

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA

Ministry Of Higher Education and Scientific Research

University 8 May 1945 Guelma

Telecommunications Institute



1st International Workshop on Telecommunications «IWT'2024»

1st & 2nd December 2024, Guelma, Algeria

Preliminary Program Schedule

December 1 st , 2024	
08:00-09:00	Reception and Registration of the participants
09:00-09:30	Opening Ceremony (Conference room, central Library, old campus)
09:30-10:30	Opening plenary: (Conference room) Title: Signal Separation: From Model Driven Approaches to Data Driven Approaches <u>Pr. Adel BELOUHRANI</u> IEEE Fellow, Algerian Academy of Science and Technology Member Ecole Nationale Polytechnique, Algiers, Algeria Chairs: Pr. Fayçal DJEFFAL Pr. Salah REDADAA
10:30-11:00	Coffee break
11:00-12:00	Plenary Session 2: (Conference room) Title: Research Activities in the Field of Space Telecommunications <u>Dr. Lahcene HADJ ABDERRAHMANE</u> Satellite Development Center (CDS), ASAL, Algeria Chairs: Pr. Adel BELOUHRANI Pr. Djamel ABED
12:00-14:00	Lunch and Networking
Oral Sessions	
14:00-16:00	Session O1 : Wireless Communications and Networks (Conference room+ Lecture room 1) Chairs: Pr. Hocine BOUROUBA, Dr. Mohamed Aymen LABIOD, Dr. Samir IKNI, Dr. Kheireddine ABAINIA and Dr. Hakim Doghmane
	Session O2 : Antennas and Microwave Engineering (Lecture room 2) Chairs : Pr. Ahcene BOUALLEG, Pr. Djamel ABED, Dr. Abderrezak KHALFALLAOUI and Dr Abdelhalim CHAABANE
	Session O3 : Optical Telecommunications (Lecture room 2) Chairs: Dr. Lahcene HADJ ABDERRAHMANE, Dr. Leila GRAINI and Dr. Abderezzaq HALASSI.
16:00-17:30	Visit to « Telecommunications Institute of Guelma University»
19:30-21:00	Diner and Discussions

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December 2nd, 2024

09:00-10:00	<p>Plenary Session 3: (Conference room)</p> <p>Title: New Approaches for Modeling and Elaboration of Optoelectronic Devices: Sensing and Photovoltaic Applications</p> <p><u>Pr. Fayçal DJEFFAL</u> University of Batna 2, Algeria</p> <p>Chairs: Dr. Fayçal BOULSINA Dr. Leila GRAINI</p>
10:00-10:30	Coffee break
10:30-11:30	<p>Plenary Session 4: (Conference room)</p> <p>Title: Enhancing Quality of Experience (QoE) in 5G and Beyond Networks through Innovative Network Architectures</p> <p><u>Dr. Mohamed-Aymen LABIOD</u> Paris-Est Créteil University (UPEC), France</p> <p>Chairs: Pr. Ahcene BOUALLEG Dr. Farouk BOUMEHREZ</p>
11:30-12:00	Round table and closing of the workshop
12:00	Workshop Photo
12:00-13:15	Lunch
13:15-19:00	Cultural program (Roman theater visit, Hammam Debagh "Chellala", ...)
19:30-21:00	Diner

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Workshop program

First Day -December 1st, 2024-

08:00-09:00 Reception and Registration of the participants

09:00-09:30 Opening Ceremony (Conference room, central Library, old campus)

09:30-10:30 *Opening plenary (Conference room)*

"Signal Separation: From Model Driven Approaches to Data Driven Approaches,"

Pr. Adel BELOUHRANI. Ecole Nationale Polytechnique, Algeria.

Chairs: Pr. Fayçal DJEFFAL, Pr. Salah REDADAA

10:30-11:00 Coffee Break

11:00-12:00 *Plenary Session 2 (Conference room)*

"Research Activities in the Field of Space Telecommunications,"

Dr. Lahcene Hadj Abderrahmane. Satellite Development Center, ASAL, Algeria.

Chairs: Pr. Adel BELOUHRANI, Pr. Djamel ABED

12:00-14:00 Lunch and Networking

Oral Sessions

Session 01 A (Lecture room 1): Wireless Communications and Networks

Chairs: Dr. Kheireddine Abainia and Hakim Doghmane

14:00-14:20 : **Wheat disease monitoring system using deep learning**, Ines Abdelaziz (Khenchela Univ), Farouk BOUMEHREZ (Khenchela Univ), Nouredine Doghmane (Annaba Univ), Abdelhakim Sahour (Khenchela Univ), Bekhouche Abdelaali (Khenchela Univ).

14:20-14:40: **A Machine Learning-Based Smart Irrigation System with IoT and LoRa for Greenhouse Automation**, Aouissi Ferial , Farouk BOUMEHREZ , Abdelhakim Sahour. Khenchela Univ.

