Marco Savi

PhD

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Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del D.P.R. 445/2000.

Overview

Main Duties	- Research on *Computer Networking* and *Cloud Computing*
	- Research project management
	- Preparation of research project proposals (generation of $\sim$850 k€ in funding)
	- Teaching to BSc, MSc and PhD students (> 500 hours)

Research Topics
(from more to less recent)
- Serverless Computing/Function-as-a-Service in Distributed Networks
- Trustworthy and Distributed Machine-Learning-Based Network Intrusion Detection
- Network Monitoring with Programmable Data Planes
- Distributed Learning for Multi-access Edge Computing
- Resource Allocation in Fog Computing
- SDN-based Network Orchestration of IP/Optical Layers
- Resource Optimization in NFV and Service Function Chaining
- Energy-Efficient Content Caching in Fixed-Mobile Convergent Networks
- Privacy and Security in Smart Grids

Research Methods
- Optimization models (linear programming) and algorithms (heuristics)
- Network simulation and emulation
- Queuing theory
- Signal processing

Bibliometrics
- H-index: 19 (Google Scholar), 16 (Scopus)
- Number of citations: 1385 (Google Scholar), 985 (Scopus)

Academic Eligibility
Italian Scientific Qualification (ASN) for the role of Associate Professor:
- In Information Processing Systems, SSD: IINF-05/A, from 06/23 to 06/35
- In Computer Science, SSD: INFO-01/A, from 01/22 to 01/34
- In Telecommunications, SSD: IINF-03/A, from 06/21 to 06/33

Professional Experience

11/22-Now **University of Milano-Bicocca**, *Tenure-Track Assistant Professor (RTD-B, SSD: IINF-05/A)*, Milano, Italy
Department: Department of Informatics, Systems and Communication (DISCo)
Laboratory: Real-time Events and Decision Support (REDS) – Deputy Lab Head
Lab Head: Prof. Fabio Sartori

04/20-10/22 **University of Milano-Bicocca**, *Non-Tenured Assistant Professor (RTD-A, SSD: IINF-03/A)*, Milano, Italy
Department: Department of Informatics, Systems and Communication (DISCo)
Laboratory: Real-time Events and Decision Support (REDS)
Lab Head: Prof. Fabio Sartori

04/18-03/20 **Fondazione Bruno Kessler**, *Expert Researcher (SSD: IINF-05/A)*, Trento, Italy
Research Centers: FBK-ICT (01/20-03/20), FBK CREATE-NET (04/18-12/19)
Research Unit: Robust and Secure Distributed Computing (RiSING)
Research Unit Head: Prof. Domenico Siracusa

11/18 **University of Alcalá**, *Visiting Researcher*, Alcalá, Spain
(2 weeks) *Department:* Department of Automatics
Host Research Group: GIST-NetServ
Research Group Head: Prof. Juan Antonio Carral
Activities: Starting a new research collaboration on topics related to SDN

03/16-03/18 **Fondazione Bruno Kessler**, *Postdoc Researcher (SSD: IINF-05/A)*, Trento, Italy
Research Center: FBK CREATE-NET
Research Unit: Future Networks (FuN)
Research Unit Heads: Prof. Domenico Siracusa & Prof. Roberto Riggio

01/16-03/16 **Politecnico di Milano**, *Postdoc Researcher (SSD: IINF-03/A)*, Milano, Italy
Department: Department of Electronics, Information e Bioengineering (DEIB)
Laboratory: Broadband Optical Networks, Security and Advanced Internet (BONSAI)
Lab Head: Prof. Achille Pattavina

02/15-06/15 **University of Bergamo**, *Contract Professor (SSD: IINF-03/A)*, Bergamo, Italy
Activities: Teaching to BSc students

08/14-02/15 **University of Melbourne**, *Visiting Researcher*, Melbourne, Australia
Department: Department of Electrical and Electronic Engineering
Host Research Center: Centre for Energy-Efficient Telecommunication (CEET)
Research Center Director: Dr. Kerry Hinton
Activities: Research on energy efficiency in access/aggregation networks

