

# SIMONE MAGNANI

PhD Student, He/Him, Italian

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🔗 z-vCD5QAAAAJ

👤 s41m0n  
📍 Turin, Italy



## 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., Braghin, S., Rawat, A., Doriguzzi-Corin, R., Purcell, M., & Siracusa, D. (2023). Pruning federated learning models for anomaly detection in resource-constrained environments. In *2023 IEEE International Conference on Big Data (BigData)* (pp. 3274-3283). 🔗 s41m0n/intellect
- Magnani, S., Doriguzzi-Corin, 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 (R2O-SON-BRC-SA-R1-M3-E1)

🏢 route2open 📅 April 2023 🔗 3223AEC-312D19B-82C69

Redundancy Methods (R2O-SON-BRC-SA-R1-M4-E1)

🏢 route2open 📅 April 2023 🔗 3223AEC-330E2DB-82C69

Routing Protocols in SONiC (R2O-SON-BRC-SA-R1-M5-E1)

## 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.

 **route2open** 📅 May 2023

Writing in the Sciences

 **Coursera** 📅 September 2021

Inclusive Leadership: The Power of Workplace Diversity

 **Coursera** 📅 May 2021

Neural Networks and Deep Learning

 **Coursera** 📅 March 2021

Improving Deep Neural Networks

 **Coursera** 📅 November 2021

Problem Solving (Intermediate)

 **HackerRank** 📅 November 2022

Rest API (Intermediate)

 **HackerRank** 📅 November 2022

Go (Intermediate)

 **HackerRank** 📅 November 2022

JavaScript (Intermediate)

 **HackerRank** 📅 November 2022

Python (Basic)

 **HackerRank** 📅 November 2022

Java (Basic)

 **HackerRank** 📅 November 2022

Node (Basic)

 **HackerRank** 📅 November 2022

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 A4HSDP4CSN7T

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 2RFVA8FJWV2B

 BBAYS7QCV8ZA

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## 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.