

Keynotes Talk Session

8 am - 9 am

Talk 1 : Wireless Edge intelligence: Vision, Algorithms and Applications*Mehdi Bennis**University of Oulu, Finland*

9 am -10 am

Talk 2 : AI-based Automation for Future Networks*Xavier Costa Perez**NEC Laboratories Europe GmbH, Germany*

Coffee break

Invited Talk Session : AI/ML

10:30am-12:30 pm

Towards AI-enabled Microservice Architecture for Network Function Virtualization,*Maziar Nekovee, Sachin Sharma, Navdeep Uniyal, Avishek Nag, Reza Nejabati, Dimitra Simeonidou***Network Orchestration in Mobile Networks via a Synergy of Model-driven and AI-based Techniques,***Yantong Wang, Vasilis Friderikos***A Reinforcement Learning based Path Guidance Scheme for Long-range Autonomous Valet Parking in Smart Cities,***Muhammad Khalid, Nauman Aslam, Liang Wang***Native SDN Intrusion Detection using Machine Learning,***Mohd Mat Isa, Lotfi Mhamdi*

Lunch break

Invited Talk Session : IoT/ B5G

1:30 pm – 3 pm

On the Improvement of Positioning Accuracy in Wireless Sensor Network using Smart Antennas,*Tian Hong Loh, Haoyu Lin***Topology for Robust RF/FSO Backhauling under Random Jamming Attacks and Adversary Weather Conditions,***Mai Kafafy, Mohamed Abdallah*

Regular technical Session

3 pm – 4:15 pm

Resource Allocation Steps for an Efficient End-to-End Service Delivery in Network Function Virtualization: A Survey*Inès Raïssa Djouela Kamgang, Ghayet el mouna Zhioua, Nabil Tabbane***Theoretical Probability of Neighbor Discovery for Proximity Services over Cellular Network,***Leila Nasraoui***Design of a Metamaterial Terahertz Resonant inclusion for 5G Applications,***Bouthaina Smari, Mondher Labidi, Fethi Choubani***How much can Fog Computing enhance performances of heterogeneous delay-sensitive services in Smart Cities,***Amel Ksentini, Maha Jebalia, Sami Tabbane***Information-Centric Networking Challenges and Opportunities in Service Discovery: A Survey,***Armelle Noulapeu Ngaffo, Walid El Ayeb, Zied Choukair*

Coffee break

Regular technical Session

4:45 pm- 6:15 pm

Temporal framing of a finite memory observer for network control systems applied to measurement losses and integrity recovery,*Julien Thuillier, David Delouche, Jacques Fantini, Frederic Kratz***Securing Smart Homes using a Behavior Analysis based Authentication Approach,***Noureddine Amraoui, Amine Besrou, Riadh Ksantini, Belhassen Zouari***Energy and Spectral Efficient Scheduling for Heterogeneous IoT Sensor Nodes,***Chowdhury Saleha Ferdowsy, Zied Bouida, Mohamed Ibnkahla***Compensation Systems and Performance Comparison of the Very High Doppler Frequency,***Changyoung An, Heung-Gyoon Ryu***Performance Analysis of SWIPT Networks over Composite Fading Channels,***Abubakar Umar Makarfi, Rupak Kharel, Khaled M. Rabie, Xingwang Li, Osamah S. Badarneh, Galymzhan Nauryzbayev, Sultangali Arzykulov, Omprakash Kaiwartya*

Keynote Talk Session

- 8 am - 9 am **Talk 1 : Wireless 2.0: Wireless Networks Empowered by Reconfigurable Intelligent Surfaces**
Marco Di Renzo
Paris-Saclay University, France
- 9 am -10 am **Talk 2 : Overview of Radar Sensor Networking Research**
Sumit Roy
U. Washington, Seattle, USA

Coffee Break

Invited Talk Session: PHY

- 10:30am -12:30am **SNR Prediction in Cellular Systems based on Channel Charting,**
Parham Kazemi, Hanan Al-Tous, Christoph Studer, Olav Tirkkonen
Energy Efficiency Maximization in Millimeter Wave Hybrid MIMO Systems for 5G and Beyond,
Aryan Kaushik, John Thompson, Evangelos Vlachos
Towards Beyond 5G Future Wireless Networks with focus towards Indoor Localization,
Qasim Zeeshan Ahmed, Maryam Hafeez, Faheem A. Khan, Pavlos Lazaridis

Lunch Break

Invited Talk Session: UAV

- 1:30am- 3 pm **On the Performance of Non-Orthogonal Multiple Access (NOMA): Terrestrial vs Aerial Networks,**
Mehdi Monemi, Hina Tabassum, Ramein Zahedi
Opportunities and Challenges of Bridging the Digital Divide using 5G enabled High Altitude Platforms and TVWS spectrum,
Konstantinos Katzis, Luzango Mfupe, Habib Mohammed Hussien
Hybrid Very High Throughput Satellites: Potential, Challenges, and Research Directions,
Mounia Bouabdellah, Elmehdi Illi, Faissal El Bouanani, Mohamed-Slim Alouini

