

CommNet'22 Program

(*) Note: All times are GMT+1

<i>Monday December 12, 2022</i>	
08:45-09:15	<p style="text-align: center;">Opening Speech</p> <ul style="list-style-type: none"> • Prof. Faissal El Bouanani, ENSIAS, Mohammed V University of Rabat, Morocco (General Chair) • Prof. Mohamed-Slim Alouini, KAUST, Kingdom of Saudi Arabia (Steering Committee Chair) • Prof. George K. Karagiannidis, Aristotle University of Thessaloniki, Greece (Steering Committee Chair) • Prof. Ilham Berrada, ENSIAS, Mohammed V University of Rabat, Morocco (ENSIAS College Dean) • Prof. Francisco Javier López-Martínez, University of Málaga, Spain (TPC Chair)
9:15-10:00	<p style="text-align: center;">Plenary Speaker 1</p> <ul style="list-style-type: none"> • Speaker: Prof. Tareq Al-Naffouri, KAUST, Kingdom of Saudi Arabia • Title: “<i>Towards Robust & Accurate Localization: A Manifold Optimization Approach</i>” • <u>Session Chair:</u> Prof. Marwa K. Qaraqe, Hamad Bin Khalifa University, Doha, Qatar
10:00-13:15	Technical Sessions
10:00-11:30	<p style="text-align: center;">Session I: Networking & Security 1</p> <ul style="list-style-type: none"> • <u>Session Chair:</u> Prof. Maria Julia Fernandez-Getino Garcia, Carlos III University of Madrid, Madrid, Spain
11:30-13:15	<p style="text-align: center;">Session II: Networking & Security 2</p> <ul style="list-style-type: none"> • <u>Session Chair:</u> Prof. Mohamed Chergui, CRMEF, Kenitra, Morocco
Break	
14:00-16:45	<p style="text-align: center;">Panel: “6G for Good”</p> <ul style="list-style-type: none"> • <u>Panel Moderator:</u> Prof. Mohamed-Slim Alouini, KAUST, Kingdom of Saudi Arabia
16:45-17:30	<p style="text-align: center;">Plenary Speaker 2</p> <ul style="list-style-type: none"> • Speaker: Prof. Alain Mourad, InterDigital, Wilmington, USA • Title: “<i>A perspective on the roadmap to 6G</i>” • <u>Session Chair:</u> Prof. Ana García Armada, Carlos III University of Madrid, Madrid, Spain

Tuesday December 13, 2022	
08:30-10:15	Technical Session
	<p>Session III: PHY & Performance Analysis 1</p> <ul style="list-style-type: none"> • <u>Session Chair:</u> Prof. Azeddine Elhassouny, ENSIAS, Mohammed V University of Rabat, Morocco
10:15-11:00	<p><u>Plenary Speaker 3</u></p> <ul style="list-style-type: none"> • Speaker: Prof. Petar Popovski, Aalborg University, Denmark • Title: “<i>Time and Space in Wireless Connectivity towards 6G</i>” • <u>Session Chair:</u> Dr. Mounia Bouabdellah, ENSIAS, Mohammed V University of Rabat, Morocco
11:00-13:00	Technical Session
	<p>Session IV: PHY & Performance Analysis 2</p> <ul style="list-style-type: none"> • <u>Session Chair:</u> Dr. Maryam Olyae, University of Málaga, Spain
Break	
14:00-14:45	<p><u>Plenary Speaker 4</u></p> <ul style="list-style-type: none"> • Speaker: Dr. Sennur Ulukus, University of Maryland, USA • Title: “<i>Timeliness as a semantic measure in 6G goal oriented communications</i>” • <u>Session Chair:</u> Dr. Kemal Davaslioglu, University of Maryland, USA
14:45-15:30	<p><u>Plenary Speaker 5</u></p> <ul style="list-style-type: none"> • Speaker: Prof. İsmail Güvenç, NC State University, North Carolina, USA • Title: “<i>Aerial Experimentation and Research Platform on Advanced Wireless</i>” • <u>Session Chair:</u> Dr. El Mehdi Illi, Hamad Bin Khalifa University, Doha, Qatar
15:30-17:00	Technical Sessions
	<p>Session V: PHY & Performance Analysis 3</p> <ul style="list-style-type: none"> • <u>Session Chair:</u> Dr. El Mehdi Illi, Hamad Bin Khalifa University, Doha, Qatar
17:00-18:30	<p>Session VI: Smart Applications 1</p> <ul style="list-style-type: none"> • <u>Session Chair:</u> Prof. Fouad Ayoub, CRMEF, Kenitra, Morocco

