

17th International Conference on Network of the Future

NoF
2026



#NoF2026

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Program NoF 2026

	September 29, 2026		September 30, 2026	October 1, 2026	October 2, 2026
8:30	Registration		Registration	Registration	Registration
9:00	ERN Workshop <i>Experimental Research on Networking</i>	SCIN Workshop <i>From Meaning to Intent: Semantic Communications and Intent-Based Networking</i>	Opening Session	FPS #3 <i>Traffic Forecasting and QoE Prediction</i>	FPS #5 <i>Network Performance Modeling and Optimization</i>
9:30			Keynote #1 <i>From sniffing signals to manipulating reality: Air Interface Security in 5G and ISAC</i>		
10:00					
10:30					
11:00	ERN Workshop <i>Experimental Research on Networking</i>	SCIN Workshop <i>From Meaning to Intent: Semantic Communications and Intent-Based Networking</i>	FPS #1 <i>Learning-Based Cyber Defence</i>		Keynote #3 <i>The SLICES-RI post5G Blueprint, experimenting 6G research design at the time of AI</i>
11:30				Keynote #2 <i>6G Space-Terrestrial Integration: Pathways for Direct-to-Device</i>	
12:00					
12:30			Demo Session	Demo Session	
13:00	ERN Workshop <i>Experimental Research on Networking</i>	Tutorial #1 <i>Beyond Connectivity: SD-WAN for Edge Network Automation and Decision Intelligence</i>	FPS #2 <i>Cross-Layer Optimization and Security in IoT Networks</i>	FPS #4 <i>Control and Resilience in Next-Generation Network Infrastructures</i>	SPS #3 <i>Edge Computing, Mobile Systems and Next-Generation Networking</i>
14:30					
15:00					
15:30	ERN Workshop <i>Experimental Research on Networking</i>	Tutorial #2 <i>Improving Wireless Next-Generation Industrial IoT (IIoT) Networks with Reinforcement Learning</i>	SPS #1 <i>AI for Network Operations, Security, and Reliability</i>	SPS #2 <i>AI-Native and Autonomous Network Management</i>	Panel <i>Networks of the Future: 6G, AI, Emerging Technologies and Global Connectivity</i>
15:45					
16:20					
17:00			Best Paper Award and Closing Session		
18:30			Welcome Reception	Visit of Trastevere	
19:00					
20:00					





Welcome Message from the Chairs

On behalf of the Network of the Future (NoF) Organizing Committee, we are pleased to welcome you to the **17th International Conference on Network of the Future (NoF 2026)**, taking place in **Rome, Italy**, from **September 29 to October 2, 2026**.

Rome, the Eternal City, provides a memorable setting for NoF 2026, combining history, beauty, and atmosphere. Built on seven hills and crossed by the Tiber River, it offers millennia of art and architecture, from the Colosseum and the Pantheon to Piazza Navona and the Trevi Fountain. Its domes, bridges, and green spaces, including Villa Borghese and Appia Antica Park, make the city both timeless and vibrant.

NoF 2026 aims to bring together the community to discuss and shape the evolution of networking. Since its creation in 2010, NoF has established itself as a premier annual conference on Future Internet design, focusing on enabling technologies, architectures, and services.

In recent years, communication infrastructures have undergone a profound transformation, increasingly combining connectivity, computation, and control. Cloud-native design, intent-based and autonomous operation, and artificial intelligence (AI)-driven orchestration are making them more resilient, sustainable, and user-centric. Advances in generative and agentic AI, data-driven methods, and network foundation models are also raising automation levels, enabling more proactive operation and opening new paths toward fully autonomous systems. As these infrastructures expand their role, security, trust, and privacy become even more central, from safeguarding the physical world inferred through integrated sensing to defending software- and AI-driven environments. Digital twins, zero-touch automation, semantic communications, and multi-path and multi-domain integration are redefining how connectivity supports humans and machines. At the same time, momentum behind sixth-generation mobile communication systems (6G) continues to grow, with visions of integrated terrestrial and non-terrestrial systems, immersive experiences, and new requirements for trust and sustainability shaping the future Internet.

NoF 2026 opens on September 29 with a full day of tutorials and workshops. The tutorials address Software-Defined Wide Area Networking (SD-WAN) for edge network automation and decision intelligence, and reinforcement learning for next-generation Industrial Internet of Things (IIoT) networks. The conference also features two workshops: Experimental Research on Networking (ERN) and From Meaning to Intent: Semantic Communications and Intent-Based Networking (SICN) 2026.

Over the following three days, the conference includes 8 technical sessions, a demo session, 3 keynotes, and a panel.

Giuseppe Bianchi (University of Rome Tor Vergata, Italy) will open the keynote series by exploring what happens when wireless signals not only carry data but also sense the physical world. Focusing on Integrated Sensing and Communication (ISAC), he examines emerging privacy and security risks in fifth-generation mobile communication systems (5G) and beyond, including attacks that manipulate sensing signals to inject, move, or conceal objects in the perceived environment.

Amina Boubendir (Airbus Defense and Space, France) will address the convergence of terrestrial and non-terrestrial networks in 6G, with Direct-to-Device connectivity as a key outcome. Her keynote covers multi-orbit and multi-provider service aggregation, cross-technology interoperability, network softwarization for multi-provider orchestration, and progress in standardization.

Serge Fdida (Sorbonne Université, France) will present SLICES-RI (Scientific Large-scale Infrastructure for Computing/Communication Experimental Studies Research Infrastructure), the first large-scale scientific instrument for the digital sciences on the European Strategy Forum on Research Infrastructures (ESFRI) roadmap. His talk discusses its beyond-5G and 6G blueprint as a platform for reproducible experimentation and for building network foundation models, supported by agentic AI and machine learning operations (MLOps).

The schedule also features a panel, "Networks in the AI Era: Data as a Goldmine for Research and Innovation," moderated by Guillaume Doyen (IMT Atlantique, France), bringing together a diverse set of experts: Jovanka Adzic (University of Belgrade, Serbia), Kohei Shiimoto (Tokyo City University, Japan), Gregory Blanc (Télécom SudParis, Institut Polytechnique de Paris, France), Marco Forzati (Swedish Innovation Agency, VINNOVA, Sweden), and Andrea Petroni (Fondazione Ugo Bordonini, FUB, Italy).

We thank all members of the technical and organizing committees, as well as the reviewers, authors, and presenters, whose contributions have shaped NoF 2026.

Beyond the technical sessions, we invite you to enjoy the social events: a welcome reception on the Roof Garden of the Hotel Forum, and a guided tour of Trastevere followed by the conference dinner at Ai Bozzi Restaurant, in the heart of Trastevere, featuring contemporary cuisine rooted in Roman tradition. These occasions will offer a chance to experience Rome's atmosphere and flavors in good company.

We look forward to seeing you in Rome for an inspiring and engaging NoF 2026.



