Place: CNAM (Conservatoire National des Arts et Métiers)

292 rue Saint Martin
75003 Paris, France

The event is organized by the IMT Centre *Réseaux et Systèmes pour la Transformation Numérique*, the TUM School of Computation, Information and Technology, and CNAM. The event is supported by the German-French Academy for the Industry of the Future (GFA), with expert contributions from Future Networks PEPR, AMI CMA IMTFor5G+, and funding from SEIDO and SYSTEMX.

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FRANCE 2030

PROGRAMME DE RECHERCHE

RÉSEAUX DU FUTUR

Schedule

Monday 20th of October, 10:30-12:30 – Introduction, datas.

- Welcome words
- Johannes Späth, TUM

Monday 20th of October, 14:00-18:00 – Goal Oriented and Semantic Communication

- Vincent Corlay, Mitsubishi Electric R&D Centre Europe
- Marios Kountouris, DaSCI, University of Granada and EURECOM

Tuesday 21st of October, 08:30-18:00 – Distributed AI

- Roberto Morabito (EURECOM)
- Pegah Alizadeh & Anastasios Giovanidis (Ericsson Research)
- Charles Beauville (Flower Labs)

Wednesday 22nd of October, 08:30-18:00 – Core Network

- Jérémie Leguay (Nokia)
- Quang Huy TRAN (Nokia)
- Yassine Hadjadj-Aoul (IRISA)

Gala Diner

Thursday 23rd of October, 08:30-18:00 – Keynotes, panels (Thursday)

- Fabien Geyer, Airbus
- Reda Yaich, Elies Gherbi, IRT SystemX
- Yves Lostanlen, Entrepreneurial executive

Friday 24th of October, 08:30-12:30 – Environmental Sustainability and Acceptability

- Joe Wiart, Shanshan Wang (Telcom Paris)

Monday 20th of October, 10:30-12:30

Introduction

Johannes Späth, TUM School of Computation, Information and Technology, Technical University of Munich

Title: How to produce (research) data from a testbed.

Monday 20th of October, 14:00-18:00

Goal Oriented and Semantic Communication

Vincent Corlay, Mitsubishi Electric R&D Centre Europe

Title: Use of semantic communications in a goal-oriented communication context, examples of applications.

Vincent Corlay is a researcher at Mitsubishi Electric R&D Centre Europe (Rennes, France) in the group Wireless Communication Systems since 2020. He obtained his PhD degrees from Télécom ParisTech, France, in computer science. In 2021, he received the best thesis award runner-up from Institut Polytechnique de Paris (Top 7 theses).

Marios Kountouris, DaSCI, University of Granada and EURECOM

Title: Goal-Oriented Semantic Communication: From Information Theory to Systems.

Marios Kountouris graduated with a degree in Electrical and Computer Engineering from the National Technical University of Athens (NTUA), Greece, in 2002, and obtained his Master's and PhD degrees from Télécom ParisTech, France, in 2004 and 2008, respectively. He is currently Distinguished Researcher in DaSCI (Andalusian Research Institute in Data Science and Computational Intelligence, University of Granada) and Professor in the Department of Communication Systems at EURECOM, France. Prior to that, he held positions at CentraleSupélec, Huawei Paris Research Centre, France, the University of Texas at Austin, USA, and Yonsei University, South Korea. He has been editor-in-chief of IEEE Transactions on Wireless Communications, IEEE Transactions on Signal Processing and IEEE Wireless Communication Letters. He is the recipient of a Consolidator Grant from the European Research Council (ERC) in 2020 on goal-oriented semantic communication. He has received several awards and distinctions, including the 2022 Blondel Medal and the 2013 IEEE ComSoc Outstanding Young Researcher Award for the EMEA region. He is a fellow of the IEEE, AAIA, and AIIA.

Monday 21st of October, 08:30-18:00

Distributed AI

Roberto Morabito (EURECOM)

He is an Assistant Professor in the Communication Systems Department at EURECOM. he holds a PhD in Networking Technology from Aalto University and has previously worked as a researcher at Ericsson Research for 8 years and as a postdoctoral fellow at Princeton University's EDGE Lab. His research work intersects IoT, Edge Computing, and Distributed AI, emphasizing the trade-offs in AI service provisioning and orchestration under computing and networking resource constraints. Recently, he has expanded his focus to include the impact of generative AI, such as Large Language Models, particularly in provisioning these models in constrained edge environments. This exploration represents a key part of his broader commitment to advancing next-generation edge intelligence.