<i>Wednesday December 14, 2022</i>	
08:30-09:15	<p style="text-align: center;">Plenary Speaker 6</p> <ul style="list-style-type: none">• Speaker : Prof. Mohammad-Ali Khalighi, Ecole Centrale Marseille, Marseille, France• Title: “<i>Augmenting Internet of Underwater Things by Optical Wireless Communications</i>”• <u>Session Chair:</u> Prof. Francisco Javier López-Martínez, University of Málaga, Spain
09:15-11:00	Technical Sessions
	<p style="text-align: center;">Session VII: PHY & Performance Analysis 4</p> <ul style="list-style-type: none">• <u>Session Chair:</u> Prof. Marwa K. Qaraqe, Hamad Bin Khalifa University, Doha, Qatar.
11:00-12:45	<p style="text-align: center;">Session VIII: Smart Applications 2</p> <ul style="list-style-type: none">• <u>Session Chair:</u> Prof. Osamah Badarneh, German Jordanian University, Madaba, Jordan
12:45-13:00	Closing Speech

Detailed program

Monday December 12, 2022

Opening Speech - (08:30-09:15)

- **Prof. Faissal El Bouanani**, ENSIAS, Mohammed V University of Rabat, Morocco (**General Chair**)
- **Prof. Mohamed-Slim Alouini**, KAUST, Kingdom of Saudi Arabia (**Steering Committee Chair**)
- **Prof. George K. Karagiannidis**, Aristotle University of Thessaloniki, Greece (**Steering Committee Chair**)
- **Prof. Ilham Berrada**, ENSIAS, Mohammed V University of Rabat, Morocco (**ENSIAS College Dean**)
- **Prof. Francisco Javier López-Martínez**, University of Málaga, Spain (**TPC Chair**)

Plenary Speaker 1- (9:15-10:00)

- **Speaker: Prof. Tareq Al-Naffouri**, KAUST, Kingdom of Saudi Arabia
- **Title:** “*Towards Robust & Accurate Localization: A Manifold Optimization Approach*”
- **Session Chair:** **Prof. Marwa K. Qaraqe**, Hamad Bin Khalifa University, Doha, Qatar

Session I - (10:00-11:30): Networking & Security 1

Session Chair: **Prof. Maria Julia Fernandez-Getino Garcia**, Carlos III University of Madrid, Madrid, Spain

1570820342: “Drive-Charge Dilemma in Electric Mobility: Price of Anarchy and Data Analytics Standpoint”, **Zineb Mahrez** (National High School for Electricity and Mechanics, Morocco); **Essaid Sabir** (University of Quebec at Montreal, Canada); **Walid Saad** (Virginia Tech, USA) and **Elarbi Badidi** (UAE University, United Arab Emirates)

1570844089: “Multi-Step Attack Detection and Mitigation Enhancing In-Network Flow Classification”, **Christoph Hardegen**, **Sebastian Rieger** and **Timo Geier** (Fulda University of Applied Sciences, Germany)

1570845398: “Measurement of Dissemination Characteristics of LTE-V2X and ITS-G5 for Safety-Critical Vehicle-To-Vehicle Communication” **Jochen Stellwagen**, **Matthias Deegener** (Frankfurt University of Applied Sciences, Germany) and **Michael Kuhn** (University of Applied Sciences Darmstadt, Germany)

1570850153: “Application of Multi-Pronged Monitoring and Intent-Based Networking to Verticals in Self-Organising Networks”, **Carolina Fernandez**, **Andrés Cárdenas**, **Sergio Giménez Antón** (i2CAT Foundation, Spain); **Juncal Uriol** and **Mikel Serón Esnal** (Vicomtech, Spain); **Carlos Giraldo-Rodríguez** (Gradiant, Spain)