Education

01/13-06/16 **Politecnico di Milano**, *Doctor of Philosophy (PhD)*, in Information Technology (SSD: IINF-03/A), Milano, Italy
Dissertation Title: Overcoming Performance, Cost and Energy Issues in Fixed and Mobile Convergent Networks
Supervisor: Prof. Giacomo Verticale
Grade Point: With merit

10/10-12/12 **Politecnico di Milano**, *Master of Science (MSc)*, in Telecommunications Engineering (Networking Area), Milano, Italy
Grade Point: 110/110 (summa cum laude)

09/07-07/10 **Politecnico di Milano**, *Bachelor of Science (BSc)*, in Telecommunications Engineering, Milano, Italy
Grade Point: 108/110

Teaching Experience

Teacher	**Telecommunication Systems and Services** (Graduate Course, 6 CFU) *Academic Years:* 21-22 (50 hours), 22-23 (40 hours), 23-24 (40 hours), 24-25 (40 hours) *University:* University of Milano-Bicocca, Milano, Italy *Role:* Responsible of the course
Teacher	**Networks and Operating Systems** (Undergraduate Course, 8 CFU) *Academic Years:* 22-23 (32 hours), 23-24 (52 hours), 24-25 (52 hours) *University:* University of Milano-Bicocca, Milano, Italy
Teacher	**Expert Systems and Network Architectures for Distributed Wearable Environments** (PhD Course, 2 CFU) *Academic Years:* 21-22 (11 hours), 23-24 (12 hours) *University:* University of Milano-Bicocca, Milano, Italy *Role:* Responsible of the course
Teacher	**Information Systems** (Graduate Course, 6 CFU) *Academic Years:* 20-21 (16 hours), 21-22 (16 hours) *University:* University of Milano-Bicocca, Milano, Italy
Teacher	**Multimedia Internet Networks** (Undergraduate Course, 6 CFU) *Academic Year:* 14-15 (48 hours) *University:* University of Bergamo, Bergamo, Italy *Role:* Responsible of the course
Teaching Assistant	**Foundations of Computer Science** (Undergraduate Course, 8 CFU) *Academic Year:* 22-23 (10 hours) *University:* University of Milano-Bicocca, Milano, Italy
Teaching Assistant	**Telecommunication Systems and Services** (Graduate Course, 6 CFU) *Academic Year:* 20-21 (10 hours) *University:* University of Milano-Bicocca, Milano, Italy
Teaching Assistant	**Databases** (Undergraduate Course, 8 CFU) *Academic Years:* 19-20 (20 hours), 20-21 (20 hours) *University:* University of Milano-Bicocca, Milano, Italy
Teaching Assistant	**Multimedia Internet Networks** (Undergraduate Course, 6 CFU) *Academic Year:* 16-17 (16 hours) *University:* University of Bergamo, Bergamo, Italy
Teaching Assistant	**Telecommunication Networks** (Undergraduate Course, 9 CFU) *Academic Year:* 13-14 (24 hours) *University:* University of Bergamo, Bergamo, Italy
Teaching Assistant	**Networking Software Platforms** (Undergraduate Course, 5 CFU) *Academic Years:* 12-13 (6 hours), 13-14 (6 hours) *University:* Politecnico di Milano, Milano, Italy
Lab Assistant	**Telecommunication Networks and Internet** (Undergraduate Course, 10 CFU) *Academic Year:* 13-14 (20 hours) *University:* Politecnico di Milano, Milano, Italy

Roles and Academic Services

03/23-Now **Member of the Steering Committee (*Giunta*) of the National Inter-University Consortium for Telecommunications (CNIT)'s Scientific Board**
Body description: The Steering Committee of the CNIT's Scientific Board (*Consiglio Scientifico*) is composed of four elected members of the Scientific Board
Role: Assisting the President in the definition of strategies to strengthen the development of CNIT's scientific activities; involvement in CNIT's strategy definition for VQR 2020-2024 (Evaluation of Quality of Research)