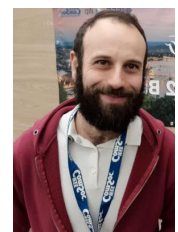
Barbara Martini
(Universitas Mercatorum, Italy)



Paolo Monti
(Chalmers University of Technology, Sweden)



Sahar Hoteit
(Université Paris-Saclay, France)



Marco Polverini
(Università La Sapienza, Italy)



NoF 2026 Keynotes



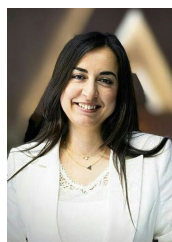
From sniffing signals to manipulating reality: Air Interface Security in 5G and ISAC

Giuseppe Bianchi

(Full Professor of Networking and Network Security at the University of Rome Tor Vergata, Italy)

Giuseppe Bianchi is Full Professor of Networking and Network Security at the University of Rome Tor Vergata since 2007. He is the founder and director of the CNIT National Laboratory of Network Assurance and Monitoring (NAMlab). He has authored over 300 peer-reviewed publications with more than 25,000 citations, and is internationally recognized for fundamental contributions to wireless system performance evaluation, including the ACM SIGMOBILE Test of Time Award. He has coordinated or technically led 6 large EU projects, as well as several additional European and national initiatives. He holds more than 10 patents in security, programmable networks, and wireless systems, and has served as chair/editor for leading IEEE/ACM venues.

Abstract: What happens when wireless signals no longer just carry data, but actively sense and describe the physical world? With the advent of Integrated Sensing and Communication (ISAC), 5G and beyond networks become pervasive, large-scale instruments for observing reality itself. This raises a fundamental question: how can we safeguard the integrity of the physical environment inferred from wireless signals? This talk focuses on the emerging threat surface introduced by ISAC, spanning not only privacy but also security concerns. On the privacy side, residual risks such as physical-layer leakage, traffic inference, and 5G NR sniffing highlight how information can still be exposed despite advanced protections. Even more critically, ISAC enables a new class of attacks where adversaries can actively manipulate sensing signals to inject, move, or conceal objects, effectively altering the aimed perceived reality.



6G Space-Terrestrial Integration: Pathways for Direct-to-Device

Amina Boubendir

(Head of Research and Standardisation Airbus Defence and Space, France)

Dr. Amina Boubendir is Head of Research and Standardisation at Airbus Defence and Space. She leads the research and technology activities on secure satellite communications, 5G/6G NTN connectivity, software-defined networks, automated AI-based systems, and earth observation. Sitting at leadership boards, Amina oversees cross-national military and governmental satellite solutions and Airbus contributions to major European and global SDOs like 3GPP, TMForum, ETSI, and IEEE. She represents Airbus at the European Smart Networks and Services JU and at the 6G Industry Association. She is a member of the Advisory Group of the European 6G Flagship Hexa-X I and II. Amina led a number of research and standardisation projects and is a senior telecommunications expert acting as member and chair at key scientific committees. Amina holds a PhD in networks and computer science from Télécom Paris, multiple awards, and a publication record of 40+ publications.

Abstract: 6G is driving a structural shift towards integrated Terrestrial and Non-Terrestrial Networks (NTN) — spanning aerial platforms, HAPS, and multi-orbit satellite constellations — as the foundation for ubiquitous coverage, resilient connectivity across critical domains such as logistics, emergency response, navigation, and surveillance. The keynote examines the architectural and technical foundations of TN-NTN convergence, focusing on Direct-to-Device (D2D) connectivity as its defining outcome. It addresses the system-level requirements this convergence demands: multi-orbit and multi-provider service aggregation, cross-technology interoperability, and automated infrastructures capable of dynamically composing connectivity across domains.

The keynote will detail views on representative use cases, the state of the art and open challenges — key enablers for D2D, architectural models for integration, and the role of network softwareization in multi-provider orchestration — alongside progress in relevant standardization bodies. It closes with a forward-looking perspective on the research and engineering priorities shaping space-terrestrial convergence towards 6G



The SLICES-RI post5G Blueprint, experimenting 6G research design at the time of AI.

Serge Fdida

(Professor, Sorbonne Université, France)

Serge Fdida is a Professor with Sorbonne Université, Paris, France. He is a member of the French Academy of Technology, an IEEE Fellow and an ACM Sigcomm Distinguished Scientist. He has been leading many research projects in Europe, notably pioneering the activity on federated Internet testbeds. He established PlanetLab Europe in 2007 and the OneLab and FIT facilities. He steered the successful SLICES initiative, the first large-scale scientific instrument in Digital Sciences, that entered the ESFRI roadmap in 2021. He was one of the initiators of the ACM Conext conference, general chair of ACM Mobicom 2015, IEEE Infocom 2019 and in 2021 and started the NetworkingChannel online program. Serge Fdida also developed a strong experience related to innovation and industry transfer: — co-founder of the Qosmos and Hopcast companies, — leadership role to the creation of the Cap Digital cluster in Paris, President of EIT Health France and coordinator of the 4EU+ European University. He also developed a strong experience in the governance of Higher research and education organizations: Vice-President European affairs University P&M Curie (2014-2018); Vice-President International Development of Sorbonne Université (2018-2021).

Abstract: The scientific community working on next-generation networks and systems increasingly lacks advanced, sustainable open tools to validate research, accelerate discovery through data sharing, and support reproducibility. The rapid pace of academic production—driven by data-intensive methods and the fast adoption of AI/ML—makes validation challenging. The intent-driven SLICES-RI is the first initiative designed as a sustainable scientific instrument under the European ESFRI framework, which supports the complete lifecycle of experimental research—from concept to reproducible deployment—by enabling experiments to be executed over its infrastructure through standardized blueprints, and by collecting, archiving, and documenting all outputs following a rigorous methodology. A key challenge lies in creating a seamless, continuous mechanism translating scientific excellence into competitive advantage at the pace of innovation. SLICES-RI addresses this by enabling virtual access through an open data management infrastructure and defined workflows. The importance of data, scale and diversity, motivates the interest for building foundation models that will have a strong transformative role in the design of open research infrastructures. Our most advanced SLICES-RI Blueprint, dedicated to beyond 5G and 6G, is the appropriate environment for building network foundation models. This talk presents the SLICES instrument, its community and roadmap, highlighting its openness and potential for collaboration. We will focus mostly on its 6G Blueprint, Metadata registry system (MRS) and its evolution towards processing the AI pipelines with suitable LLM, agentic AI and MLOPs management.





NoF 2026 Panel

Networks in the AI Era: Data as a Goldmine for Research and Innovation

Abstract: Artificial intelligence is now permeating the landscape of Internet networks and services, whether it is for innovative services targeting customers, fast decision-making within the control plane, or monitoring for KPI and security. Algorithms derived from machine learning, deep learning, neural networks, and natural language processing agents are already integrated or on the way to becoming central to the hardware and software infrastructures of the future networks. At the heart of this evolution lies the data necessary for these new algorithms to operate, but producing it in sufficient quantity and quality, and making it available to the stakeholders involved in designing these new components and services for the networks of the future, remains a significant challenge. In this panel of experts, we propose to identify the obstacles and challenges related to data and datasets from different perspectives. We will first address the technical challenges of producing the data needed to train the models used in networks, from capturing real-world data to generating synthetic ones. What quality, variety, and quantity of data are needed to accurately reflect the extremely diverse situations our networks face? Secondly, we will address the dissemination and use of data. What are the challenges of anonymization for privacy and the sensitivity of disseminated data for algorithms designed to assist, among other things, security operators? What framework and scope of dissemination are acceptable to provide access to data, particularly for public and private actors in research and innovation? Finally, like a gold mine, the economic stakes surrounding data will be explored due to the difficulty of producing and disseminating it. What profits and which actors are behind data and datasets for innovative networks and services? What role does public dissemination and free usage play in a context where data is so scarce and crucial? This panel will provide a view on these challenges from four senior experts regarding various academic, industrial, and governmental sectors, allowing the preceding questions to be addressed from complementary and sometimes contradictory perspectives..

