# SIMONE MAGNANI

**PhD Student,** He/Him, Italian

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## EDUCATION

Ph.D. in Cybersecurity and Reliable Artificial Intelligence
**Università di Genova - Fondazione Bruno Kessler**
Nov 2020 – ongoing

M.Sc. in Computer Engineering
**Politecnico di Torino**
Oct. 2018 – Oct. 2020, 110/110 cum laude
Opportunistic Traffic Monitoring with eBPF

B.Sc. in Computer Science and Engineering
**Università di Bologna**
Sept 2015 – Oct 2018, 110/110
Analisi delle Prestazioni del Linux Kernel Runtime Guardian

## PUBLICATIONS

### Journal Articles

- Magnani, S., Risso, F., & Siracusa, D. (2022). A Control Plane Enabling Automated and Fully Adaptive Network Traffic Monitoring With eBPF. *IEEE Access*, *10*, 90778–90791. s41m0n/opportunistic_monitoring .

### Conference Proceedings

- Magnani, S., Doriguzzi-Corìn, R., & Siracusa, D. (2023). Enhancing Network Intrusion Detection: An Online Methodology for Performance Analysis. In *2023 IEEE 8th International Conference on Network Softwarization*. s41m0n/enid .
- Doriguzzi-Corin, R., Cretti, S., Catena, T., Magnani, S., & Siracusa, D. (2022). Towards Application-Aware Provisioning of Security Services with Kubernetes. In *2022 IEEE 8th International Conference on Network Softwarization*. smagnani/seccont .

## CERTIFICATIONS

Unboxing Open Networking (R2O-UON)
**route2open** April 2023 311E863-302CCD3-82C69

SONiC Introduction (R2O-SON-BRC-SA-R1-M1-E1)
**route2open** April 2023 3223AEC-31284A3-82C69

Initial SONiC Setup (R2O-SON-BRC-SA-R1-M2-E1)
**route2open** April 2023 3223AEC-3128639-82C69

Introducing the CLI interface and Interface Configuration (R20-SON-BRC-SA-R1-M3-E1)
**route2open** April 2023 3223AEC-312D19B-82C69

Redundancy Methods (R20-SON-BRC-SA-R1-M4-E1)
**route2open** April 2023 3223AEC-330E2DB-82C69

Routing Protocols in SONiC (R2O-SON-BRC-SA-R1-M5-E1)
**route2open** May 2023 3223AEC-33094BE-82C69

Writing in the Sciences
**Coursera** September 2021 A4HSDP4CSN7T

Inclusive Leadership: The Power of Workplace Diversity

## LANGUAGES

**Italian**
Mother tongue

**English**
Ielts: 7.0 (C1)

## STRENGTHS

Linux | eBPF | Kubernetes | Docker | Go | Python | C

Open Source | Cybersecurity | Engineering | Machine Learning

Commitment | Team Player | Resilient | Problem-Solving | Reliable | Humorous | Positive

## REFEREES

**Prof. Fulvio Risso**
Politecnico di Torino
fulvio.risso@polito.it

**Dr. Domenico Siracusa**
Fondazione Bruno Kessler
dsiracusa@fbk.eu

## EXPERIENCE

Research Fellow, (Internship)
**IBM** June-Aug, 2023

Development of Federated Learning algorithms in heterogeneous environments for cyberattack detection.

Research Fellow,
**Netgroup** June-Aug, 2020
s41m0n/eBPF_TrafficAnalyzer
Creation of network monitoring probes for cyberattack detection.

Software Developer, (Internship)
**Yoroy S.R.L.** Oct-Dec, 2017
s41m0n/PassiveInformationGatherer
Development of a passive information gatherer system.

**Coursera** May 2021 K8FHS87382AX

Neural Networks and Deep Learning

**Coursera** March 2021 2RFVA8FJWV2B

Improving Deep Neural Networks

**Coursera** November 2021 BBAYS7QCV8ZA

Problem Solving (Intermediate)

**HackerRank** November 2022 24a55d35cc73

Rest API (Intermediate)

**HackerRank** November 2022 de9e70054629

Go (Intermediate)

**HackerRank** November 2022 e3f782b2c4d5

JavaScript (Intermediate)

**HackerRank** November 2022 cbcfdae14807

Python (Basic)

**HackerRank** November 2022 e113b64e516c

Java (Basic)

**HackerRank** November 2022 8a5a415a7001

Node (Basic)

**HackerRank** November 2022 fbb8a69ce6a8

## OPEN SOURCE CONTRIBUTIONS

BCC, a toolkit for creating efficient kernel tracing and manipulation programs

**IOVisor** 2020

iovisor/bcc

Support of new kernel primitives.

CrownLabs, Kubernetes-based Remote Laboratories

**Netgroup** 2020

netgroup-polito/CrownLabs

Enabled K8S APIs for interacting with a cluster from a website.

Polycube, build fast and lightweight network functions

**Netgroup** 2019-20

polycube-network/polycube

Support for dynamic network traffic monitoring and data export.

Kubernetes on Desktop, run user applications in a remote cluster

**Netgroup** 2019-20

netgroup-polito/KubernetesOnDesktop

Support for offloading user applications to a remote K8S cluster.