10/22-Now **Director of Research Unit at CNIT**
Research Unit: University of Milano-Bicocca, Milano, Italy
Additional and Related Role: Member of the CNIT's Scientific Board

12/20-Now **Member of the Italian Academic Board of the PhD in Computer Science**
University: University of Milano-Bicocca, Milano, Italy
PhD Cycles: XXXVII, XXXIX, XL, XLI (planned)

10/21-Now **Information Engineer**
Association: Order of Engineers of the Province of Milano, Italy
Registration number: 32877

01/23-Now **Member of the DISCo's Timetable Commission**
University: University of Milano-Bicocca, Milano, Italy
Duty: Definition of the timetable and rooms for the lessons of the BSc and MSc Degrees offered by the DISCo Department

Research and Innovation Projects

Responsibilities in Projects

03/24-12/25 **WatchEDGE** (Wide-area Agile and Flying Network Arcvitecture for AI-surveillance Processing at the Edge), with *University of Milano-Bicocca*
Details: 3-years focused project of the PNRR RESTART programme
Funding agency: Italian Ministry of University and Research (MUR)
Role: WatchEDGE/A1 Task Leader (project joined through Cascade Call)

12/23-11/25 **SHIELDED** (Secure, Trustworthy, and Efficient Federated Learning for Intrusion Detection at the Edge), with *University of Milano-Bicocca*
Details: 2-years PRIN 2022 PNRR project
Funding agency: Italian Ministry of University and Research (MUR)
Role: Responsible of Research Unit and Deputy Project Coordinator

01/23-12/27 **ReGAInS** (Reducing the Gap between Artificial Intelligence and Society), with *University of Milano-Bicocca*
Details: "Excellence Department" project of the DISCo Department
Funding agency: Italian Ministry of University and Research (MUR)
Role: Referent for Activity 3 (Development of architectures for the analysis of big data volumes) of Objective 2 (Sustainable AI development)

01/19-12/22 **GÉANT GN4-3**, with *Fondazione Bruno Kessler*
Details: 4-years H2020 project
Funding agency: European Commission
Role: Responsible and coordinator of FBK's research activities with respect to Work Package 6-Task 1, as subcontractor of GARR Consortium
Deliverables: Author of D6.3, D6.5 (technical)

07/18-06/21 **DECENTER** (Decentralized Technologies for Orchestrated Cloud-to-Edge Intelligence), with *Fondazione Bruno Kessler*
Details: 3-years European/Korean H2020/IITP project
Funding agency: European Commission and Korean Government
Role: Work Package 3 Leader and EU Deputy Project Coordinator
Deliverables: Editor of D3.1 (technical) and of D7.1-8 (ethics requirements), author of D2.1, D3.2 (technical) and D1.2, D1.3 (management)

01/18-12/21 **5G Experimentation in the City of Prato (Italy)**, with *Fondazione Bruno Kessler*
Details: 4-years project supported by Italian Ministry of Economic Development (MISE)
Role: Responsible and coordinator of FBK's activities on SDN aspects
Reporting: Writing of the required documentation

Participation in Projects

01/22-07/22 **Assessment of the Communication Network of an Italian Hospital**, with *University of Milano-Bicocca*
Details: Project funded by a public administration
Role: Contribution to the definition of the methodology and to the assessment activity
Reporting: Contribution to the required documentation

02/15-01/18 **ACINO** (Application-Centric IP/optical Network Orchestration), with *Fondazione Bruno Kessler*
Details: 3-years H2020 project
Funding agency: European Commission
Role: Research on resource allocation in multi-layer IP/optical networks
Deliverables: Author of D2.2, D3.3, D3.4, D3.5 (technical), of D1.9 (management) and of D6.5 (dissemination)

