (Cum. GPA: 87.6 %)

BS in Engineering

UCLouvain | Louvain School of Management

Grad. June 2019 | Louvain-la-Neuve, Belgium

Major: Computer Engineering | Minor: Electrical Engineering

Languages: core courses in French, English language courses

Magna Cum Laude (Cum. GPA: 79.3 %)

Secondary School

Institut Saint-Joseph

Grad. June 2016 | Ciney, Belgium

Majors: Mathematics & Science

Languages: core courses in French, Dutch in immersion classes, English

Excellence prize (Best student of the promotion)