Pegah Alizadeh & Anastasios Giovanidis (Ericsson Research)

Pegah Alizadeh is a ML Researcher (PhD, Sorbonne) with experience in Reinforcement Learning, GenAI, and natural language processing. As an AI Research Scientist at Ericsson, she contributes to patents, publications, and research-backed products. Skilled in PyTorch, Python, simulators, and package development. Focused on GPT for decision-making.

Anastasios Giovanidis is a computer science researcher interested in solving fresh research and development problems of information technology by applying advanced mathematical tools and doing validation and experimentation through data. His scientific expertise spans the fields of: probabilistic modeling, optimization, data analytics, machine learning. He has taught courses on these areas at Sorbonne University and Telecom ParisTech. The main focus of his work has been in the field of networks, especially telecom and social networks. However, the techniques that he uses have a very large spectrum of applications.

Charles Beauville (Flower Labs)

Charles Beauville is a Data Scientist currently working at Flower Labs since December 2022. Previously an intern at Arcanite from July 2022 to September 2022, where Charles worked on Natural Language Processing applied to cybersecurity. Charles holds a Bachelor of Science in Computer Science from EPFL and is currently pursuing a Master of Science in Data Science from MIT. Charles is known for their work on developing an open source framework for Federated Learning.

Wednesday 22nd of October, 08:30-18:00

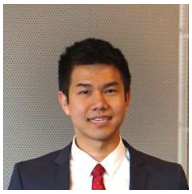
Core Network

Jérémie Leguay (Nokia)

Title: Network acceleration for AI workloads: an overview of current research activities related to collective communications, load balancing, congestion control

Jeremie Leguay received his Ph.D. degree in computer science from Pierre et Marie Curie University, Paris, France. He is Department Head at Nokia Bell Labs Paris Saclay on Network Systems Research. From 2004, he conducted research and led the Networking Lab at Thales Communications and Security (SIX GTS division) where he developed activities on sensor networks, mobile networks, and software-defined networks for mission-critical networked systems. In 2014, he joined Huawei Technologies as leader of the Network and Traffic Optimization Team to conduct research activities on the planning and control of IP networks. He is Senior IEEE member. He has been a Senior Expert and Director of the Datacom Dijkstra Lab at Huawei Technologies. His current activities are mainly on Routing, Network Management and Optimization, Self-driving networks, Automation, Network for AI.

Quang Huy TRAN (Nokia)



Title: Towards autonomous networks with agentic AI, including a small lab/practice together with the talk to demonstrate Nokia's current research on network management automation

Huy Q. Tran is a Research Engineer from the Network Systems Research Department at Nokia Bell Labs, Paris-Saclay, France. His research interests and expertise include AI/ML applications for end-to-end network management, resource allocation and optimization, network programmability and automation. He has actively participated in open-source projects: Linux Networking Foundation OpenDaylight and Telecom Infra Project Open Optical & Packet Transport (TIP OOPT). Moreover, he contributed to the standardization of the technology-agnostic optical transport control interfaces in the Open Network Models and Interfaces Transport API (ONMI TAPI) Working Group.

Yassine Hadjadj-Aoul (IRISA)

Title: AI-based Inference of Network Characteristics through Network Tomography.

Yassine Hadjadj-Aoul is a Full Professor at the University of Rennes, France, where he heads the ESIR's school computer science department since 2022. He is affiliated with the INRIA Ermine team-project and the IRISA Laboratory, which he joined in 2009 when he was hired as an Associate Professor at the University of Rennes. After completing his Ph.D. from the University of Versailles, he further developed

his research experience as a postdoctoral researcher at the University of Lille 1 and as a Marie Curie Fellow under the EU FP6 EIF program at University College Dublin (UCD), Ireland. He has been actively involved in the organization of numerous international conferences, serving as General Chair for key events such as ISNCC'2025, ICT-DM'2019, and ISNCC'2018, among others. Additionally, he has taken on major roles, including TPC Chair for IEEE ISCC'2024, WD'2021, and ISNCC'2017, demonstrating his leadership and commitment to the research community. His responsibilities have spanned executive, financial, publication, and publicity roles, reflecting his broad and sustained engagement in the scientific organization and dissemination of research. A Senior Member of the IEEE and recipient of multiple best paper awards, he has supervised numerous Ph.D. students and postdoctoral researchers and has played a key role in several high-impact projects in the areas of 5G and post-5G systems. He actively contributes to scientific committees and editorial boards, and co-leads both the "AI for Infrastructure" initiative within the French GDR and the SmartNet research action between INRIA and Nokia Bell Labs, which focuses on AI-driven intelligent network management. His primary research interests include congestion control, mobile cloud networking, and QoS/QoE provisioning across the Edge–Cloud continuum.