01/13-09/16 **COMBO** (Convergence of Fixed and Mobile Broadband Access/aggregation Networks), with *Politecnico di Milano*
Details: 3-years FP7 project
Funding agency: European Commission
Role: Research on content caching aspects in fixed-mobile convergent networks
Deliverables: Author of D3.1, D4.1 (technical)

01/13-12/13 **Feasibility Study of Vectoring DSL Multi-DSLAM and G.Fast**, with *Politecnico di Milano*
Details: Project funded by a private company
Role: Definition and implementation of a model for Multi-DSLAM Vectoring
Reporting: Contribution to the required documentation

Grants and Awards

Research Grants

03/24-12/25 **WatchEDGE** Project, funded by Italian Ministry of University and Research under PNRR RESTART's Spoke 8 Cascade Call
Grant: **80 k€** to University of Milano-Bicocca
Role: Team leader and responsible of proposal writing (name: SPRINT) for the University of Milano-Bicocca's Research Unit

12/23-11/25 **SHIELDED** Project, funded by Italian Ministry of University and Research under PRIN 2022 PNRR call
Grant: **87 k€** to University of Milano-Bicocca
Role: Team leader and responsible of proposal writing for the University of Milano-Bicocca's Research Unit

09/23-09/25 **EDWARD** Project, individual project funded by University of Milano-Bicocca under Fondo di Ateneo Quota Competitiva (FAQC) call
Grant: **13.4 k€**
Role: Team leader and responsible of proposal writing

07/18-06/21 **DECENTER** Project, funded by the European Commission (H2020)
Grant: **650.5 k€** to Fondazione Bruno Kessler
Role: Member of the FBK's team (together with Prof. Domenico Siracusa and Mr. Raffaele Giaffreda) leading and coordinating the proposal writing

01/19-12/22 **GN4-3** Project, funded by the European Commission (H2020)
Role: Member of the FBK's team (together with Prof. Domenico Siracusa) participating to the proposal writing, as subcontractor of GARR Consortium

Best Paper Awards

ESOCC 2025 11th European Conference on Service-Oriented and Cloud Computing (ESOCC)
Paper: "ML-Based Performance Modeling in Edge FaaS Systems"

CNOM 2022 IEEE ComSoc Technical Committee on Network Operation and Management (CNOM) Best Paper Award 2022
Paper: "Estimating Logarithmic and Exponential Functions to Track Network Traffic Entropy in P4"

RNDM 2016 8th International Workshop on Resilent Network Design and Modelling (RNDM)
Paper: "Virtual Network Function Placement For Resilient Service Chain Provisioning"

Research Awards

YTA 2023 Young Talents Award 2023 (1st Prize, **5 k€** of Research Grant)
Issuer: University of Milano-Bicocca, Milano, Italy
Patron: Accademia Nazionale dei Lincei
Macro-area: Mathematics, Computer Science, Industrial and Information Engineering

YTA 2021 Young Talents Award 2021 (3rd Prize, **1 k€** of Research Grant)
Issuer: University of Milano-Bicocca, Milano, Italy
Patron: Accademia Nazionale dei Lincei
Macro-area: Mathematics, Computer Science, Industrial and Information Engineering

Travel Grants

CoNext 2020   Travel Grant. Online conference (due to COVID-19 emergency): the Grant eventually only covered the Registration fee.

Supervision, Tutoring and Evaluation

Supervisor/Co-supervisor of PhD Students

11/24-Now   *Emanuele Petriglia*, Load Distribution Methods for Decentralized Function-as-a-Service, University of Milano-Bicocca (supervisor)

01/22-12/24   *Jacopo Talpini*, Uncertainty Quantification and Distributed Models to Enhance ML-based Network Security, University of Milano-Bicocca (co-supervisor)

11/17-10/21   *Damu Ding*, Design and Development of Network Monitoring Strategies in P4-enabled Programmable Switches, Fondazione Bruno Kessler/University of Bologna (co-supervisor)

