



WORK EXPERIENCE

ASSISTANT PROFESSOR – UNIVERSITY CAMPUS BIO-MEDICO OF ROME – 02/2025 – Current – ROME, ITALY

- Professor for the course "Cyber Security for Biomedical Systems" - Master's Degree in Biomedical Engineering(LM-21) at Campus Bio-Medico University of Rome – 5 ECTS.
- Professor for the course "Fundamentals of Cyber Security" - Bachelor's Degree in Industrial Engineering (L-9) at Campus Bio-Medico University of Rome – 2 ECTS.
- Professor for the course "Dynamics and Control for Chemical Processes" - Master's Degree in Chemical Engineering for Sustainable Development (LM-22) at Campus Bio-Medico University of Rome - 2 ECTS.
- Professor for the course "Smart Systems" - Master's Degree in Intelligent Systems Engineering (LM-32) at Campus Bio-Medico University of Rome – 2 ECTS.
- Professor for the course "Digital Twins for Control, Automation, and Predictive Maintenance" - Master's Degree in Intelligent Systems Engineering (LM-32) at Campus Bio-Medico University of Rome – 1 ECTS • Lecturer in the First-Level Master's Program in Cyber Security Management

POSTDOCTORAL RESEARCHER – UNIVERSITY CAMPUS BIO-MEDICO OF ROME – 12/2023 – 01/2025 – ROME, ITALY

CONTRACT PROFESSOR – LUISS GUIDO CARLI UNIVERSITY – 02/2022 – 09/2025 – ROME, ITALY

- Contract Professor for the course "Data Privacy and Security": 6 ECTS at Master's degree in "Data Science and Management"
- Contract professor for the course Academic Gym - Loft "CISCO Cybersecurity"
- Member of the Graduation Commission of Department of Business and Management
- Cisco Networking Netacad Instructor

UNIVERSITY TEACHING ASSISTANT – UNIVERSITY CAMPUS BIO-MEDICO OF ROME – 03/2021 – 01/2025 – ROME, ITALY

Teaching assistant for the following courses:

- Ethical hacking: 6 ECTS at Master's degree in "Intelligent Systems Engineering"
- Cyber Security for Operational Technologies: 6 ECTS at Master's degree in "Biomedical Engineering"
- Cyber Security: 6 ECTS at Master's degree in "Intelligent Systems Engineering"
- Dynamics and Control of Chemical Processes: 6 ECTS at Master's degree in "Chemical Engineering for Sustainable Development"
- Smart Systems: 6 ECTS at Master's degree in "Biomedical Engineering"
- Automatic Control: 6 ECTS at Master's degree in "Intelligent Systems Engineering"
- Fundamentals of Automation: 9 ECTS at Bachelor's degree in "Industrial Engineering"
- Official instructor at the "CyberChallenge.IT" promoted by CINI

ACCADEMIA DI CYBERSICUREZZA LAZIO (ACL) – ROME, ITALY

CONTRACT PROFESSOR – 10/2023 – 01/2024

Contract Professor for Web security, Network security, and IoT security courses

CONTRACT PROFESSOR – 10/2025 – 01/2026

Contract Professor for Web security, Network security, and Vulnerability Assessment

PHD STUDENT – UNIVERSITY CAMPUS BIO-MEDICO OF ROME – 11/2020 – 11/2023 – ROME, ITALY

- The research project focuses on the study, development and design of solutions for the defence of OT systems against APT (Advanced Persistent Threat) attacks, improving the ability to identify anomalous behaviour.
- The goal is to create a hybrid Intrusion Response System (IRS) which can detect and react against physical, cyber and cyber-physical anomalies by providing effective responses in real time.