1570861982 “A Classifier to Detect Number of Machines Performing DoS Attack Against Arduino Oplà Device in IoT Environment” **Mahmoud Al-Maani**, **Gayle Frisbie**, **Frederick Shippy**, **Mario Tiseo**, **Omar Darwish** and **Munther Abualkibash** (Eastern Michigan University, USA)

Session II - (11:30-13:15): Networking & Security 2

- **Session Chair: Prof. Mohamed Chergui**, CRMEF, Kenitra, Morocco

1570848217 “Improving the Deployment of Multi-Tenant Containerized Network Function Acceleration”
, **Timo Geier** and **Sebastian Rieger** (Fulda University of Applied Sciences, Germany)

1570850069: “An Advanced Comparative Study of Routing Protocols in LoRaWAN”, **Adil Hilmani** (ENSEM, Morocco), **Aouad Siham**(ENSIAS, Mohammed V University of Rabat) and **Abderrahim Maizate** (RITM-ESTC / CED-ENSEM, University Hassan II & STIC Laboratory University Chouaib Doukkali, Morocco)

1570850105: “Deep Reinforcement Learning Based Anti-Jamming Using Clear Channel Assessment Information in a Cognitive Radio Environment”, **Abubakar Sani Ali** (Khalifa University, United Arab Emirates); **William T. Lunardi**, **Lina Bariah**, **Michael Baddeley**, **Martin Andreoni Lopez**, **Jean-Pierre Giacalone** (Technology Innovation Institute, United Arab Emirates) and **Sami Muhaidat** (Khalifa University, United Arab Emirates)

1570850118: “Characterizing Frequency Dependence of Calibration Coefficients for Antenna Arrays” **Haofeng Peng**, **Yongwei Zhang** and **Xianyang Lv** (Nantong University, China)

1570862085 “High Throughput Implementation of AES Algorithm Using Radiation-Hardened FPGA for Secure LST-SW Algorithm” **Assaad EL Makhloufi**; **Samir El Adib** and **Naoufal Raissouni** (National School for Applied Sciences, University Abdelmalek Essaadi, Morocco)

1570861606 “Fractal Analysis Segmentation of Medical Images: Application to Breast Cancer Mammography Image” **Fatima Ghazi** (Ibn Tofail University, Morocco), **Fouad Ayoub** (LaREAMI, CRMEK, Kenitra, Morocco), **Aziza Benkuider** (Ibn Tofail, Morocco); **Mohamed Chergui**(LaREAMI, CRMEK, Kenitra, Morocco) and **Khalil Ibrahimi** (Ibn Tofail University, Morocco)

Break

Panel: “6G for Good” - (14:00-16:45)

- **Panel Moderator: Prof. Mohamed-Slim Alouini**, KAUST, Kingdom of Saudi Arabia

Panelists:

- Prof. **Ashutosh Dutta**, Johns Hopkins University, USA
- Prof. **Luca Chiaraviglio**, University of Rome “Tor Vergata”, Italy
- Prof. **Eduard A. Jorswieck**, Technische Universität Braunschweig
- Prof. **Harald Haas**, University of Strathclyde, Glasgow, U.K.

Plenary Speaker 2- (16:45-17:30)

- **Speaker: Prof. Alain Mourad**, InterDigital, Wilmington, USA
- **Title: “A perspective on the roadmap to 6G”**
- **Session Chair: Prof. Ana García Armada**, Carlos III University of Madrid, Madrid, Spain

Tuesday December 13, 2022

Session III - (08:30-10:15): PHY & Performance Analysis 1

- **Session Chair:** Prof. **Azeddine Elhassouny** ENSIAS, Mohammed V University of Rabat, Morocco

1570840989: “Fast Modular Exponentiation Methods for Public-Key Cryptography”, **Khalid El Makkaoui** (Mohammed I University, Morocco); **Youssef Lamriji** (Chouaib Doukkali University, Morocco); **Ibrahim Ouahbi** (Mohammed I University, Morocco); **Omayma Nabil** (Mohammed I University, Morocco); **Anas Bouzahra** (Mohammed I University, Morocco); **Abderrahim Beni-Hssane** (Chouaib Doukkali University, Morocco)