Moderator :



Guillaume Doyen
(IMT Atlantique, France)

Guillaume Doyen has been a Professor at IMT Atlantique since 2021. He is affiliated to the IRISA (UMR CNRS 6074). Formerly, he was an associate professor at Troyes University of Technology since 2006 where he was the head of the Network and Telecommunication engineering program from 2019 to 2021 and the co-chair of the Cyber-Security transversal research project from 2014 to 2020. His current research interest focuses on the design of autonomous management and control solutions applied to the performance and security of the Future Internet. He has published more than 50 papers in the network and service management community. As an active member, he is a TPC member of high-venue conferences (e.g. IEEE/IFIP CNSM, IEEE/IFIP IM and NOMS, IFIP AIMS) and a regular reviewer for the top-related journals (e.g. IEEE CommMag, IEEE TNSM, Springer JNSM, Wiley IJNM) and has been a co-chair of several events (e.g. ManSDN/NFV, IFIP AIMS). He has been involved in several research projects (e.g. ANR-MOSAICO, ANR-Doctor, French Investment for Future Request, ANR BBNNet). He holds an Habilitation from University of Technology of Compiègne, France, a PhD from University of Nancy I, France and an MSc from INSA Toulouse, France.

Panelists :



Jovanka Adzic
(University of Belgrade, Serbia)

Jovanka Adzic obtained Political Science degree in International Law (University of Belgrade, Serbia), Computer Science degree in Data Management (University of Turin, Italy), Master in Informatics and Telecommunications (Polytechnic of Turin, Italy) and Master in European Law and Policies (UniNettuno, Rome, Italy). She joined research and innovation department at Telecom Italia as project and technical leader where she contributed to and

coordinated many innovative internal projects such as ML-based solutions for fraud detection and management. Moreover, she contributed also to European collaborative projects, and particularly to those addressing AI/ML across connect-compute networks, such as AI@EDGE project. Her recent research interests lie in the exploration of the AI/ML for mobile networks and cloud-edge computing infrastructures, with particular interest in AI-enabled network management, federated learning and AI Governance.



Kohei Shiomoto
(Tokyo City University, Japan)

Kohei Shiomoto is a Professor at Tokyo City University, Tokyo, Japan. Before joining the university in 2017, he was with NTT Laboratories, where he conducted and led research on network architecture, traffic engineering and management, and network operations for the Internet, mobile networks, and cloud computing infrastructures. His research focuses on the intersection of artificial intelligence and computer networks, with particular interests

in AI-enabled network management, trustworthy machine learning, federated learning, and secure communication infrastructures.



Gregory Blanc
(Télécom SudParis, Institut Polytechnique de Paris, France)

Gregory Blanc obtained a Ph.D degree in cybersecurity from Nara Institute of Science and Technology (NAIST, Japan). He then joined SAMOVAR laboratory at Télécom SudParis as a postdoctoral fellow where he contributed to the proposal and coordination of European collaborative projects such as NECOMA (joint Europe-Japan project).

Since 2015, he is an associate professor in networks and cybersecurity at Télécom SudParis and coordinates the education program in systems and networks security. His recent research interests lie in the exploration of machine learning (ML) and network programmability to the benefit of the autonomic security loop in order to improve the resilience of networks of the future, incl. monitoring, detection, countermeasure selection, policy security orchestration. He is also active on topics dealing with the critical assessment of such approaches including the evaluation of ML-based systems reliability, security and robustness, and of the quality of the related datasets.



Marco Forzati
(Vinnova, Italy)

Marco Forzati holds a PhD in Electrical Engineering from Chalmers University of Technology, an MSc in Electrical Engineering from Chalmers University of Technology and Politecnico di Milano, and a degree in Business and Economics from Stockholm University. He is currently Chief AI Officer at Vinnova, Sweden's Innovation Agency, where he leads the agency's work on AI strategy, governance, data and information management. Previously,

he was Director of Data Analysis at RISE Research Institutes of Sweden, leading applied research in AI and data analytics, and has held research and management positions in telecommunications, digital infrastructure and digitalisation. Over more than 20 years, he has worked at the intersection of technology, research, innovation and public policy, including as a long-standing expert adviser to the European Commission on digital infrastructure and transformation. He has authored more than 90 scientific and professional publications and has contributed to and led numerous national and European research and innovation initiatives. His current interests include applied and agentic AI, AI governance, data-driven transformation, digital infrastructure and the societal and organisational implications of emerging technologies.



Andrea Petroni
(FUB, Italy)

Andrea Petroni Received the B.Sc. and M.Sc. degrees in Electronics Engineering and the Ph.D. degree in Information and Communication Technology from the Sapienza University of Rome, Italy, in 2011, 2014, and 2018, respectively. From 2018 to 2021, he was a Post-Doctoral Research Fellow with the Department of Information, Electronics and Telecommunication Engineering, Sapienza University of Rome. His research interests include

wireless optical communications, underwater acoustic communications and LoRa/LoRaWAN networks for IoT. Since 2022, he is a researcher at Fondazione Ugo Bordoni, working in the Networks and Spectrum area. He is author of several scientific papers and regularly carries out scientific review activities for conferences and journals in the ICT field.



NoF 2026 Tutorials

Beyond Connectivity: SD-WAN for Edge Network Automation and Decision Intelligence

Abstract: Software-Defined Wide Area Networking (SD-WAN) has evolved from a cost-effective alternative to traditional, provider-managed wide-area networking solutions into a foundational technology for network automation, edge optimization, and distributed service delivery in modern enterprise and service provider environments. By decoupling the control and data planes and providing centralized policy-driven orchestration, SD-WAN enables automated dynamic traffic steering, real-time analytics, and integration with cloud and edge infrastructures. This tutorial positions SD-WAN as an enabler of network automation at the network edge, with direct relevance to emerging 6G use cases that demand ultra-low latency, pervasive connectivity, and intelligent service orchestration. In future 6G platforms where the network becomes a programmable service delivery substrate, SD-WAN automation capabilities, combined with Artificial Intelligence (AI) insights and network management, can help realize a platform to support distributed AI, by providing dynamic service placement, automated SLA-aware routing, fine-grained traffic segmentation, and adaptive resource scaling across edge nodes and cloud endpoints. The tutorial delivers a comprehensive view of SD-WAN technology and highlights its effectiveness through specific use cases that demonstrate how automated control, analytics, and orchestration facilitate digital transformation for modern enterprises. It will cover architectural principles, automation techniques, AI-enhanced decision intelligence, and integration challenges, illustrated with practical scenarios and testbed demonstrations that showcase both current deployments and forward-looking trends.



Guido Maier
(Politecnico di Milano, Italy)

Guido Maier (Senior member IEEE), received his Laurea degree in Electronic Engineering at Politecnico di Milano (Italy) in 1995 and his Ph.D. degree in Telecommunication Engineering at the same university in 2000. Until February 2006 he has been researcher at CoreCom (research consortium supported by Pirelli in Milan, Italy), where he achieved the position of Head of the Optical Networking Laboratory. On March 2006 he joined the Politecnico di Milano as Assistant Professor. In 2015 he became Associate Professor. His main areas of interest are: optical network modeling, design and optimization; SDN orchestration and control-plane architectures; SD-WAN and NFV. He is author of more than 150 papers in the area of Networking published in international journals and conference proceedings (h-index 29) and 6 patents. He has been involved in industrial and European research projects, and is currently PI of the project WatchEDGE – NextGeneratioEU funds. In 2016 he co-founded the start-up SWAN networks, spin-off of Politecnico di Milano. He is editor of the journal Optical Switching and Routing, General Chair of DRCN 2020, DRCN 2021, IEEE NetSoft 2022 and IEEE HPSR 2025, and TPC member in many international conferences. He is IEEE Senior Member.