NITEL - CONSORZIO NAZIONALE INTERUNIVERSITARIO PER I TRASPORTI E LA LOGISTICA – ROME, ITALY

OT CYBER-SECURITY EXPERT – 08/11/2023 – 30/11/2023

Penetration testing and vulnerability assessment activities at Unem (Unione Energie per la Mobilità)

[Verbale-conferimento-incarico-del-06.11.2023-Bando-160-del-30.10.2023.pdf](#)

OT CYBER-SECURITY EXPERT – 11/2024 – 11/2024

Penetration testing and vulnerability assessment activities at Carmagnani.

[Verbale-conferimento-incarico-del-18.10.2024-Bando-167-del-11.10.2024.pdf](#)

VISITING RESEARCHER – SUPSI - SCUOLA UNIVERSITARIA PROFESSIONALE DELLA SVIZZERA ITALIANA – 01/2023 – 03/2023 – LUGANO, SWITZERLAND

IT AUDITOR – ENEL GLOBAL SERVICES SRL – 04/2022 – 09/2022 – ROME, ITALY

Cyber security internal auditor

- Risk analysis of IT business processes.
- Review of processes, organizational structures and support systems through ad hoc analysis of documents or massive data analysis with the support of IT tools.
- Identification of key controls for the containment of events that may compromise the achievement of the business objectives and the compliance with laws and regulations.
- Drafting of summary notes with the results of the analyses and/or performed activities.

CONTRACT PROFESSOR – ROMA TRE UNIVERSITY – 09/2021 – 09/2021

Professor at the second level Master “La Cybersecurity per la protezione dei sistemi di controllo nell’industria 4.0 e nelle infrastrutture critiche”

Title of the lesson: “Cybersecurity per Operational Technologies (OT): Firewall, IDS, IPS, Snort”

UNIVERSITY RESEARCH ASSISTANT – UNIVERSITY CAMPUS BIO-MEDICO OF ROME – 05/2018 – 11/2020 – ROME, ITALY

- Study of the state of the art about IT security in the industrial sector.
- Implementation of cyber-attacks against a water testbed using Kali Linux.
- Study of possible defence strategies by means of Intrusion Detection System (IDS) and / or Intrusion Prevention System (IPS) software such as Snort or Suricata and machine learning algorithms.
- Virtual extension of water testbed for real-time simulation of Cyber-Physical systems through the MiniCPS software.

EDUCATION AND TRAINING

12/2020 – 04/2024 Rome, Italy

PHD IN CYBER-SECURITY FOR OPERATIONAL TECHNOLOGIES University Campus Bio-Medico of Rome

Website www.unicampus.it 11/2018 –

11/2020 Rome, Italy

MASTER'S DEGREE IN BIOMEDICAL ENGINEERING- 110/110 CUM LAUDE AND HONOUR MENTION FOR THE ACADEMIC CAREER University Campus Bio-Medico of Rome

Website www.unicampus.it

10/2015 – 07/2018 Rome, Italy

BACHELOR'S DEGREE IN INDUSTRIAL ENGINEERING - 110/110 CUM LAUDE AND HONOUR MENTION FOR THE ACADEMIC CAREER University Campus Bio-Medico of Rome

Website www.unicampus.it 09/2010 –

07/2015 Rome, Italy

SCIENTIFIC HIGH SCHOOL DIPLOMA - 100/100 CUM LAUDE San Giuseppe Del Caburlotto

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN** Other

language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PUBLICATIONS

2026

[Emergent risks in complex systems: A bayesian perspective on uncertainty and prediction](#)

Vairo, S. Guarino, A. Benvenuto, B. Fabiano, and R. Setola, Reliability Engineering System Safety, vol. 270, p. 112 129, 2026 2026

[Hybrid knowledge-based decision support system for intrusion response in industrial cyber-physical systems](#)

S. Guarino, L. Faramondi, G. Oliva, E. Del Prete, F. Flammini, and R. Setola, Future Generation Computer Systems, vol. 179, p. 108 306, 2026 2025

[D-tv-dbn: A hierarchical and distributed architecture for scalable cyber-physical anomaly detection with bayesian networks](#)