1570850683 “A Compact Multi-Band PIFA Array Operating in the GPS L1/GSM1800/GSM1900/UMTS/LTE2300/2.4-GHz WLAN/LTE2500 Bands for Wireless Terminals” **Raefat Jalila El bakouchi** (Cadi Ayyad University & ISGA, Morocco) and **Abdelilah Ghammaz** (Cadi Ayyad University, Morocco)

1570850923 “Construction of Some New Quantum Codes” **Mohammed Sabiri** (Moulay Ismail University, Morocco)

1570850020 “Indoor Factory RSRP and RTT Measurements at 3.7 GHz: Simulator and Analysis”, **Kiraseya Preusser, Phillip Lölver, Marcel Garling** and **Anke Schmeink** (RWTH Aachen University, Germany)

1570854206 “Optimal M-QAM Rotated Constellation Angle in DVB-T2” **Daniel Agani** (UAC, Benin); **Honfoga Anne-Carole** (University of Mons, Belgium); **Patrick Sotindjo** (Ecole Normale Supérieure de l'Enseignement Technique & Université Nationale des Sciences Techniques, Benin)

Plenary Speaker 3- (10:15-11:00)

- **Speaker:** Prof. **Petar Popovski**, Aalborg University, Aalborg, Denmark
- **Title:** “*Time and Space in Wireless Connectivity towards 6G*”
- **Session Chair:** Dr. **Mounia Bouabdellah**, ENSIAS, Mohammed V University of Rabat, Morocco

Session IV- (11:00-13:00): PHY & Performance Analysis 2

- **Session Chair: Dr. Maryam Olyae**, University of Málaga, Spain

1570854248 “Statistical Characterization of the Multicenter Two-Wave Fading Model” **Maryam Olyae** (Telecommunication Research Institute (TELMA), Universidad de Málaga, Spain); **Juan P. Peña-Martín** (University of Málaga, Spain); **Francisco Javier Lopez-Martinez** (University of Málaga, Spain) and **Juan M. Romero-Jerez** (University of Malaga, Spain)

1570855505 “Analysis of Intra-Cell Handover Procedures into the Power Consumption During a Voice LTE Call over IMS Network” **Caio Bruno Bezerra de Souza**, **Jussif Junior Abularach Arnez**, **Renata Kellen Gomes Dos Reis** and **Maria Lima Damasceno, Vinicius Batista Pereira** (Sidia Institute of Science and Technology, Brazil) and **Janisley Oliveira de Sousa** (SIDIA, Brazil)

1570862122 “Broadband Antenna Design with Multiple Slots for Satellite Applications” **Fatim-zahra Bennioui**, **Asma Khabba**, **Jamal Amadid**, **Saida Ibnyaich** (Cadi Ayyad University, Morocco); **Zeroual Abdelouhab** (Cadi Ayyad University, Morocco) and **Layla Wakrim** (Higher Institute of Engineering & Business (ISGA), Morocco)

1570863226 “OPNET Implementation and Performance Evaluation of the CoDel AQM Algorithm” **Ahmad F. Al-allaf** (Northern Technical University & Mosul, Iraq)

1570863739 “Cubic Spline-Based Approximation for the Sum of i.i.d. Lognormal Distributions” **El-Houcine El Baqqaly** (Mohammed First University of Oujda, Morocco); **Faissal El Bouanani** (ENSIAS, Mohammed V University in Rabat, Morocco) and **Zakaria El Allali** (Mohammed First University of Oujda, Morocco)

1570853660 “A New Iterative Threshold Decoding Algorithm for Non-Binary OSMLD Codes” **Zakaria M'rabet** (ENSIAS, Mohammed V University in Rabat, Morocco), **Fouad Ayoub** (LaREAMI, CRMEK, Kenitra, Morocco) and **Mostafa Belkasmi** (ENSIAS - Mohammed V University in Rabat, Morocco)

1570852581 “Improving the IDS for BoT-IoT Dataset-Based Machine Learning Classifiers”, **Khalil Ibrahim** and **Hafsa Benaddi** (University of Ibn Tofail, Morocco)

Plenary Speaker 4- (14:00-14:45)

- **Speaker:** **Dr. Sennur Ulukus**, University of Maryland, Maryland, USA
- **Title:** “*Timeliness as a semantic measure in 6G goal oriented communications*”
- **Session Chair:** **Dr. Kemal Davaslioglu**, University of Maryland, USA

