

Matteo Franzil

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PROFESSIONAL PROFILE

Skilled young researcher with experience in network management, monitoring, and security. Highly motivated and resourceful, is capable of working independently with minimal supervision and in a team. Works well under pressure, and excels at time management and task prioritization. Capable of handling both research and development tasks, with a passion for learning and problem solving.

RESEARCH INTERESTS AND KNOWLEDGE AREAS

- Network Monitoring and Observability
- Virtualization and Containerization
- Edge and Cloud Infrastructures
- Cloud Orchestration
- Cyber and Network Security
- Software-Defined Networking
- Machine and Deep Learning
- Service and Network Management

EXPERIENCE

- **Researcher** Mar 2022 — ongoing
Fondazione Bruno Kessler Trento (TN)
 - **Researcher** (Nov 2023 — Oct 2024)
 - **Junior Researcher** (Nov 2022 — Oct 2023)
 - **Intern** (Mar 2022 — Jul 2022)
Research internship on efficient real-time telemetry solutions for end-host and edge networks.
- **Teaching Assistant** Oct 2020 — Sep 2024
University of Trento Trento (TN)
 - **Teaching Assistant** (Mar 2023 — Sep 2024)
Exam management and exercise lecturing for the *Probability* (undergraduate) and *Programming 1* (undergraduate, imperative programming) courses. Guest lecturer for the *Fog and Cloud Computing* course (graduate).
 - **Class Tutor** (Oct 2020 — Jun 2022)
Exercise lecturing, hands-on exam preparation and dedicated student support for the *Programming 1* and *Probability* courses.

EDUCATION

- **Master's Degree in Computer Science** Sep 2020 — Oct 2022
University of Trento Trento (TN)
 - Systems and Networks, Cloud Computing, Cyber Security
 - Mark: 110L/110
- **Bachelor's Degree in Computer Science** Sep 2017 — Lug 2020
University of Trento Trento (TN)

LANGUAGES

- **Italian** Mother tongue
- **English** Cambridge Level 3 Certificate — C2
- **French** A2
- **Spanish** A2

WORKS

- **Exploiting Kubernetes Image Pull for Denying Availability of Clusters** Oct 2023
To be published
Keywords: Kubernetes, APIs, Denial-of-Service attacks, containerd
- **Real-Time Monitoring of the QUIC Protocol** Oct 2022
Master's Degree Thesis
Keywords: QUIC, programmable data planes, eBPF, XDP, software-defined networks, end-host monitoring
- **Configuration of threat protection systems for the enterprise** Jul 2020
Bachelor's Degree Thesis
Keywords: Honey pots, threat protection, virtualization, data collection

PROJECTS

- **FLUIDOS: Flexible, scaLable and secUre decentralIzed Operating System** May 2023 — ongoing
Task Leader of T6.3, “Cost-effective and energy-aware infrastructure”.
Exploration of machine learning techniques for predicting energy demand of edge computing tasks.
<https://cordis.europa.eu/project/id/101070473>
- **Fast and Scalable Shortest Path Recovery for Multi-Domain Segment Routing Networks** Nov 2022 — Mar 2023
Efficient shortest path recovery algorithms for Segment Routing deployments
Project funded by Cisco Systems Inc.

TECHNICAL SKILLS

Network and system administration

Linux network stack, Bash scripting and automation

Virtualization and cloud

Docker, Kubernetes

Azure, Google Cloud Platform, AWS

OpenStack, Hyper-V, VMWare, Proxmox, KVM

Cyber Security

Metasploit, Nmap, Wireshark, OpenVAS, Nessus

Fortinet/FortiOS, Juniper, Cisco platforms

Development

Python: NetworkX, OpenCV,

Numpy, TensorFlow, Keras

HTML, CSS, JavaScript

Python-, Java-, PHP- and JS-based frameworks

Other

LaTeX typesetting

SQL (Postgres, MySQL)

Rust, Lua, Go, R, C, C++

OTHER SKILLS

Multimedia skills

Photography, photo editing, graphics design, video production

Miscellaneous

Event management and organization, computer building, systems management and maintainance

FINAL REMARKS

Acconsento alla pubblicazione del mio CV in ottemperanza alle disposizioni di legge dettate in materia di trasparenza (D.Lgs. 33/2013).

Trento, 9 aprile 2024