

PERSONAL INFORMATION

Guido Marchetto



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✉ guido.marchetto@polito.it

🌐 <http://netgroup.polito.it/post/profiles/gm/>

Sex Male | Date of birth OMISSIS Nationality Italian

| Enterprise | University | EPR |
|--|--|---|
| <input type="checkbox"/> Management Level | <input checked="" type="checkbox"/> Full professor | <input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist |
| <input type="checkbox"/> Mid-Management Level | <input type="checkbox"/> Associate Professor | <input type="checkbox"/> Level III Researcher and Technologist |
| <input type="checkbox"/> Employee / worker level | <input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator | <input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator |

WORK EXPERIENCE

April 2024 - now

Full Professor

Computer and Control Engineering Department – Politecnico di Torino, Italy

- Research: Distributed systems, policy verification, network security and privacy.
- Teaching: Graduate and undergraduate courses on computer networks
- Administrative duties (main): Vice-coordinator of the PhD Program in Computer and Control Engineering (since October 2021), elected member of the Department Council (since February 2018)

Education and research

November 2019 - now

Scientific Responsible of the HPC infrastructure

Politecnico di Torino, Italy

- Planning and management of the High Performance Computing (HPC) facilities available at Politecnico di Torino for internal and external researchers

Education and research

October 2021 - now

Operating Project Manager

Politecnico di Torino, Italy – Turin Tashkent Polytechnic University (TTPU), Uzbekistan

- Management of all teaching, research, and technology transfer activities at TTPU, within the Partnership Agreement on the Academic Cooperation for Institutional Development between Politecnico di Torino and TTPU

Education and research

February 2018 – April 2024

Associate Professor

Computer and Control Engineering Department – Politecnico di Torino, Italy

- Research: Distributed systems, policy verification, network security and privacy.
- Teaching: Graduate and undergraduate courses on computer networks
- Administrative duties (main): Vice-coordinator of the PhD Program in Computer and Control Engineering (since October 2021), elected member of the Department Council (since February 2018)

Education and research

Arrivo: AOO CSI, N. Prot. 00014429 del 30/07/2024

101.v, 9.v, 1/2024A/CSI.fra, CSI.arm, 5.nd, 3.a

November 2011 – January 2018

Assistant Professor

Computer and Control Engineering Department – Politecnico di Torino, Italy

- Research: Distributed systems, Quality of Service provisioning, Cloud and Edge computing
- Teaching: Graduate and undergraduate courses on computer networks
- Administrative duties (main): Elected member of the Department Council (since February 2015)

Education and research

April 2008 – October 2011

Post doctoral Fellow

Computer and Control Engineering Department – Politecnico di Torino, Italy

- Research: Distributed systems, Quality of Service provisioning, P2P technologies

Education and research

September 2008 – April 2009

Visiting Scholar

Computer Science Department – Boston University, MA, USA

- Research: Distributed systems, P2P technologies

Education and Research**EDUCATION AND TRAINING**

January 2005 – April 2008

PhD in Computer and Control Engineering

Politecnico di Torino, Italy

September 1998 – April 2004

Master of Science's Degree in Telecommunications Engineering

Politecnico di Torino, Italy

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English – Proficient user (C1)

Job-related skills

- Good communication skills gained through more than 15 years of teaching and public speaking in academic and general public meetings
- Good coordination and leadership skills
 - Coordinator of the DESIRE (Distributed Learning for Resilient Virtual Network Management at Scale) project, funded by the European Commission, NGI Atlantic 4th open call, 2021
 - Principal Investigator of several research contracts with Italian and foreign companies (TIM SpA, PWT Engineering SpA, Tiesse SpA, Futurewei Technologies Inc.)
 - Coordinator of five PhD students and several MSc students

Digital skills

- *Operating systems*: Microsoft Windows, Linux, MacOS
- *Programming languages*: C, C++, Java, Python

ADDITIONAL INFORMATION

Publications **Relevant publications** (complete list available at <https://iris.polito.it/cris/rp/rp14731#.Yewhiy1h3FM>)
Journal publications

1. 2024. Angi, Antonino; Sacco, Alessio; Esposito, Flavio; Marchetto, Guido; Clemm, Alexander, Load Profiling via In-Band Flow Classification and P4 With Howdah, IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT, pp. 15, 2024, Vol. 21, ISSN: 1932-4537, DOI: 10.1109/TNSM.2023.3299729
2. 2023. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido, Completing and Predicting Internet Traffic