Sebastian Troia
(Politecnico di Milano, Italy)

Sebastian Troia (member IEEE) is an Associate Professor at the Department of Electronics, Information and Bioengineering, Politecnico di Milano, Italy, and a Fulbright Fellow at the University of Texas at Dallas, USA. He received his Ph.D. in Information Technology (Telecommunications) cum laude from Politecnico di Milano in 2020 and is a partner at SWAN Networks, a Politecnico di Milano spin-off specializing in SDN/SD-WAN orchestration. His research focuses on edge network softwarization and Machine Learning for SDN, SD-WAN, and multi-layer optical/IP networks. He has contributed to several European projects, including H2020 Metro-Haul and NGI Atlantic, and served as an editor for the ITU-T FG-ML5G. He has authored over 80 publications and is active in TPC and organizing committees for major conferences such as IEEE ICC, GLOBECOM, NetSoft, and others. He is the founder and co-organizer of the Edge Network Softwarization (ENS) workshop series, now in its 5th edition in conjunction with IEEE NetSoft 2026. In 2025, he was honoured to receive the IEEE ComSoc EMEA Outstanding Young Researcher Award, a recognition of his contributions to the field of telecommunication networks. In 2026, he was also a recipient of the IEEE Communications Society Charles Kao Award for the most outstanding paper published in the IEEE/Optica Journal of Optical Communications and Networking.

Improving Wireless Next-Generation Industrial IoT (IIoT) Networks with Reinforcement Learning

Abstract: The Industrial Internet of Things (IIoT) is transforming industrial automation by integrating advanced Information and Communication Technologies (ICT) with Artificial Intelligence (AI) to enable flexible, adaptive, and intelligent manufacturing systems. Future industrial environments are expected to increasingly rely on wireless communications to support applications such as autonomous robotics, process monitoring, predictive maintenance, and human-machine interaction. These applications exhibit highly heterogeneous traffic characteristics and impose stringent Quality of Service (QoS) requirements in terms of latency, reliability, scalability, and energy efficiency. Traditional wireless communication and resource management approaches often struggle to cope with the complexity and dynamics of modern industrial environments. Consequently, AI-driven networking solutions are emerging as key enablers of next-generation industrial wireless systems. In particular, the introduction of the Non-Public Network (NPN) paradigm by the 3GPP, together with the vision of AI-native 6G networks, has created new opportunities for the adoption of Reinforcement Learning (RL) techniques in industrial communications.

This tutorial provides a brief overview of RL and Multi-Agent Reinforcement Learning (MARL) for wireless IIoT systems. Starting from the fundamentals of industrial communications and NPN architectures, the tutorial introduces the main RL concepts and discusses how learning-based approaches can be used to optimize radio resource management, scheduling, and medium access control protocols in industrial scenarios. Particular attention is devoted to practical implementation aspects, including state and reward design, scalability, and deployment constraints. The tutorial is complemented by two representative industrial case studies. The first addresses dynamic radio resource allocation for mobile control panels through a centralized RL framework implemented at the base station. The second focuses on distributed MARL-based MAC protocol learning for process monitoring applications, where wireless IIoT devices collaboratively learn collision-free channel access strategies. Through these examples, participants will gain insights into the design, implementation, and practical challenges of AI-native wireless industrial networks.



Luciano Miuccio
(University of Catania, Italy)

Luciano Miuccio received the B.Sc. degree in Electronics Engineering and the M.Sc. degree (cum laude) in Telecommunications Engineering from the University of Catania, Italy, in 2015 and 2018, respectively. In November 2022, he received the Ph.D. degree in Systems, Energy, Computer and Telecommunications Engineering from the University of Catania, with the additional label of "Doctor Europaeus". Since March 2023, he has been an Assistant Professor of Telecommunications with the Department of Electrical, Electronic and Computer Engineering, University of Catania. From May 2019 to September 2019, he worked as an Early-Stage Researcher on methodologies for the multi-objective optimization of parametric systems. In 2022, he was a Visiting Ph.D. Student at the Centre for Wireless Communications (CWC), University of Oulu, Finland, under the supervision of Prof. Mehdi Bennis. In October 2025, he returned to the same institution as a Visiting Researcher. His research interests include AI-driven radio resource management for B5G/6G networks, green networking, non-orthogonal multiple access (NOMA), wireless IoT systems, and multi-agent reinforcement learning for communication networks. He has authored and co-authored numerous scientific publications on reinforcement learning, protocol learning, and intelligent resource management for wireless systems. Dr. Miuccio has served on the Technical Program Committees of several international conferences, including IEEE ICC, IEEE GLOBECOM, IEEE ICMLCN, and IEEE VTC. He has delivered tutorials at international conferences such as IEEE RTSI, IEEE EUROCON, and European Wireless, focusing on reinforcement learning and protocol learning for communication networks. He has also contributed to conference organization as Special Session Chair and Workshop Co-Chair at IEEE RTSI, IEEE EUROCON, IEEE CSCN, and IEEE PiCom. He currently serves as an Associate Editor for Ad Hoc Networks, Telecommunication Systems, and Wireless Networks.



NoF 2026 Tutorials



Salvatore Riolo

(University of Catania, Italy)

Salvatore Riolo received the B.Sc. degree in Electronics Engineering, the M.Sc. degree (cum laude) in Telecommunications Engineering, and the Ph.D. degree in Systems, Energy, Computer and Telecommunications Engineering from the University of Catania, Italy, in 2012, 2017, and 2021, respectively. Since January 2022, he has been an Assistant Professor of Telecommunications with the Department of Electrical, Electronic and Computer

Engineering, University of Catania. From August 2017 to March 2018, he worked as an Early-Stage Researcher in the project "High Bit Rate Device-to-Device Services for 5G Mobile Networks." In 2022, he was a Visiting Researcher at the Centre for Wireless Communications (CWC), University of Oulu, Finland. His research interests include radio resource management for B5G/6G networks, green networking, massive machine-type communications, AI-native radio access networks, and the application of reinforcement learning techniques to wireless communication systems. His recent research activities focus on intelligent resource management, wireless IoT systems, and AI-enabled communication networks for next-generation industrial and mobile applications. Dr. Riolo has served on the Technical Program Committees of numerous international conferences, including IEEE ICC, IEEE GLOBECOM, and IEEE ICMLCN. He has contributed to conference organization as Workshop Co-Chair at IEEE EUROCON, IEEE CSCN, and IEEE PiCom. Furthermore, he has served as an instructor in multiple international tutorials on reinforcement learning for communication networks, including tutorials delivered at IEEE RTSI and European Wireless. He currently serves as an Associate Editor for Computer Networks, Physical Communication, and Wireless Personal Communications.