Plenary Speaker 5- (14:45-15:30)

- **Speaker:** **Prof. İsmail Güvenç**, NC State University, North Carolina, USA
- **Title:** “*Aerial Experimentation and Research Platform on Advanced Wireless*”
- **Session Chair:** **Dr. El Mehdi Illi**, Hamad Bin Khalifa University, Doha, Qatar

Session V - (15:30-17:00): PHY & Performance Analysis 3

- **Session Chair: Dr. El Mehdi Illi**, Hamad Bin Khalifa University, Doha, Qatar

1570864573 “On a double parameterized relative operator entropy and related properties” **Lahcen Tarik, Abdenbi El Hilali** (University Ibn Tofail Kenitra, Morocco); **Mohamed Chergui; Fouad Ayoub** (LaREAMI, CRMEF, Kenitra, Morocco) and **Bouazza El Wahbi** (Ibn Tofail University, Morocco);

1570860998 “Uplink Scheduler for 5G Enhanced Mobile Broadband Communications” **Asmae Mamane** (Sidi Mohamed Ben Abdellah University, Morocco); **Mohammed Fattah** (University Moulay Ismail, Morocco); **Mohammed El Ghazi** (Sidi Mohamed Ben Abdellah University, Morocco) and **Moulhime El Bekkali** (Sidi Mohamed Ben Abdellah University, Morocco)

1570861954 “UAV-Based System Energy Efficiency Optimization for Air Pollutant Monitoring” **Hassan Saadaoui** and **Faissal El Bouanani** (ENSIAS, Mohammed V University in Rabat, Morocco)

1570861963 “Joint Rate and Relaying Nodes Allocation for Orthogonal MAMRN” **Ali Al Khansa** (Orange labs, France & University of Avignon, France); **Raphael Visoz** (Orange Labs, France); **Yezekael Hayel** (LIA, University of Avignon, France) and **Samson E Lasaulce** (CRAN (CNRS - University of Lorraine), France)

Session VI - (17:00 -18:30): Smart Applications 1

- **Session Chair: Prof. Fouad Ayoub**, CRMEF, Kenitra, Morocco

1570862038: “An Efficient Approach for Improving Customer Sentiment Analysis in the Arabic Language Using an Ensemble Machine Learning Technique”, **Nouri Hicham, Sabri Karim** and **Habbat Nassera** (Hassan II University, Morocco)

1570862096 “Speech Emotion Recognition Using Energies in Six Bands and Multilayer Perceptron on RAVDESS Dataset” **Abdellah Agrima** (Faculty of Sciences & Technics, Hassan I University, Morocco), **Aziza Barakat, Ilham Mounir** (Graduate School of Technology-Safi, Cadi Ayyad University, Morocco), **Abdelmajid Farchi** (Faculty of Sciences & Technics, Hassan I University, Morocco); **Laila Elmaazouzi** and **Badia Mounir** (Graduate School of Technology-Safi, Cadi Ayyad University, Morocco)

1570862112 “Multiband SIW Cavity-Backed Antenna Using Inverted U-Shaped Slot and Metallic Strip for WIMAX/WLAN Applications” **Dounia Chrij, Asma Khabba, Zakaria El Ouadi, Jamal Amadid, Saida Ibnyaich** and **Zeroual Abdelouhab** (Cadi Ayyad University, Morocco)

1570850887 “Predicting Late Delivery in Supply Chain 4.0 Using Feature Selection: A Machine Learning Model”, **Houria Abouloifa** and **Mohamed Bahaj** (Hassan I University of Settat, Morocco)

1570862199: “Degeneration Vs Classical of Simulated Annealing Algorithm: Performance Analysis” **Bouchaib Aylaj** (CRMEF, Rabat, Morocco) and **Said Nouh** (Faculty of Sciences Ben M'sik, Morocco)

Wednesday December 14, 2022

Plenary Speaker 6- (08:30-09:15)

- **Speaker: Prof. Mohammad-Ali Khalighi**, Ecole Centrale Marseille, Marseille, France
- Title: *“Augmenting Internet of Underwater Things by Optical Wireless Communications”*
- **Session Chair: Prof. Francisco Javier López-Martínez**, University of Málaga, Spain