- Matrices Using Adversarial Autoencoders and Hidden Markov Models, IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT, pp. 15, 2023, Vol. 20, ISSN: 1932-4537, DOI: 10.1109/TNSM.2023.3270166
3. 2022. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido; Montuschi, Paolo, *A Self-Learning Strategy for Task Offloading in UAV Networks*, IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, pp. 11, 2022, Vol. 71, ISSN: 1939-9359, DOI: 10.1109/TVT.2022.3144654
 4. 2022. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido, *Restoring Application Traffic of Latency-Sensitive Networked Systems using Adversarial Autoencoders*, IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT, pp. 15, 2022, Vol. 19, ISSN: 1932-4537, DOI: 10.1109/TNSM.2022.3192305
 5. 2021. Marchetto, Guido; Sisto, Riccardo; Valenza, Fulvio; Yusupov, Jalolliddin; Ksentini, Adlen, *A Formal Approach to Verify Connectivity and Optimize VNF Placement in Industrial Networks*, IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS, pp. 11, 2021, Vol. 17, ISSN: 1551-3203, DOI: 10.1109/tii.2020.3002816
 6. 2021. Sacco, Alessio; Flocco, Matteo; Esposito, Flavio; Marchetto, Guido, *Supporting Sustainable Virtual Network Mutations with Mystique*, IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT, pp. 14, 2021, Vol. 18, ISSN: 1932-4537, DOI: 10.1109/TNSM.2021.3059647
 7. 2021. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido; Montuschi, Paolo, *Sustainable Task Offloading in UAV Networks via Multi-Agent Reinforcement Learning*, IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, pp. 13, 2021, Vol. 70, ISSN: 0018-9545, DOI: 10.1109/TVT.2021.3074304
 8. 2021. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido, *Resource Inference for Sustainable and Responsive Task Offloading in Challenged Edge Networks*, IEEE TRANSACTIONS ON GREEN COMMUNICATIONS AND NETWORKING, pp. 14, 2021, Vol. 5, ISSN: 2473-2400, DOI: 10.1109/TGCN.2021.3091812
 9. 2020. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido, *RoPE: An Architecture for Adaptive Data-Driven Routing Prediction at the Edge*, IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT, pp. 14, 2020, Vol. 17, ISSN: 1932-4537, DOI: 10.1109/TNSM.2020.2980899

Conference publications

10. 2021. Bringhenti, D.; Marchetto, G.; Sisto, R.; Valenza, F., *A novel approach for security function graph configuration and deployment*, In: IEEE International Conference on Network Softwarization (NetSoft 2021), Tokio, Japan, June 2021, pp. 7, ISBN: 978-1-6654-0522-5, DOI: 10.1109/NetSoft51509.2021.9492654
11. 2021. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido, *On Control and Data Plane Programmability for Data-Driven Networking*, In: IEEE International Conference on High-Performance Switching and Routing (HPSR 2021), Paris, France, June 2021, pp. 6, ISBN: 978-1-6654-4006-6, DOI: 10.1109/HPSR52026.2021.9481859
12. 2021. Sacco, Alessio; Flocco, Matteo; Esposito, Flavio; Marchetto, Guido, *Owl: Congestion Control with Partially Invisible Networks via Reinforcement Learning*, In: IEEE Conference on Computer Communications (INFOCOM 2021), Virtual Event 10-13 May 2021, pp. 10, 2021, ISBN: 978-1-6654-3131-6, DOI: 10.1109/INFOCOM42981.2021.9488851
13. 2020. Bringhenti, Daniele; Marchetto, Guido; Sisto, Riccardo; Valenza, Fulvio; Yusupov, Jalolliddin, *Introducing programmability and automation in the synthesis of virtual firewall rules*, In: International Workshop on Cyber-Security Threats, Trust and Privacy Management in Software-defined and Virtualized Infrastructures (SecSoft), co-located with 2020 6th IEEE Conference on Network Softwarization (NetSoft), Virtual Event, June 2020, pp. 6, ISBN: 978-1-7281-5684-2, DOI: 10.1109/NetSoft48620.2020.9165434
14. 2020. Bringhenti, Daniele; Marchetto, Guido; Sisto, Riccardo; Valenza, Fulvio, *Automatic Configuration for an Optimal Channel Protection in Virtualized Networks*, In: 2nd Workshop on Cyber-Security Arms Race (CYSARM), Virtual Event, November 2020, pp. 6, DOI: 10.1145/3411505.3418439
15. 2020. Bringhenti, D.; Marchetto, G.; Sisto, R.; Valenza, F.; Yusupov, J., *Automated optimal firewall orchestration and configuration in virtualized networks*, In: IEEE/IFIP Network Operations and Management Symposium (NOMS 2020), Virtual Event, April 2020, pp. 7, ISBN: 978-1-7281-4973-8, DOI: 10.1109/NOMS47738.2020.9110402
16. 2020. Sacco, Alessio; Esposito, Flavio; Marchetto, Guido, *Resource Inference for Task Migration in Challenged Edge Networks with RITMO*, In: IEEE International Conference on Cloud Networking (CloudNet 2020), Virtual Event, November 2020, pp. 7, ISBN: 978-1-7281-9486-8, DOI: 10.1109/CloudNet51028.2020.9335807
17. 2019. Tao, Xu; Flavio, Esposito; Sacco, Alessio; Marchetto, Guido, *A Policy-Based Architecture for Container Migration in Software Defined Infrastructures*, In: IEEE Conference on Network Softwarization (NetSoft 2019), Parigi June 2019, pp. 5, 2019, DOI: 10.1109/NETSOFT.2019.8806659
18. 2018. Marchetto, Guido; Sisto, Riccardo; Yusupov, Jalolliddin; Ksentini, Adlen, *Formally verified latency-aware VNF placement in industrial Internet of things*, In: IEEE International Workshop on Factory Communication Systems (WFCS 2018), Imperia, Italy, June 2018, pp. 9, ISBN: 9781538610664, DOI: 10.1109/WFCS.2018.8402355

Torino, July 23, 2024
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