ERN 2026 Program - September 29, 2026 - Auditorium

8:30 – 09:00 Registration

9:00 – 09:10 Workshop Opening

9:10 – 9:50 Invited Talk: Next-Generation Mobile Network Experiments: The Potential of Coordinating Federated Learning and RAN Transport

Speaker : Luca Valcarengi & Emilio Paolini (Scuola Superiore Sant'Anna, Italy)

Session Chair : Carlo Centofanti (University of L'Aquila, Italy & NexTrainE SRL, Italy)

9:50 – 10:30 TS 1: Mobile Network Measurements and 5G QoS

Session Chair : Carlo Centofanti (University of L'Aquila, Italy & NexTrainE SRL, Italy)

A Journey in Smartphone-Based Network Measurements: from Performance Analysis to Machine Learning-Driven Optimization

Stefania Zinno (University of Naples Federico II, Italy); Giovanni Stanco (University of Napoli Federico II, Italy); Giuseppe Caso (Karlstad University, Sweden); Nicola Pasquino (University of Naples Federico II, Italy); Alessio Botta (University of Napoli Federico II, Italy); Anna Brunstrom (Karlstad University, Sweden & University of Malaga, Spain); Giorgio Ventre (University of Naples Federico II, Italy)

Implementation of Hybrid QoS-Aware Data Radio Bearer in 5G Networks

Padmapriya Patil, Abhishek Bhattacharyya and Gudepu Venkateswarlu (University of Texas at Dallas, USA); Andrea Fumagalli (UTD, USA); Koteswararao Kondepu (Indian Institute of Technology Dharwad, India)

10:30 – 11:00 Spazio Sociale

11:00 – 12:30 TS 2: Measurements, Programmable and Emulated Network Testbeds

Session Chair : Andrea Marotta (University of L'Aquila, Italy & NexTrainE SRL, Italy)

iCloud Private Relay on Mobile Networks: Performance Across Countries and Roaming

Damiano Ravalico and Martino Trevisan (University of Trieste, Italy); Idilio Drago (University of Turin, Italy); Paul Schmitt (Cal Poly, USA); Francesco Bronzino (École Normale Supérieure de Lyon, France)

An Experimental Hybrid SDN Platform Integrating Emulated and Hardware Switches

Cristian Bua, Antonio Masu, Lorenzo Bianchi, Sara Menchini, Asm Chafiuallah Bhuiyan, Stefano Giordano and Alessio Giorgetti (University of Pisa, Italy)

Experimental Evaluation of a P4-Based Networking Framework for the Automatic Discovery and Dynamic Formation of Smart-Device Swarms

Faris Alhamed, Francesco Paolucci and Filippo Cugini (CNIT, Italy)

Emulation Is Not Neutral: How EVE-NG and Containerlab Shape Network Experiments

Luca Borgianni and Pavan Sai Bhogadi (University of Pisa, Italy); Davide Adami (CNIT Pisa Research Unit, University of Pisa, Italy); Stefano Giordano (University of Pisa, Italy)

12:30 – 13:30 Spazio Sociale - Aula 2

13:30 – 14:10 Invited Talk: Sustainability-by-design in 6G Technology

Speaker : Luigi Briguglio (CyberEthics Lab., Italy)

Session Chair : Alessio Giorgetti (University of Pisa, Italy)

14:10 – 14:50 TS 3: Experimental Network Security

Session Chair : Alessio Giorgetti (University of Pisa, Italy)

A Testbed for Runtime Behavioral Analysis of eSIM Applets

Matteo Fanfarillo (University of Rome Tor Vergata, Italy & Consorzio Nazionale Interuniversitario Delle Telecomunicazioni (CNIT), Italy); Lorenzo Valeriani (University of Rome Tor Vergata, Italy & CNIT, Italy); Leandro Pagano (Sapienza University of Rome, Italy); Giuseppe Bianchi (University of Rome Tor Vergata, Italy)

Experimental Evaluation of an Explainable Hybrid AI Framework for Cyber Threat and Hardware Failure Detection in SD-WAN

Amirreza Fazelyhamedani, Muzzamil Aziz and Philipp Wieder (GWDG, Germany); Ramin Yahyapour (GWDG – University Göttingen, Germany)

15:00 – 15:30 Spazio Sociale

15:30 – 16:10 Invited Talk: Secrets of Semantic communications: From Theory to Experiments and Standardization

Speaker : Emilio Calvanese Strinati (CEA-Leti, France)

Session Chair : Koteswararao Kondepu (Indian Institute of Technology Dharwad, India)



16:10 – 16:50 TS 4: Post-Quantum Security and Experimental Datasets

Session Chair : Koteswararao Kondepu (Indian Institute of Technology Dharwad, India)

Energy Efficiency of Post-Quantum Cryptography Across Heterogeneous NVIDIA GPU Platforms: A Batch-Dependent ops/J Analysis of ML-KEM and ML-DSA

Pinelopi-Konstantina Anastasopoulou and Kyriakos Vlachos (University of Patras, Greece); Filippo Cugini (CNIT, Italy)

Dataset and Experimental Testbed for Deep Learning-Based Bluetooth Device Fingerprinting

Haytham Albousayri and Bechir Hamdaoui (Oregon State University, USA)

16:50 – 17:00 Closing ERN Workshop

SCIN 2026 Program - September 29, 2026 - *Aula 1*

8:30 – 09:00 Registration

9:00 – 09:10 Workshop Opening

9:10 – 10:10 Invited Talk: The role of knowledge representation in next generation communication systems

Speaker : Sergio Barbarossa (Sapienza University of Rome, Italy)
Session Chair : Stefania Sardellitti (Universitas Mercatorum, Italy)

10:10 – 10:30 Technical Session 1

Session Chair : Stefania Sardellitti (Universitas Mercatorum, Italy)

Machine Learning-Based Analog Transmission of Speech

Ömer Karakas (Fraunhofer IIS, Germany); Marco Breiling (Fraunhofer Institute for Integrated Circuits (IIS), Germany); Sahana Raghunandan (Fraunhofer IIS, Germany); Wolfgang Gerstacker (University of Erlangen-Nuernberg, Germany)

10:30 – 11:00 Spazio Sociale

11:00 – 12:30 Technical Session 2

Session Chair : Molka Gharbaoui (Scuola Superiore Sant'Anna, Italy)

Resource-Aware Semantic-Huffman Bit Allocation for Hybrid Semantic-Shannon Communication

Themistoklis Charalambous (University of Cyprus, Cyprus & Aalto University, Finland); Kyriakos Christodoulides (University of Cyprus, Cyprus); Risto Wichman (Aalto University, Finland)

Model-Routed LLM Translation for Industrial Intent-Based Networking

Mattia Fontana, Davide Berardi and Barbara Martini (Universitas Mercatorum, Italy)

Root-Cause Aware Hierarchical Intent Reporting

Yarkin Gevez (Ericsson, Turkey); Sultan Ertas (Ericsson Research, Turkey); Ajay Kattepur (Ericsson Research, India); Danesh Daroui (Ericsson Research, Sweden); Snigdha Das (Ericsson Research, India); Marin Orlić (Ericsson Research, Sweden); Ankita Likhyan (Ericsson, India); Mohammed Ziauddinm (Ericsson Research Ireland, Athlone,

Ireland); Abid Ahmed Salem (Ericsson India Private Limited, India)

Goal-oriented Energy-Efficient Operation in Smart Capsule Endoscopy

Mohammad Zoofaghari (Oslo University Hospital, Norway); Aliakbar Rahimifard (Yazd University, Iran); Saikat Chatterjee (KTH – Royal Institute of Technology & Communication Theory Lab, Sweden); Ilango Balasingham (Oslo University Hospital, Norway)