Session VII - (09:15-11:00): PHY & Performance Analysis 4

- **Session Chair: Prof. Marwa K. Qaraqe**, Hamad Bin Khalifa University, Doha, Qatar.
1570862210 “Age-Of-Information in Networks with Periodic Workflow” **Richard Schoeffauer** (Free University of Berlin, Germany) and **Gerhard Wunder** (Freie Universität Berlin & AG Cybersecurity and AI, Germany)
1570862238 “Static Classification of IoT Malware Using Grayscale Image Representation and Lightweight Convolutional Neural Networks” **Hichem Belguendouz** (University of Oran 1 Ahmed Ben Bella, Algeria), **Hachem Guerid** and **Mejdi Kaddour** (Université des Sciences et de la Technologie d’Oran, Algeria);
1570862299 “Performance Comparison Between Bluetooth Mesh Network with and Without Preemption in Relay Nodes” **Marco Mercuri** (Polytechnic University of Marche, Italy); **Lorenzo Palma**, **Alberto Belli**, **Sara Raggiunto** and **Paola Pierleoni** (Università Politecnica delle Marche, Italy)
1570862324 “Melanoma Lesion Recognition Using Deep Convolutional Neural Network and Global Average Pooling” **Samira Lafraxo** (Ibn Zohr University, Morocco); **Mohamed El Ansari** (University of Moulay Ismail, Morocco) and **Lahcen Koutti** (Ibn Zohr University, Morocco)
1570862739 “ARIS for Safeguarding MISO Wireless Communications: A Deep Reinforcement Learning Approach” **Aly Sabri Abdalla** and **Vuk Marojevic** (Mississippi State University, USA)
1570846666: “Low-SNR Modulation Recognition Based on Deep Learning on Software Defined Radio”, **Husam Y Alzaq** (Istanbul Technical University & Biruni University, Turkey); **Jilan Alrehaili** (Istanbul Technical University, Turkey) and **B.Berk Ustundag** (Istanbul Technical University, Turkey)

Session VIII - (11:00-12:45): Smart Applications 2

- **Session Chair: Prof. Osamah Badarneh**, German Jordanian University, Madaba, Jordan
1570858619 “Facial Emotions Recognition Using ViT and Transfer Learning” **Rachid Bousaid**, **Mohamed El Hajji** and **Youssef Es-Saady** (Université Ibn Zohr, Morocco)
1570854955 “An Intelligent Anti-Cheating Model in Education Exams” **Siham Essahraoui**, **Mohammed Amine El mrabet**, **Mouncef Filali Bouam**, **Khalid El Makkaoui** and **Ahmed Faize** (Mohammed First University, Nador, Morocco)
1570856057 “Three Folded U-Shaped Resonators with Good Harmonics Suppression for S-Band Radar Applications” **Zakaria El Ouali**, **Jamal Amadid**, **Asma Khabba**, **Abdessalam El Yassini**, **Saida Ibnyaich** and **Zeroual Abdelouhab** (Cadi Ayyad University, Morocco)
1570862234 “A Tool for Home Monitoring in Parkinson's Disease” **Marco Mercuri**, **Francesco Pio Cecca**, **Sara Mattioli** (Polytechnic University of Marche, Italy); **Sara Raggiunto**, **Lorenzo Palma**, **Alberto Belli** (Università Politecnica delle Marche, Italy); **Michele Paniccia** (Istituto di Riabilitazione Santo Stefano, Italy) and **Paola Pierleoni** (Università Politecnica delle Marche, Italy)
1570862296 “Smart Statistics for Smart Cities: The Role of Big Data” **Rachid Ettaoufiki** (Information Sciences School, Rabat & MIKS Laboratory, Morocco); **M'barek El Haloui** (Information Sciences School, Morocco); **Mina El Maallam** (Information Sciences School, Rabat, Morocco)
1570866018: “A Comprehensive Survey of the R-CNN Family for Object Detection” **Oussama Hmidani** and **El Mehdi Ismaili Alaoui** (Moulay Ismail University, Morocco)
1570850185 “Ensemble Transfer Learning for Brain Tumor Classification”, **Nihal Remzan**, **Karim Tahiry** and **Abdelmajid Farchi** (Hassan I University of Settat, Morocco)

Closing Speech - (12:45-01:00)