Partial Co-supervisor of PhD Students (not as formal (co-)supervisor)

11/18-10/21   *Francescomaria Faticanti*, Strategic Allocation of Resources in Highly Distributed and Heterogeneous Computing and Information Systems under Concurrency and Multitenancy, Fondazione Bruno Kessler/University of Trento

11/17-10/20   *Roberto Doriguzzi Corin*, Methods and Techniques for Dynamic Deployability of Software-Defined Security Services, Fondazione Bruno Kessler /University of Bologna

11/15-10/18   *Antonio Marsico*, Enabling Novel Interactions between Applications and Software-Defined Networks, Fondazione Bruno Kessler/University of Trento

11/15-10/18   *Ali Hmaity*, Reliability Strategies for Next Generation Cloud Networks, Politecnico di Milano

Tutor of PhD Students

11/21-02/25   *Alice Bernasconi*, University of Milano-Bicocca

11/23-Now   *Effrosyni Sokli*, University of Milano-Bicocca

11/24-Now   *Alessandro Riva*, University of Milano-Bicocca

Member of PhD Evaluation Committee

04/24   *Iman Lotfimahyari*, Enhancing Performance in Programmable 5G Networks, Blockchains, and Cloud Gaming, Politecnico di Torino (also thesis reviewer)

11/23   *Mingyuan Zang*, Secure and Trustworthy IoT Networks, Technical University of Denmark (also thesis reviewer)

07/22   *Marco Zambianco*, Deep Reinforcement Learning for Inter-Numerology Interference Minimization in 5G RAN Slicing, Politecnico di Milano

07/22   *Memedhe Ibrahimi*, Innovative Cross-Layer Optimization Techniques for the Design of Filterless and Wavelength-Switched Optical Networks, Politecnico di Milano

05/22   *Eder Ollora Zaballa*, Control and Data Plane Programming-driven SDN Management and Operation, Technical University of Denmark (also thesis reviewer)

03/22   *Valerio Bruschi*, Closing the Gap between Performance and Efficiency in Programmable Networking, University of Rome Tor Vergata (also thesis reviewer)

03/22   *Sergio Spanò*, Design of Hardware Architecture for the Acceleration of Machine Learning Algorithms, University of Rome Tor Vergata

Supervisor/Co-supervisor of MSc/BSc Students

01/13-Now   Supervision or co-supervision of MSc students (20+) from University of Milano-Bicocca, Fondazione Bruno Kessler and Politecnico di Milano

01/13-Now   Supervision or co-supervision of BSc students (15+) from University of Milano-Bicocca and Politecnico di Milano

Editorial Activity and Peer Reviewing

Member of the Editorial Board

04/20-Now   Elsevier's Computer Communications (Member of the Technical Committee)

11/20-Now   MDPI Network (Editor)

05/20-Now   Frontiers in Communications and Networks (Review Editor)

06/20-Now   MDPI Future Internet (Member of the Reviewer Board)

Guest Editor

09/23-09/24   Elsevier's Computer Networks - Special Issue on "Network Softwarization and Intelligence at the Edge: Challenges and Opportunities"

01/20-05/21   Elsevier's Computer Networks - Special Issue on "Challenges and Solutions for Hybrid SDN"

06/22-10/23   MDPI Sensors - Special Issue on "Network Traffic: Models, Challenges and Research Opportunities"

12/20-10/21   MDPI Electronics - Special Issue on "New Trends in SDN/NFV Architectures and Routing Solutions"

Academic Reviewer

01/13-Now   *Relevant Journals*: IEEE/ACM Transactions on Networking, IEEE Journal on Selected Areas in Communications, IEEE Communications Magazine, Computer Communication Review, IEEE Transactions on Smart Grid, IEEE Communications Letters, IEEE Transactions on Network and Service Management, IEEE Access, IEEE Transactions on Green Communications and Networking, IEEE Transactions on Industrial Informatics, IEEE/OSA Journal of Optical Communications and Networking, IEEE Networking Letters, Computer Networks, Computer Communications, Optical Switching and Networking, Journal on Network and Systems Management