S. Guarino, F. Vitale, E. D. Prete, L. Faramondi, N. Mazzocca, and R. Setola, IEEE Transactions on Emerging Topics in Computing, pp. 1–12, 2025

2025

[Process mining for digital twin development of industrial cyber-physical systems](#)

F. Vitale, S. Guarino, F. Flammini, L. Faramondi, N. Mazzocca, and R. Setola, IEEE Transactions on Industrial Informatics, vol. 21, no. 1, pp. 866–875, 2025 2025

[Multiple-bayesian-network-based risk assessment methodology for industrial control systems](#)

S. Guarino, S. Ansaldi, and R. Setola, Critical Infrastructure Protection XVIII, J. Staggs and S. Sheno, Eds., Cham: Springer Nature Switzerland, 2025, pp. 113–130

2025

[Vulnerability assessment combining cvss temporal metrics and bayesian networks](#)

S. Perone, S. Guarino, L. Faramondi, and R. Setola, IEEE International Conference on Cyber Security and Resilience (CSR), 2025, pp. 606–611.

2024

ZADIG: A novel Extended Detection and Response System

IEEE CSR conference, London, United Kingdom, 2024, pp. 688-693

2024

Cybersecurity for Safety: Risk Assessment of Autonomous Cyber-Physical Systems

IEEE CSR conference, London, United Kingdom, 2024, pp. 652-657

2024

Uncertain analytic hierarchy process for risk assessment in cyber-physical systems

M. Nobili, S. Guarino, L. Faramondi, G. Oliva, E. Del Prete, and R. Setola, International Conference on Critical Information Infrastructures Security, Springer, 2024, pp. 418–433.

2024

Holistic Risk Assessment in Industrial Control Systems: Combining Multiple Bayesian Networks with Multi-Criteria Decision Making

MED Conference, Chania - Crete, Greece, 2024, pp. 37-42; S. Guarino, L. Faramondi et al.

2023

A Two-Level Fusion Framework for Cyber-Physical Anomaly Detection

IEEE TICPS; S. Guarino, F. Vitale, F. Flammini, L. Faramondi, N. Mazzocca and R. Setola

2023

A hybrid behavior- and Bayesian network-based framework for cyber–physical anomaly detection

Computers and Electrical Engineering; L. Faramondi, F. Flammini, S. Guarino and R. Setola

2023

A Recovery Model for Faulty Networked System

IEEE Systems Journal; L. Faramondi, S. Guarino, G. Oliva and R. Setola

2023

A Spatial Decision Support System for Prioritizing Repair Interventions on Power Networks

IEEE Access, vol. 11, pp. 34616-34629; S. Guarino, G. Oliva, A. D. Pietro, M. Pollino and V. Rosato

2023

Quantifying how a zone is residential: A Multi-Criteria Decision Making approach

GEOmedia; S. Guarino, C. Fioravanti, G. Oliva, R. Setola, G. DeAngelis and M. Coradini

2023

Evaluating Machine Learning Approaches for Cyber and Physical Anomalies in SCADA Systems

IEEE CSR Conference, pp. 412-417; L. Faramondi, F. Flammini, S. Guarino and R. Setola

2023

DRIVERS: A platform for dynamic risk assessment of emergent cyber threats for industrial control systems

MED Conference, Limassol, Cyprus, 2023, pp. 395-400; M. Nobili, C. Fioravanti, S. Guarino, et al.

2022

A Hardware-in-the-Loop Water Distribution Testbed Dataset for Cyber-Physical Security Testing

IEEE Access, vol. 9, pp. 122385-122396; L. Faramondi, F. Flammini, S. Guarino and R. Setola

2022

Identifying Residential Areas based on Open Source Data: a Multi-Criteria Holistic Indicator to Optimize Resource Allocation During a Pandemic

CRITIS Conference; L. Faramondi, S. Guarino, R. Setola and G.Oliva

2022

Configuration vulnerability in SNORT for Windows operating systems

IEEE CSR Conference, pp. 82-89; L. Faramondi, M. Grassi, S. Guarino, R. Setola and C. Alcaraz

2022

A Risk Assessment Framework for Critical Infrastructure Based on the Analytic Hierarchy Process

IFAC-PapersOnLine, Volume 55, Issue 40, Pages 277-28; C. Fioravanti, S. Guarino, et al.

