Agenda

EUROPEAN WIRELESS 2023

SALA BARACCA

TUESDAY- Oct. 3rd

08:45 **REGISTRATION**

09:00 **TUTORIAL 1 - James Gross, Balázs Varga, Marilet De Andrade Jardim, David Puffer**
An overview of time-bounded and deterministic communication.

11:00 **COFFEE BREAK**

11:30 **WELCOME MESSAGE**

11:45 **KEYNOTE 1 - Symeon Chatzinotas** Mega Constellations – Trends, Technologies and Vision

12:45 **LUNCH**

14:00 **KEYNOTE 2 - Damian Dudek** Quantum ThermoMechanics in Future Information Processing Systems.

15:00 **SPECIAL SESSION 1 - Tactile Internet-***Chair:Juan Cabrera***:**

- Bridging the Gap: 5G-TSN Integration for Industrial Robotic Communication.
- 6G Underlayer Network Concepts for Ultra Reliable and Low Latency Communication in Manufacturing.
- Performance Evaluation of Core-Less Mesh Mobile IAB Network Architecture for 6G xURLLC.
- Performance Comparison of Real-Time Algorithms for IMU-Based Orientation Estimation.
- On the Simulation of Random Phase Fluctuations.

16:40 **COFFEE BREAK**

17:10 **MAIN TRACK - Propagation, Beamforming and Intelligent Reflecting Surfaces-***Chair: Ernestina Cianca:*

- Zero Forcing Beamforming with Sidelobe Suppression Using Neural Networks.
- On the Equivalence of Hybrid and Digital Beamforming in Multi-User Scenarios.
- Design of a Graphene-Based Reconfigurable Intelligent Surface in THz Spectrum.
- IndoorDRaGon: Data-Driven 3D Radio Propagation Modeling for Highly Dynamic 6G Environments

19:00 **WELCOME APERITIF**

9:00 **TUTORIAL 3 Christian Deppe, Riccardo Bassoli, Roberto Ferrara, Janis Nötzel, and Uzi Pereg**
Quantum Communications and 6G Technology.

11:00 **COFFEE BREAK**

11:30 **MAIN TRACK - Localization and Sensing in Wireless Systems-***Chair:Riccardo Bassoli:*

- SPEB Evaluation and Anchors Selection for UAV Positioning.
- Contactless FMCW Radar-Based Health Monitoring Using Continuous Wavelet Transform and Machine Learning.
- One-Class Support Vector Machine for WiFi-Based Device-Free Indoor Presence Detection.
- H.264 Compress-Then-Analyze Transmission in Edge-Assisted Visual SLAM

12:50 **LUNCH**

13:50 **KEYNOTE 3 - Emilio Calvanese Strinati**
The post Shannon Era: Towards Semantic, Goal-Oriented and Reconfigurable Intelligent Environments aided 6G communications.

14:50 **ITA NTN: Workshop on Integrated Terrestrial and Non Terrestrial Networks - Part 1:**

- In-Space Computation Offloading for Multi-Layer LEO Constellations.
- Coherent Vs IM/DD Transmissions for FSO Communications in the Presence of Atmospheric Turbulence.
- Enabling Intelligent Vehicular Networks Through Distributed Learning in the Non-Terrestrial Networks 6G Vision.
- Assessment of Beamforming Algorithms with Subarrayed Planar Arrays for B5G/6G LEO Non-Terrestrial Networks.
- Continuous Time Emulation for Software-Defined Non-Terrestrial Edge Computing Networks.

16:30 **COFFEE BREAK**

17:00 **ITA NTN: Workshop on Integrated Terrestrial and Non Terrestrial Networks - Part 2:**

- Adaptive Blind Spectrum Sensing for mmWave Full Duplex Cognitive Aerial BS.
- From Interoperability to Full Integration - the ITA NTN Project Vision.
- Preliminary Performance Evaluation of a Satellite-To-HAP Communication Link.
- Coexistence Analysis Between Terrestrial and Non Terrestrial Networks in the 27.5-29.5 GHz Frequency Band.
- Architectural Analysis and Performance Evaluation of Integrated Access-Backhaul Non-Terrestrial Networks.

20:00 **SOCIAL DINNER**

WEDNESDAY- Oct. 4th

09:00 **KEYNOTE 4 - Wolfgang Utschick**
Generative Modeling for Wireless Communication Algorithms.