Thursday 23rd of October, 08:30-18:00

Keynotes, panels

Fabien Geyer, Airbus

Title: Graph Neural network – Performance prediction; use cases from Airbus – inter aircraft.

Fabien Geyer received the master of engineering degree in telecommunications from Telecom Bretagne, France, in 2011, and the PhD degree in computer science from Technical University of Munich (TUM), in 2015. He is currently with Airbus Central Research & Technologies and Technical University of Munich working on methods for network analytics, network performances, and architectures. His research interests include novel methods for data-driven networking, formal methods for performance evaluation, and modeling of networks.

Reda Yaich, Elies Gherbi, IRT SystemX

Title: AI tools for intrusion detection in IT/OT networks

Artificial intelligence, and more specifically machine learning, is becoming increasingly prevalent in cybersecurity tools, particularly in network intrusion detection. Two main approaches coexist: misuse detection, which relies on known attack signatures, and anomaly detection, which involves learning normal network traffic behaviour in order to detect any deviations. The latter, powered by machine learning algorithms, can detect unprecedented attacks, such as zero-day attacks or malicious behaviour hidden in legitimate traffic. However, the effectiveness of these models remains threatened by adversarial attacks, which are capable of manipulating network data to deceive the algorithm. The robustness, interpretability and reliability of AI systems applied to network monitoring have thus become critical issues for digital security experts.

Rada Yaich is a senior researcher and specialist in Cybersecurity and Artificial Intelligence. He is leading the Cybersecurity and Networks Reseach Teams @IRT SystemX. A French Institute of Technology (FIT).He has been working for more than 15 years in the development of Adaptive and User-Centric security mechanisms using AI techniques such as Machine-Learning, Multi-Agent Systems and Reasoning. His main objective as a human and researcher is to make humans' life safer in an intuitive and non-intrusive manner ;).

Elies Gherbi is an AI Researcher, research engineer at IRT SystemX.

Yves Lostanlen, Entrepreneurial executive

Yves Lostanlen is an experienced entrepreneurial executive in the field of cutting-edge technologies (artificial intelligence, Internet of Things, mixed/virtual/augmented reality). He is a technical expert in artificial intelligence. He studied at leading American and European universities (MIT, UCL, University of Rennes, INSA) and holds degrees in engineering, a PhD and a Habilitation à

Diriger des Recherches (HDR, accreditation to supervise research). His profile combines expertise in technological products and business management in complex environments. He has international professional experience in management positions in large groups (ENGIE, Siemens), start-ups and scale-ups (AI Redefined, aiXplain, Element AI), innovative SMEs (SIRADEL) and government and academic institutions. He is the author, co-author and subject of articles in leading publications such as Harvard Business Review, Fortune, IEEE proceedings, Les Echos and Challenges.

Friday 24th of October, 08:30-18:00

Environmental Sustainability and Acceptability

Joe Wiart, Shanshan Wang

Joe Wiart, General Engineer of Mines (92) HDR 95 PhD 95, has been the holder of the Chair in 'Modelling, Characterisation and Control of Exposure to Electromagnetic Waves' (C2M) at IMT (Institut Mines-Télécom) since 2015. He has led or contributed to numerous national and international projects dedicated to dosimetry, such as the European Lexnet project and the ANSES Acte and AMPERE projects. His research interests focus on numerical methods and statistics applied to electromagnetism and stochastic dosimetry. His work has resulted in more than 130 publications in peer-reviewed journals and more than 200 conference papers.

Shanshan Wang received her MSc degree (with distinction) in wireless communication and signal processing from the University of Bristol, UK, in 2014. Then she worked as a research engineer in Toshiba telecommunication lab in UK. She obtained her Ph.D. degree from Paris-Saclay University in France in 2019, with the thesis title "Modeling and Performance Evaluation of Spatially-correlated Cellular Networks". From 2015 to 2018, she was with the CNRS in L2S (UMR 8506) as an Early Stage Researcher of the European-Funded Project H2020 ITN-5Gwireless. From 2019 to 2023, she was Postdoctoral researcher in Chair C2M, Telecom Paris, working on assessments and prediction of EMF exposure. From 2023 to 2024, I was assistant professor in ETIS lab in Cergy. She has engaged in several European and French projects, e.g., SEAWave, Goliat, Beyond5G. Her research interests include EMF exposure, statistical and machine learning for applications in wireless communications. She was a recipient of the 2018 INISCOM Best Paper Award.