Regular technical Session

- 3 pm – 4:15pm **Efficient SDN Controller for Safety Applications in SDN-Based Vehicular Networks: POX, Floodlight, ONOS or OpenDaylight?**
Karima Smida, Hajer Tounsi, Mounir Frikha, Ye-Qiong Song
Genetic Algorithm based Resource Allocation for V2X Communications,
Brahmi Ibtissem, Hend Koubaa, Faouzi Zarai
Development of Advanced Edge Computing Framework using Rich Client Devices,
Masato Oguchi, Saneyasu Yamaguchi
Impact of Hardware Impairments on the Performance of Millimeter-Wave Massive MU-MIMO Systems with Distributed Antennas,
Wadad Belaoura, Khalida Ghanem, Muhammad Zeeshan Shakir, Khalid Qaraqe
A Deep Learning Approach Combining Autoencoder with One-class SVM for DDoS Attack Detection in SDNs,
Lotfi Mhamdi, Desmond McLernon, Fadi El-moussa, Syed Ali Raza Zaidi, Mounir Ghogho, Tuan Tang

Coffee Break

Regular technical Session

- 4:45 pm- 6:15pm **A Joint Clustering and Routing Algorithm based on GA for Multi Objective Optimization in WSN,**
Marwa Fattoum, Zakia Jellali, Leila Najjar Atallah
Performance Analysis of Cognitive-Radio IoT Networks,
Mohammad Reza Amini, Mohammed W. Baidas
A Two-Stage Solution Procedure to Joint Subcarrier Assignment and Global Energy-Efficient Power Allocation in Energy-Harvesting Two-Tier Downlink NOMA HetNets,
Mohammed W. Baidas, Mubarak Al-Mubarak, Emad Alsusa, Mohamad Khattar Awad
Performance Analysis of Index Modulation Based Multiple Access Under Imperfect Channel Estimation,
Abdullateef Almohamad, Saud Althunibat, Marwa Qaraqe, Raed Mesleh, Mazen Hasna
Secure Performance of DF Relaying in Cooperative NOMA over Rician Fading Channels,
Nesrine Zaghdoud, Adel Ben Mnaouer, Wided Hadjalouane, Hatem Boujemaa, Farid Touati
HARQ performance over massive MIMO channels using chase combining and CZA pilot decontamination,
Maroua Boudaya, Inès Kammoun, Mohamed Siala

Keynote Talk Session

8 am - 9 am

Visible Light Communication System Relay-Assisted VLC and Underwater VLC Communication systems*Khalid Qaraqe**Texas A&A University at Qatar, Qatar*

Invited Talk Session : UAV

9 am -10 am

ERID: A Deep Learning based Approach Towards Efficient Real-Time Intrusion Detection for IoT,*Murao Lin, Baokang Zhao, Qin Xin***Energy Efficient Wireless Body Area Networks: Proximity-based Clustering in Medical Implants,***Muhammad Usman, Marwa Qaraqe, Muhammad Rizwan Asghar, Imran Shafique Ansari*

Coffee break

Tutorial Session : UAV for 6G

10:30am-11:30am

Flying Platforms for 6G: Global Connectivity*Muhammed Zeeshan Shakir* and Mohamed-Slim Alouini***** University of the West of Scotland UWS-U.K*

Special Session: Blockchain

11:30am-13 pm

Energy-Efficient dynamic clustering for IoT applications: A Neural Network Approach,*Li Manman, Qin Xin, Pratik Goswami, Amrit Mukherjee, Yang Lixia***CNN for object recognition implementation on FPGA using PYNQ framework,***Meriam Dhouibi, Ahmed Karim Ben Salem, Slim Ben Saoud***A trust-aware micropayment system for data muling in cloud environment: a Blockchain based approach,***Soumaya Bel Hadj Youssef, Nouredine Boudriga, Slim Rekhis***Diabetes Analytics and Recommendation Engine (DARE),***Joe F Samuel, Zied Bouida, Pooria Shafia, Mohamed Hozayen, Leen Yassin Kassab, Lama Yassin Kassab, Mohamed IbnKhala***Assessing Trustworthiness of IoT-Health Devices in Hospital Environments,***George Hadjichristofi, George Varveris, Konstantinos Katzis,***Blockchain for 5G and IoT: Opportunities and Challenges,***Tharaka Mawanane Hewa, Anshuman Kalla, Avishek Nag, Mika E Ylianttila, Madhusanka Liyanage*

Lunch break