01/13-Now   *Relevant Conferences*: All the conferences for which I serve as TPC Member, IEEE Online GreenComm, IEEE/IFIP NOMS, IEEE COINS, ONDM, EuCNC,

01/21-Now **Grant Proposal Reviewer**

Invitations by the following agencies:
- National Science Center, Poland
- National Research Agency (ANR), France
- Fondazione Cariplo, Italy

Participation to Conference and Workshop Committees

Conference Organizing Committee Member

NetSoft 2025 *Tutorial Co-Chair*, 11th IEEE International Conference on Network Softwarization

ICIN 2025 *Workshop Co-Chair*, 28th Conference on Innovation in Clouds, Internet and Networks

LANMAN 2024 *Publicity Chair*, 30th IEEE International Symposium on Local and Metropolitan Area Networks

MTSR 2023 *Chair for MTSR 2023*, 17th International Conference on Metadata and Semantics Research

CoNext 2022 *Web Chair*, 18th International Conference on emerging Networking EXperiments and Technologies

NetSoft 2022 *Web Co-Chair*, 8th IEEE International Conference on Network Softwarization

SECON 2021 *Publication Chair*, 18th International Conference on Sensing, Communication and Networking

Workshop Organizing Committee Member

ENS 2025 *General Co-Chair*, 4th International Workshop on Edge Network Softwarization (co-located with IEEE NetSoft 2025)

Tx4Nets 2025 *TPC Co-Chair*, 2nd International Workshop on Trustworthy and eXplainable Artificial Intelligence for Networks (co-located with IFIP Networking 2025)

ENS 2024 *General Co-Chair*, 3rd International Workshop on Edge Network Softwarization (co-located with IEEE NetSoft 2024)

Tx4Nets 2024 *Member of the Organizing Committee*, 1st International Workshop on Trustworthy and eXplainable Artificial Intelligence for Networks (co-located with IFIP Networking 2024)

ENS 2023 *TPC Co-Chair*, 2nd International Workshop on Edge Network Softwarization (co-located with IEEE NetSoft 2023)

ENS 2022 *General Chair*, 1st International Workshop on Edge Network Softwarization (co-located with IEEE NetSoft 2022)

EuroP4 2022 *Publicity Chair*, 5th European P4 Workshop (co-located with ACM CoNext 2022)

Technical Program Committee Member

Conferences - IEEE NetSoft 2023, 2024, 2025
- IEEE HPSR 2023, 2024, 2025
- ICNC 2025 - Edge Computing, Cloud Computing and Big Data Track
- IEEE CSCN 2023, 2024
- 5G&Co. 2024
- IEEE ANTS 2022, 2023
- IEEE SECON 2021, 2022, 2023
- IEEE COINS 2020 - Cloud Computing Track
- IEEE ICC 2017 - Selected Areas in Communications: SDN & NFV
- IEEE GLOBECOM 2015 - Selected Areas in Communications: SDN

Workshops - *LESS Workshop 2023, 2024
- IFIP NI Workshop 2022 (co-located with Networking 2022)
- ACM SDN-NFV Sec Workshop 2021 (co-located with CODASPY 2021)
- IEEE STET Workshop 2018 (co-located with NetSoft 2018)

Invited Talks, Talks, Panels, Seminars and Tutorials

26/06/24 *Talk* "Hierarchical Multiclass Continual Learning for Network Intrusion Detection" at IEEE NetSoft 2024

16/04/24 *Moderator* of the session "Making the Network Programmable and able to Orchestrate Services and Applications" at 5G&Beyond, co-located with 5G&Co

08/01/23 *Tutorial* "Development of Next-Generation ML-Based Security Solutions Exploiting the Capabilities of Programmable Data Planes and P4" at IEEE CCNC 2023