2020

Anomaly and Attack Detection in Supervisory Control Networks for Cyber-Physical Systems

ESREL Conference; E. Del Prete, F. Pera, L. Faramondi, C. Fioravanti, S. Guarino, et al.

2020

New Perspectives on Wearable Devices and Electronic Health Record Systems

MetroInd4.0&IoT; G. Assenza, C. Fioravanti, S. Guarino, V. Petrassi

2019

A Wearable Platform to Identify Workers Unsafety Situations

IEEE MetroInd4.0&IoT; L. Faramondi, C. Fioravanti, S. Guarino et al.

2019

A Privacy-Oriented Solution for the Improvement of Workers Safety

PROJECTS

2026 – CURRENT

Pipeline Integrity Protection & Embrittlement Sensing Hardware for Internal Evaluation and Leak Detection

Scientific supervisor of the BRIC INAIL ID20-2025 project.

10/2024 – 06/2025

Distributed Content Security (DCS)

Scientific supervisor of the project "Distributed Content Security (DCS)" funded by Competence Center Cyber4.0.

2023 – 2024

Drivers: Combined Data-driven and Experience-driven Approach to Systemic Risk Analysis

Competitive grant BRIC INAIL ID03-2021.

2022 – 2025

Industrial Cyber Shield (ICS)

Competitive grant BRIC INAIL ID44-2022.

2021 – 2025

eUMaP

Marie Skłodowska-Curie Actions (MSCA) Research and Innovation Staff Exchange (RISE) H2020-MSCA-RISE-2020 (Project Number: 101007641). 2018 – 2021

Rafael - System for Risk Prediction and Management for Critical Infrastructures in Southern Italy

Competitive grant ARS01_00305 co-financed by the Ministry of University and Research under the PON "Research and Innovation" 2014-2020 and FSC as per D.D. notice of July 13, 2017, no. 1735 – Application ARS01_00305 specialization area "Smart Secure & Inclusive Communities"

2018 – 2019

Smartbench

Competitive grant BRIC INAIL ID15-2016

CONFERENCES AND SEMINARS

05/09/2022 – 08/09/2022 Leuven, Belgium

Summer School on Security and Privacy in the (golden) Age of AI

03/06/2020 – 09/06/2020 Lucca, Italy **Model**

Predictive Control

HONOURS AND AWARDS

26/09/2025

ERCIM STM WG 2025 Award for the Best Ph.D. Thesis on Security and Trust Management – 30th European Symposium On Research in Computer Security (ESORICS 2025)

[ERCIM Working group](#) 07/2023

Best Innovation Paper Award – IEEE International Conference on Cyber Security and Resilience, Venice- Italy

Write Winner article: “Evaluating Machine Learning Approaches for Cyber and Physical Anomalies in SCADA Systems”

09/2022

Young CRITIS Award – CRITIS Conference 2022, Universität der Bundeswehr München

Winner article: “Identifying Residential Areas based on Open Source Data: a Multi-Criteria Holistic Indicator to Optimize Resource Allocation During a Pandemic”

11/2016

Elected as the best student of the Faculty of Industrial Engineering for the A.Y. 2015/2016. – University Campus Bio-Medico of Rome

QUALIFICATIONS

06/2021 – CURRENT

Italian qualification to exercise the profession of engineer - Section A

Acconsento al trattamento dei miei dati secondo la normativa vigente per gli usi di pubblica amministrazione.

Simone GUARINO

Firma autografa omessa ai sensi dell'art. 3 del D.Lgs. 39/1993.

09/02/2026