12:30 – 13:00 Closing SCIN Workshop

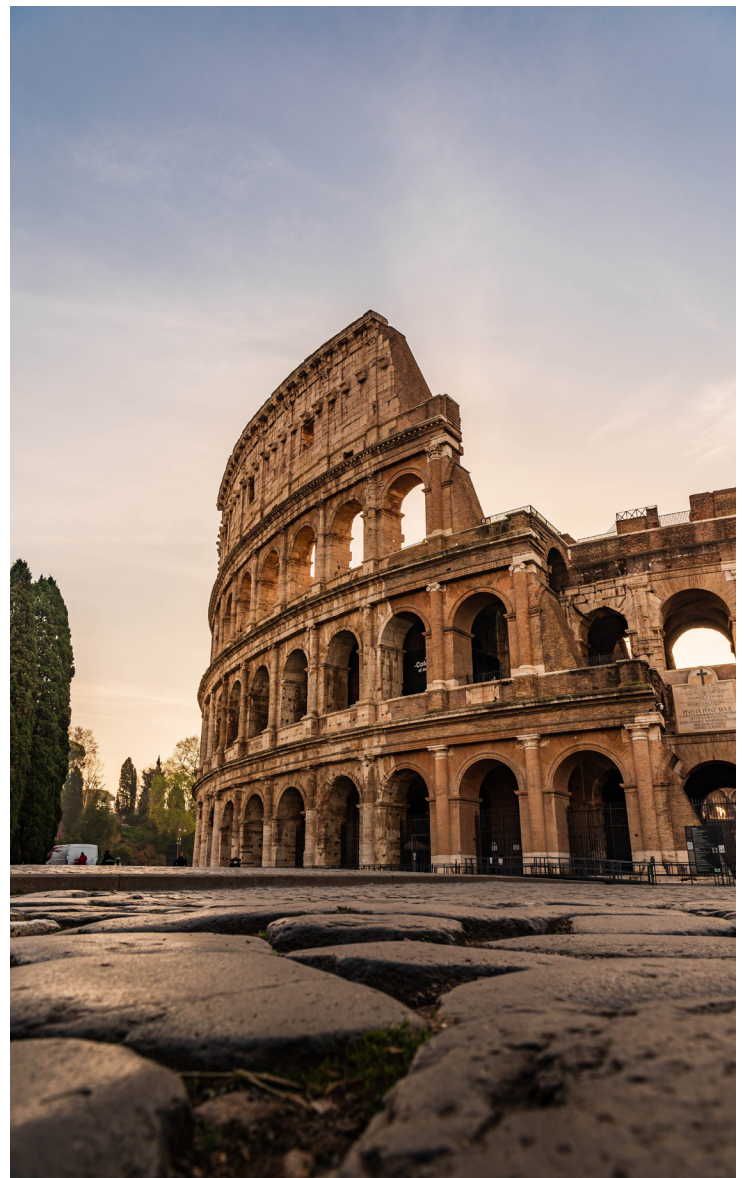
13:30 – 15:00 Tutorial 1: Beyond Connectivity: SD-WAN for Edge Network Automation and Decision Intelligence - *Aula 1*

Speaker : Guido Maier (Politecnico di Milano, Italy) & Sebastian Troia (Politecnico di Milano, Italy)

15:00 – 15:30 Spazio Sociale

15:30 – 17:00 Tutorial 2: Improving Wireless Next-Generation Industrial IoT (IIoT) Networks with Reinforcement Learning - *Aula 1*

Speaker : Luciano Miuccio (University of Catania, Italy) & Salvatore Riolo (University of Catania, Italy)





NoF 2026 - Day 1 - September 30, 2026 - Auditorium

8:30 – 09:00 Registration

9:00 – 9:30 Opening Conference

9:30 – 10:30 Keynote 1: From sniffing signals to manipulating reality: Air Interface Security in 5G and ISAC

Speaker : Giuseppe Bianchi (Full Professor of Networking and Network Security at the University of Rome TOR VERGATA, Italy)
Session Chair : Antonio Cianfrani (Università del Molise, Italy)

10:30 – 11:00 Spazio Sociale

11:00 – 12:30 FPS 1: Learning-Based Cyber Defence
Session Chair : George C. Polyzos (CUHKSZ, China)

What Do Graph-Based Phishing Detectors Actually Learn? Structural Explainability for Web Phishing Detection

Carlos Güemes-Palau (Universitat Politècnica de Catalunya, Spain); Pedro Casas (Austrian Institute of Technology (AIT), Austria); Tailai Song (Politecnico di Torino, Italy); Lucas Torrealba (NIC Chile Research Labs, University of Chile, Chile); Pere Barlet-Ros (Universitat Politècnica de Catalunya, Spain)

RAFA: Reconstruction-Aware Federated Aggregation for Unsupervised Reconstruction-Based Intrusion Detection Systems

Beny Nugraha (Technische Universität Chemnitz, Germany & Mercu Buana University, Indonesia); Thomas Bauschert (Chemnitz University of Technology, Germany)

Digital Twin-Assisted Evaluation of Network State Drift in ML-Based Intrusion Detection Systems

Marcel Antzek and Christian Dietz (Bundeswehr University Munich, Germany); Gabi Dreö Rodosek (Universität der Bundeswehr München, Germany)

12:30 – 13:30 Spazio Sociale / Demo Session - Aula 2

Backdoor in the SIM: A Remote Command-and-Control Demo

Matteo Fanfarillo (University of Rome Tor Vergata, Italy & Consorzio Nazionale Interuniversitario Delle Telecomunicazioni (CNIT), Italy); Lorenzo Valeriani (University of Rome Tor Vergata, Italy & CNIT, Italy); Leandro Pagano (Sapienza University of Rome, Italy); Giuseppe Bianchi (University of Rome Tor Vergata, Italy)

Multi-Agent Digital Twin for SLA Management in Coherent P2MP Metro-Access Networks

Sanwal Zeb, Imran Chowdhury Dipto and Muhammad Umar Masood (Politecnico di Torino, Italy); Nelson Costa (Nokia, Germany); Joao Pedro (Nokia Portugal, Portugal & Instituto de Telecomunicações, Portugal); Antonio Napoli (Nokia, Germany); Vittorio Curri (Politecnico di Torino, Italy)

Self-Negotiating Lightpaths: A Live Demonstration of an Agentic, QoT-Grounded fgOTN Interconnect for Distributed AI Training

Hesam Rahimi (Huawei Technologies, Canada); Christopher Janz and Henry Yu (Huawei Technologies Canada, Canada)

Demo: High-Precision GNSS-Free Time Synchronization Using the 5G-RBIS Protocol

Michael Gundall & Jan Petershans & Julian Remmet & Leonard Kleinberger (German Research Center for Artificial Intelligence, Germany); Hans Dieter Schotten (Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, Germany)

13:30 – 15:00 FPS 2: Cross-Layer Optimization and Security in IoT Networks

Session Chair : Angela D'Angelo (Universitas Mercatorum, Italy)

HyMRPL: Hybrid Storing and Non-Storing Coexistence for RPL-based IoT

Ramon dos Reis Fontes and Roger Kreutz Immich (Federal University of Rio Grande Do Norte, Brazil); Cassius Clay Batista da Silva Filho (Federal University of Rio Grande do Norte, Brazil)

A Cross-Layer Adaptive Transport Protocol for Energy-Constrained Wireless Sensor Networks with BER-Driven IEEE 802.15.4 MAC Optimization

Selcuk Okdem (Erciyes University, Turkey); Hongchi Shi (Texas State University, USA)

A Context-Aware Lightweight Multi-Tier Intrusion Detection Framework for IoT Networks

