

IEEE ComNet 2020

October 28 – 30, 2020

PROGRAM

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Higher School of Communication of Tunis

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École Doctorale en Technologies
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Keynotes Talk Session

Chair Prof. Mounir Frikha

8 am - 9 am

Talk 1 : Extreme URLLC*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

Chair Prof. Blehassen Zouari

10:15am-12:15
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,
Nauman Aslam, Muhammad Khalid, Liang Wang

Native SDN Intrusion Detection using Machine Learning,
Lotfi Mhamdi, Mohd Sani Bin Mat Isa

Lunch break

Invited Talk Session

Chair Prof. Mounir Frikha

1:30 pm – 2:30
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 M. Abdallah

Regular technical Session

Chair Prof. Nabil Tabbane

2:30 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

How much can Fog Computing enhance performances of heterogeneous delay-sensitive services in Smart Cities,
Amel Ksentini, Maha Jebalia, Sami Tabbane

Design of a Metamaterial Terahertz Resonant inclusion for 5G Applications,
Bouthaina Smari, Mondher Labidi, Fethi Choubani

Information-Centric Networking Challenges and Opportunities in Service Discovery: A Survey,
Armelle Noulapeu Ngaffo, Walid El Ayeb, Zied Choukair

Coffee break

Regular technical Session

Chair Prof. Mohamed Siala

4:30 pm- 6:15
pm

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 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, Khaled M. Rabie, Rupak Kharel, Osamah S. Badarneh, Galymzhan Nauryzbayev, Xingwang Li, Sultangali Arzykulov, Omprakash Kaiwartya

Keynote Talk Session

Chair Prof. Sami Tabbane

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

Chair Prof. Sami Tabbane

10:15am -12:15am

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

Chair Prof. Zied Choukair

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

Chair Prof. Zied Choukair

3 pm – 4:30 pm

Efficient SDN Controller for Safety Applications in SDN-Based Vehicular Networks: POX, Floodlight, ONOS or OpenDaylight?*Karima Smida, Hajer Tounsi, Ye-Qiong Song, Mounir Frikha***Genetic Algorithm based Resource Allocation for V2X Communications,***Brahmi Ibtissem, Hend Koubaa Sellami, 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 A. 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

Chair Prof. Zied Choukair

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***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 Omar 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*

Invited Talk Session : UAV

9 am -10 am

Energy Efficient Wireless Body Area Networks: Proximity-based Clustering in Medical Implants,
*Muhammad Usman, Marwa Qaraqe, Muhammad Rizwan Asghar, Imran Shafique Ansari***ERID: A Deep Learning based Approach Towards Efficient Real-Time Intrusion Detection for IoT,**
*Murao Lin, Baokang Zhao, Qin Xin***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-1:30 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 Rekkhis***Diabetes Analytics and Recommendation Engine (DARE),***Joe F Samuel, Zied Bouida, Pooria Shafiq, 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***Closing****End of Sessions**