10:00 **COFEE BREAK**

10:30 **MAIN TRACK - Machine Learning for Wireless Communications** *Chair: Mauro De Sanctis:*

- Dynamic Spatial Diversity via Reinforcement Learning for Ultra-Reliable Low Latency Communications.
- Cross-Silo Horizontal Federated Learning Methods in Network Traffic Analysis.
- Architectural Enhancement of Environmental-Aware Federated Inference Orchestration for Sustainable AI/ML Management.
- Mobility Performance Analysis of RACH Optimization Based on Decision Tree Supervised Learning for Conditional Handover in 5G Beamformed Networks.
- A Machine Learning Methodology for Network Anomalies Detection in O-RAN Networks.

12:30 **CLOSING SESSION**

Agenda

SALA SOCI

MONDAY - Oct. 2nd

08:45 **REGISTRATION**

09:00 **TUTORIAL 2 - Giuseppe Araniti, Nadezhda Chukhno, Olga Chukhno**
Multicast Communications Over Emerging 6G Systems.

15:00 **SPECIAL SESSION 3 - Quantum Communication Networks - Part 1** - *Chair: Uzi Pereg*

- Quantum Network Simulators: Performance Improvement Through Operation Scheduling.
- Study of Quantum Error Corrected Fidelity Routing Design for Quantum Networks.
- Network Time Synchronization as a Quantum Physical Layer Service.
- Quantum Information Spreading and Scrambling in a Distributed Quantum Network.
- Minimal Trellises for Decoding Quantum Stabilizer Codes.

17:10 **MAIN TRACK - Privacy and Security:** - *Chair: Roberto Ferrara*

- Secret Key Generation for LoRaWAN Using Autoencoders for Reciprocity Enhancement.
- Joint Controller Placement and Intrusion Detection System Enablement in Software Defined Mobile Ad Hoc Networks.
- A Novel Secret Key Generation Algorithm for Secure Wireless Communications.
- Strategic Status Updates in an Eavesdropping Game.
- Generative Adversarial Networks-Based AI/ML Model Adaptive Retraining for Beyond 5G Networks.

TUESDAY- Oct. 3rd

09:00 **MAIN TRACK - Waveforms and codes:** - *Chair: Simone Morosi*

- Living in a State of Sin: Pseudo-Random Number Generators for Random Linear Network Coding.
- Coding for Distributed Caching in High Mobility MANET.
- Low-Complexity Adaptive PTS Technique for Reducing PAPR in OTFS Systems.
- Variable Rate Non-Binary Coded Schemes Based on PSK-LoRa Modulation and LDPC Codes.
- Move Away from Me! User Repulsion Under Proximity-Induced Interference in OWC Systems.
- A Comparative Study of Linear Block Channel Codes in Macroscale Molecular Communications.

11:30 **MAIN TRACK - Source Coding, Post-Shannon and Semantic Communications:** - *Chair: Christian Deppe*

- Versatile Video Coding Performance Evaluation for Tiled 360° Videos.
- Greedy Algorithm for Compressed Sensing over Finite Fields: Balancing Recovery and Efficiency.
- Information-Theoretically Secret Reed-Muller Identification with Affine Designs.
- Functional Compression for Networked Applications in Practice.

14:50 **MAIN TRACK - Radio Access and Resource Management - Part 1:** - *Chair: L. Badia*

- Multi-Armed Bandit for Contention Window Optimization.
- 6G Core-Architecture - Approaches for Enhancing Flexibility Across Control and User Plane.
- Empowering the Convergence of Wi-Fi and 5G for Future Private 6G Networks.
- Simulation-Based Analysis of Experimental 5G NR Downlink CSI-RSRP-Based Handover Performance.
- Direct-Conflict Resolution in Intent-Driven Autonomous Networks.

17:00 **SPECIAL SESSION 3 - Quantum Communication Networks - Part 2:** - *Chair: Janis Nötzel*

- A Review of the Applications of Quantum Machine Learning in Optical Communication Systems.
- Covert Capacity of Compound Classical-Quantum Channels.
- Quantum Machine Learning for Controller Placement in Software Defined Networks.
- Strategic Interaction over Age of Information on a Quantum Wiretap Channel.
- Scaling of Entanglement-Assisted Communication in Multi-Mode Amplified Fiber Links

WEDNESDAY- Oct. 4th

10:30 **MAIN TRACK - Radio Access and Resource Management - Part 2:** - *Chair: Ernestina Cianca*

- Adaptive Scheduling for Downlink OFDMA in IEEE 802.11ax.
- Retransmissions and Reordering in 6G User Plane Protocols.
- HORA: Joint Handover and Resource Allocation on 3D Networks for Industrial IoT.
- Massive Grant-Free Access in Cell-Free Massive MIMO Networks.
- Incremental Joint Scheduling and Routing for 5G-TSN Integration.
- Channel Quality Analysis for Spectrum Sharing Between IMT and PMSE Systems.