29/11/22 *Invited Talk* "Programmable Data and Control Planes Interaction for Machine-Learning-Based DDoS Detection" at GÉANT SIG-NGN Meeting 2022

21/03/22 *Talk* "Serverless Computing for NFV: Is it Worth it? A Performance Comparison Analysis" at 1st *LESS Workshop (co-located with IEEE PerCom 2022)

17/01/22 *Talk* "DFaaS: Decentralized Function-as-a-Service for Federated Edge Computing" at INW 2022

09/11/21 *Moderator* and *Panelist* of the Student Mentor Panel at IEEE CloudNet 2021

25/06/21 *Expert Panelist* at 1st Workshop on Serverless Mobile Networking for 6G Communications (co-located with ACM MobiSys 2021)

22/04/21 *Invited Talk* "P4-based Network Traffic Entropy Estimation for the Detection of DDoS Attacks", at DRCN 2021 - Workshop "Beyond SDN. Programmable data plane: Abstraction, Architectures and Applications"

14/10/20 *Talk* "Rethinking the Design of Wearable Expert Systems: The Role of Network Infrastructures", at WiMob 2020

05/02/20 *Invited Talk* "Use Case for Data Plane Programming: Distributed Denial of Service Detection", at GÉANT Symposium 2020

30/01/20 *Talk* "An Incrementally-deployable P4-enabled Architecture for Network-wide Heavy-hitter Detection" at INW 2020

12/11/18	*Seminar* "Empowering Network Monitoring through Programmability" at University of Alcalà, Department of Automatics
12/10/18	*Invited Talk* "Empowering Network Monitoring through Programmability" at SDN NFV World Congress 2018
17/05/17	*Tutorial* "ACINO: From Application Blending to Application Centricity" at ONDM 2017 (organizer and sole speaker)
20/11/15	*Talk* "Impact of Processing Costs on Service Chain Placement in Network Functions Virtualization" at IEEE NFV-SDN 2015
11/12/13	*Talk* "A Decisional Attack to Privacy-friendly Data Aggregation in Smart Grids" at IEEE GLOBECOM 2013

Academic Collaborations

2024-Now	*Temple University* (USA) on Sketching Algorithms in eBPF (1 joint publications)
2022-Now	*University of Bologna* (Italy) on Programmable Data Planes and data/control plane interaction (2 joint publications)
2022-Now	*University of Catania* (Italy) on Edge Computing with FANETs (1 joint publication)
2020-Now	*Fondazione Bruno Kessler* (Italy) on Programmable Data Planes and Fog Computing (6 joint publications)
2016-Now	*Politecnico di Milano* (Italy) on various topics related to SDN and NFV (5 joint publications)
2020-2021	*University of Ljubljana* (Slovenia) on SLA in Fog Computing (2 joint publications)
2018-2021	*University of Alcalá* (Spain) on hybrid SDN (2 joint publications)
2020	*University of Avignon* (France) on resource allocation in Fog Computing (2 joint publications)
2019-2020	*Queen's University Belfast* (United Kingdom) on security in NFV (1 joint publication)
2019-2020	*Korea Electronics Technology Institute* (Republic of Korea) on resource sharing in Fog Computing (2 joint publications)
2019-2020	*Queen Mary University of London* (United Kingdom) on Programmable Data Planes in hybrid networks (2 joint publications)
2017-2018	*RISE-ICT/Acreo* (Sweden) on resource negotiation in multi-layer networks (2 joint publications)
2016-2018	*Athens Information Technology* (Greece) on resource allocation in multi-layer networks (2016-2018) (6 joint publications)
2015-2016	*Lund University* (Sweden) on latency in Access Networks (3 joint publications)
2014-2015	*JCP-Connect* (France) and *Argela* (Turkey) on Caching in Access Networks (2 joint publications)
2012-2015	*Fraunhofer Research Institution for Applied and Integrated Security* (Germany) on privacy in Smart Grid (3 joint publications)