Amer A.Abualhassan (King Fahd University of Petroleum and Minerals, Saudi Arabia); Louai Al-Awami (King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia); Mosab Hamdan (National College Ireland, Ireland & SETU, Ireland)

15:00 – 15:30 Spazio Sociale

15:30 – 17:00 SPS 1: AI for Network Operations, Security, and Reliability

Session Chair : Davide Berardi (Universitas Mercatorum, Italy)

Federated Learning for Intrusion Detection via Adaptive Multi-Criteria Client Selection

Andrea Deidda and Stefania Sardellitti (Universitas Mercatorum, Italy)

Characterizing and Mitigating the Effects of Device Temperature on RF Fingerprinting Accuracy

Haytham Albousayri and Bechir Hamdaoui (Oregon State University, USA)

Timeseries Forecasting in the Latent Space for Connectivity Prediction in Mobile Networks

Edoardo Di Caro, Filippo Poltronieri and Mauro Tortonesi (University of Ferrara, Italy); Pál Varga (Budapest University of Technology and Economics, Hungary)

A Performance Benchmark of SCTP, HTTP/3, and QUIC for the N2 Interface Toward 6G Core Networks

Philip Kaleße, Marius Corici and Hauke Buhr (Fraunhofer FOKUS, Germany); Alexey Kulakov, Peter Wild and Marco Broszeit (Vodafone, Germany); Eric Troudt and Christian Scheich (Fraunhofer FOKUS, Germany); Thomas Magedanz (Fraunhofer Institute FOKUS / TU Berlin, Germany)

18:30 Welcome reception: Spazio Sociale



NoF 2026 - Day 2 - October 01, 2026 - Auditorium

8:30 – 9:00 Registration

9:00 – 11:00 FPS 3: Traffic Forecasting and QoE Prediction

Session Chair : Sahar Hoteit (Université Paris-Saclay, France)

Cluster-Aware Conditioning in Mobile Traffic Forecasting: A Controlled Injection-Strategy Comparison Across Forecasting Algorithms and Cellular Regimes

Zineddine Bettouche and Khalid Ali & Andreas Kassler & Andreas Fischer (Deggendorf Institute of Technology, Germany)

Lightweight PID-Based Drift Mitigation for Cellular Traffic Forecasting

John Sengendo (University of Trento, Italy); Zineddine Bettouche and Khalid Ali (Deggendorf Institute of Technology, Germany); Andreas Kassler (Deggendorf Institute of Technology (DIT), Germany & Karlstad University, Sweden); Fabrizio Granelli (University of Trento, Italy)

From Radio Signal Dynamics to QoE Degradation Prediction in Immersive Streaming

Raza Ul Mustafa (Loyola University New Orleans, USA); Noman Ashraf (Instituto Politecnico Nacional, Mexico); Md Tariqul Islam (University of Campinas (Unicamp), Brazil); Christian Esteve Rothenberg (University of Campinas – UNICAMP, Brazil)

Predictive Traffic Shaping as a UE-Network Control Loop in Wireless Systems

Subramanian Vasudevan and Shriram Vasudevan (Independent Researcher Morristown, NJ, USA)

11:00 – 11:30 Spazio sociale

11:30 – 12:30 Keynote 2: 6G Space-Terrestrial Integration: Pathways for Direct-to-Device

Speaker : Amina Boubendir (Head of Research and Standardisation AIRBUS Defence and Space, France)

Session Chair : Barbara Martini (Universitas Mercatorum, Italy)

12:30 – 13:30 Spazio sociale / Demo Session - Aula 2

13:30 – 15:00 FPS #4: Control and Resilience in Next-Generation Network Infrastructures

Session Chair : Stefania Sardellitti (Universitas Mercatorum, Italy)

Bridging RIC Timescales: An Adversarial Bandit Framework for Conflict Management in Open RAN

Amr Amrallah, Yu Tsukamoto, Takahide Murakami and Akio Ikami (KDDI Research, Inc., Japan)

Achieving Secure Routing within Autonomous Systems Independently of Routing Protocols

J J Garcia-Luna-Aceves (University of California, USA & University of Toronto, Canada); Morteza Moghaddassian (University of Toronto, Canada)

Fast-MCS: A Scalable Open-Source Tool to Find Minimal Cut Sets

Shakthivelu Janardhanan and Yaxuan Chen (Technical University of Munich, Germany); Wolfgang Kellerer (Technische Universität München, Germany); Carmen Mas-Machuca (University of the Bundeswehr Munich (UniBW), Germany)

15:00 – 15:30 Spazio Sociale

15:30 – 17:00 SPS 2: AI-Native and Autonomous Network Management

Session Chair : Molka Gharbaoui (Scuola Superiore Sant'Anna, Italy)

Toward AI-Aware Communication Architectures: Rethinking Communication for Future AI Infrastructure

Kohei Shiomoto (Tokyo City University, Japan)

Automated Machine Learning for Enabling Failure Prediction in Optical Transport Networks

Mashboob Cheruvakkadu Mohamed (Politecnico di Torino, Italy); Carlos Natalino (Chalmers University of Technology, Sweden); Muhammad Umar Masood, Renato Ambrosone and Gulmina Malik (Politecnico di Torino, Italy); Stefano Straullu (Links Foundation, Italy); Sai Kishore Bhyri (Nokia Corporation, India); Joao Pedro (Nokia Portugal, Portugal & Instituto de Telecomunicações, Portugal); Antonio Napoli (Nokia, Germany); Gabriele Maria Galimberti (Nokia Corporation, Italy); Walid Wakim (Nokia Corporation, USA); Paolo Monti (Chalmers University of Technology, Sweden); Vittorio Curri (Politecnico di Torino, Italy)

EAGLE: Environment-Aware Graph Labeler for Load Classification in O-RAN

Parisa Hatamnia (King's College London, United Kingdom (Great Britain)); Binh V. Duong (Technische Universität Dresden, Germany); Tung Doan (Technische Universität Dresden & Haptic Communication Systems, Germany); Frank H.P. Fitzek (Technische Universität Dresden & ComNets – Communication Networks Group, Germany); Toktam Mahmoodi (King's College London, United Kingdom (Great Britain))

Agentic Control of Optical Networks: The Autonomy Cost of Graph-Based vs React Agents

Seyed Morteza Ahmadian, Paolo Monti and Carlos Natalino (Chalmers University of Technology, Sweden)

17:30 – 22:00 Spazio Sociale





NoF 2026 - Day 3 - October 02, 2026 - Auditorium

8:30 – 9:00 Registration

9:00 – 10:30 FPS 5: Network Performance Modeling and Optimization

Session Chair : Marco Polverini (Sapienza University, Italy)

Fair Play in the Network: Optimizing Application Fairness in Short-Form Video Streaming Traffic

Monisha Amir and Nikolas Wehner (University of Würzburg, Germany);
Filip Simonovski and Michael Seufert (University of Augsburg, Germany);
Tobias Hoßfeld (University of Würzburg, Germany)

On Abstraction Trade-Offs in Data-Driven Performance Modeling of Multi-Tier Microservices

Razvan-Mihai Ursu (Technische Universität München, Germany);
Navidreza Asadi (Technical University of Munich, Germany); Wolfgang
Kellerer (Technische Universität München, Germany)

ST-NDT: A Topological Framework for Reducing Communication Overhead in Network Digital Twins

John Sengendo and Fabrizio Granelli (University of Trento, Italy)

10:30 – 11:00 Spazio sociale

11:00 – 12:00 Keynote 3: The SLICES-RI post5G Blueprint, experimenting 6G research design at the time of AI.