Technical Skills

Operating Systems: Microsoft Windows, Linux

Programming/Scripting/Databases: C, Java, Matlab, HTML, Python, MySQL

Operation Research: AMPL, CPLEX

Productivity/Typesetting: Microsoft Office Suite (holder of International Certification of Digital Literacy, ICDL), LaTeX, WordPress

Network Emulation/Simulation: Cisco Packet Tracer, Net2Plan, Netkit, Mininet

Language Proficiency

Italian: Native language

English: Proficiency (C1), TOEIC Certificate, April 2010, Grade: 790/990

Publications

Journal Papers

ComNet 24$_2$ — S. Troia, **M. Savi**, C. Grasso, F. Slyne, L. Ruan, M. Seufert, Edge Network Softwarization and Intelligence: Challenges and Opportunities, in *Computer Networks*, vol. 255, pp. 110910, Dec. 2024 *(editorial)*

JRIE 24 — J. Talpini, F. Sartori, **M. Savi**, Enhancing Trustworthiness in ML-Based Network Intrusion Detection with Uncertainty Quantification, in *Journal of Reliable Intelligent Environments*, vol. 10, pp. 501-520, Sept. 2024

TNSM 24 — A. Al Sadi, **M. Savi**, A. Melis, M. Prandini, F. Callegati, Unleashing Dynamic Pipeline Reconfiguration of P4 Switches for Efficient Network Monitoring, in *IEEE Transactions on Network and Service Management*, vol. 21, no. 3, pp. 3482-3497, Jun. 2024

ComNet 24$_1$ — R. Doriguzzi-Corin, L. A. Dias-Knob, L. Mendozzi, D. Siracusa, **M. Savi**, Introducing Packet-Level Analysis in Programmable Data Planes to Advance Network Intrusion Detection, in *Computer Networks*, vol. 239, pp. 110162, Feb. 2024

ComNet 23 — S. Troia, **M. Savi**, G. Nava, L. M. Moreira Zorello, T. Schneider, G. Maier, Performance Characterization and Profiling of Chained CPU-bound Virtual Network Functions, in *Computer Networks*, vol. 231, pp. 109815, May 2023

ComCom 23 — F. Faticanti, **M. Savi**, F. De Pellegrini, D. Siracusa, Locality-aware Deployment of Application Microservices for Multi-Domain Fog Computing, in *Computer Communications*, vol. 203, pp. 180-191, Apr. 2023

TDSC 22 — D. Ding, **M. Savi**, D. Siracusa, Tracking Normalized Network Traffic Entropy to Detect DDoS Attacks in P4, in *IEEE Transactions on Dependable and Secure Computing*, vol. 19, no. 6, pp. 4019-4031, Nov. 2022

TNSM 22 — S. Troia, M. Mazzara, **M. Savi**, L. M. Moreira Zorello, G. Maier, Resilience of Delay-sensitive Services with Transport-based Monitoring in SD-WAN, in *IEEE Transactions on Network and Service Management*, vol.19, no. 3, pp. 2652-2663, Sept. 2022

AppSci 22   F. Sartori, **M. Savi**, J. Talpini, Tailoring mHealth Apps on Users to Support Behavior Change Interventions: Conceptual and Computational Considerations, in *Applied Sciences*, vol. 12, no. 8, pp. 1-19, Apr. 2022

TCC 21   **M. Savi**, M. Tornatore, G. Verticale, Impact of Processing-resource Sharing on the Placement of Chained Virtual Network Functions, in *IEEE Transactions on Cloud Computing*, vol. 9, no. 4, pp. 1479-1492, Oct. 2021

ComNet 21   E. Rojas, R. Amin, C. Guerrero, **M. Savi**, A. Rastegarnia, Challenges and Solutions for Hybrid SDN, in *Computer Networks*, vol. 195, pp. 108198, Aug. 2021 *(editorial)*

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