Speaker : Serge Fdida (Full Professor, SORBONNE Université, France)

Session Chair : Prosper Chemouil (CNAM, France)

12:00 – 13:00 Spazio sociale

13:00 – 14:30 SPS 3: Edge Computing, Mobile Systems and Next-Generation Networking

Session Chair : Paolo Monti (Chalmers University of Technology, Sweden)

Coupling-Aware Task Offloading for Digital Twin Synchronization in Industrial IoT Networks

Christopher Akwaboah, Gianluca Reali and Mauro Femminella (University of Perugia, Italy)

Function-Level Offloading in Serverless Edge Wearable Applications: An Implementation-Driven Study of Power Consumption and Time-to-Completion Trade-offs

Marco Imbelli Cai (University of Pisa, Italy); Valerio Luconi (IIT-CNR, Italy);
Alessio Vecchio (University of Pisa & Dip. Ingegneria dell'Informazione, Italy)

Toward Enhanced Management of the Telco Cloud for Next-Generation Networks

Afaf Arfaoui (DoCoMo Euro-labs, Germany); Joan Triay (DOCOMO Euro-Labs, Germany); Yuya Kuno (NTT DOCOMO, Japan)

Assessing Techno-Economic Gains of Next-Generation Coherent Point-to-Multipoint Data Center Interconnects

Sanwal Zeb and Muhammad Umar Masood (Politecnico di Torino, Italy); Ahtisham Ali (Consorzio TOP-IX, Italy & Politecnico di Torino, Italy); Riccardo Schips, Renato Ambrosone and Imran Chowdhury Dipto (Politecnico di Torino, Italy); Joao Pedro (Nokia Portugal, Portugal & Instituto de Telecomunicações, Portugal); Antonio Napoli (Nokia, Germany); Vittorio Curri (Politecnico di Torino, Italy)

14:30 – 15:00 Spazio sociale

15:00 – 16:30 Panel: Networks in the AI Era: Data as a Goldmine for Research and Innovation

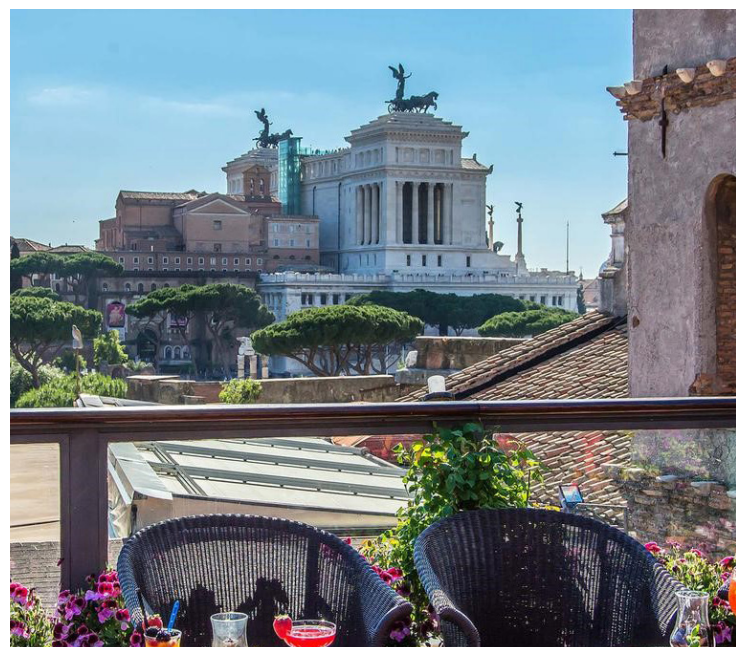
Abstract: Artificial intelligence is now permeating the landscape of Internet networks and services, whether it is for innovative services targeting customers, fast decision-making within the control plane, or monitoring for KPI and security. Algorithms derived from machine learning, deep learning, neural networks, and natural language processing agents are already integrated or on the way to becoming central to the hardware and software infrastructures of the future networks. At the heart of this evolution lies the data necessary for these new algorithms to operate, but producing it in sufficient quantity and quality, and making it available to the stakeholders involved in designing these new components and services for the networks of the future, remains a significant challenge. In this panel of experts, we propose to identify the obstacles and challenges related to data and datasets from different perspectives. We will first address the technical challenges of producing the data needed to train the models used in networks, from capturing real-world data to generating synthetic ones. What quality, variety, and quantity of data are needed to accurately reflect the extremely diverse situations our networks face? Secondly, we will address the dissemination and use of data. What are the challenges of anonymization for privacy and the sensitivity of disseminated data for algorithms designed to assist, among other things, security operators? What framework and scope of dissemination are acceptable to provide access to data, particularly for public and private actors in research and innovation? Finally, like a gold mine, the economic stakes surrounding data will be explored due to the difficulty of producing and disseminating it. What profits and which actors are behind data and datasets for innovative networks and services? What role does public dissemination and free usage play in a context where data is so scarce and crucial? This panel will provide a view on these challenges from four senior experts regarding various academic, industrial, and governmental sectors, allowing the preceding questions to be addressed from complementary and sometimes contradictory perspectives..

Moderator : Guillaume Doyen (IMT Atlantique, France)

Panelists :

- Jovanka Adzic (University of Belgrade, Serbia)
- Kohei Shiomoto (Tokyo City University, Japan)
- Gregory Blanc (Télécom SudParis, Institut Polytechnique de Paris, France)
- Marco Forzati (VINNOVA, Sweden)
- Andrea Petroni (FUB, Italy)

16:30 Best Paper Award and Closing Conference





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(Universitas Mercatorum, Italy)



Paolo Monti
(Chalmers University of Technology, Sweden)

Honorary Chair



Prosper Chemouil
(CNAM, France)

TPC Co-Chairs



Sahar Hoteit
(Université Paris-Saclay, France)



Marco Polverini
(Università La Sapienza, Italy)

Keynote Co-Chairs



Panagiotis Papadimitriou
(University of Macedonia, Greece)



Antonio Cianfrani
(Università del Molise, Italy)

Panel Co-Chairs



Toktam Mahmoodi
(Kings College London, UK)



Guillaume Doyen
(IMT Atlantique, France)

Demo Co-Chairs



Davide Berardi
(Universitas Mercatorum, Italy)



Paolo Medagliani
(Huawei, France)

Tutorial Co-Chairs



Stefania Sardellitti
(Universitas Mercatorum, Italy)



Chathurika Ranweera
(Deakin University, Australia)

Workshop Co-Chairs



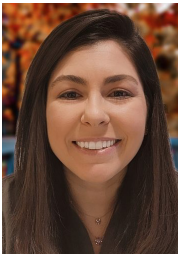
Eirini Eleni Tsiropoulou
(Arizona State University, USA)



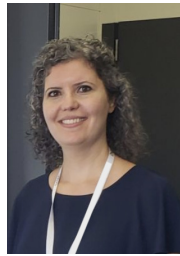
Pol Alemany
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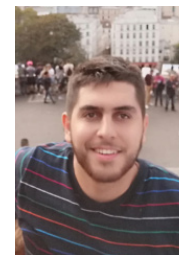
Mariateresa Piraino
(Universitas Mercatorum, Italy)

Overall arrangements Chair



Aziza Lounis
(DNAC, France)

Web/IT Chair



Elia Kallas
(DNAC, France)

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- Asma Tahir
- Stefano Di Michele
- Enrico Zanardo

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