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14:40-15:00: Apple Scab detection using YOLO algorithm: comparison between YOLOv4 and YOLOv7, BRAI SADDAM, ABBASSI Taki eddine, Yacine MESSAI, Abdelaali, BEKHOUCHE, Abdelhakim, SAHOUR, Khenchela Univ.

15:00-15:20: AI-Based Fire Detection for Firefighting Robots, Oussama Rezaiguia (Guelma Univ), Abdesselam Babouri (Guelma Univ), Halim CHOUABIA (Guelma Univ), Ameur Chaabna (USTHB); Xun ZHANG (ISEP, Paris).

15:20-15:40: Leveraging OOB to Fine-Tune ABG Model for Accurate Path Loss Prediction above 24 GHz in 5G Networks, Yacine MESSAI (Khenchela Univ), Fouzia Maamri (Khenchela Univ), Brai Saddam (Khenchela Univ), Hanane djellab (Tebessa Univ), Hiba Ines Bitat (Khenchela Univ).

Session O1 B (Conference room): Wireless Communications and Networks

Chairs: Pr. Hocine BOUROUBA, Dr. Mohamed Aymen Labiod, and Dr. Samir IKNI

14:00-14:20: Enhanced QoS Routing Protocols for Vehicular Ad Hoc Networks, Boukenadil Bahidja. Univ Center Elbayadh.

14:20-14:40: Enhancing RPL based IoT Network Performances Through Improved Routes Selection Approach, Mohamed Achref Boukhobza (Univ Center El-Bayadh), Mehdi Rouissat (Univ Center El-Bayadh); Belkheir Mohammed (Univ Center El-Bayadh); Allel Mokaddem (Univ Center El-Bayadh); Pascal Lorenz (Haute Alsace Univ, Mulhouse).

14:40-15:00: Enhanced DDoS Detection Using Hybrid DNN-AE Networks, Asma Djama, Maazouz Mohamed, Hamza Kheddar. (Medea Univ).

15:00-15:20: Real time video transmission with terrestrial and non-terrestrial networks. Hana Elhachi (Guelma Univ), Farouk Boumehrez (Khenchela Univ), Mohamed Labio (Paris univ); salah redadaa (Guelma Univ).

15:20-15:40: Cascade Chaotic System With Applications, Sarra Mekhancha, Abed Djamel, Ahcen Boualleg. Guelma Univ.

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15:40-16:00: A New Method To Reduce The PAPR Ratio For Systems Based On UFMC Modulation Technique, Dheya Alhaq Al qudami, Siham Aissani, Halim Chouabia, Mohammed Guerroui. Guelma Univ.

Session O2 A (Lecture room 2): Antennas and Microwave Engineering

Chairs: Pr. Ahcene Boualleg, and Dr. Abdelhalim Chaabane

14:00-14:20: Applying Genetic Algorithm for Optimizing Return loss of Aperture coupled Microstrip Antenna With an H-shaped Slot in the Ground Plane, Karima Chemachema. Constantine 1 Univ.

14:20-14:40: A High Directivity Tapered Slot Vivaldi Antenna Using Corrugation slots and a Dielectric Lens, Mohammed Guerroui (Guelma Univ), Abdelhalim Chaabane (Guelma Univ); Ahcene boualleg (Guelma Univ); Halim CHOUABIA (Guelma Univ); Dheya Alhaq Al qudami (Guelma Univ), Cherifa Mehadjebia (Batna 2 Univ)

14:40-15:00: Optimizing Next-Generation Wireless Networks: A Multi-Dimensional Approach to System Performance Enhancement, Hiba Ines Bitat (khenchela Univ), Fouzia Maamri (khenchela Univ), Fatima Khelfaoui (khenchela Univ), hanane Djellab (Tebessa Univ), Yacine MESSAI (Khenchela Univ).

15:00-15:20: Design of a Novel Adjustable Microstrip Antenna with Mobile Metallic Switches for Wireless Application, Aouissi Manel (Batna Univ), Titaouine Mohammed (Batna Univ); Adoui Ibtissem (Bordj Bou-Arréridj Univ).

15:20-15:40: Full Analysis of Compact E-shaped Microstrip Antenna for Wireless Communication, Bediaf Akram, Sami Bedra, Mohamed Bedra; Djemai Arar, Djamel Benatia, Tarek Fortaki. Batna 2 Univ.

Session O2 B (Lecture room 3): Antennas and Microwave Engineering

Chairs : Pr. Djamel ABED and Dr. Abderrezak KHALFALLAOUI

15:00-15:20: Resonant characteristics of air gap tuned rectangular microstrip antenna fed through a slot cut into the ground plane, Randa Bedra, Bediaf Akram, Mohamed Bedra, Sami Bedra, Djemai Arar, Tarek Fortaki. Batna 2 Univ.

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15:20-15:40: Design of Compact Double Inverted L-shaped Antenna with Dual-Band for MIMO Systems Applications, Mohamed Bedra, Sami BEDRA, Bediaf Akram, Tarek Fortaki, Djemai Arar, Djamel Benatia. Batna 2 Univ.

15:40-16:00: Resonant characteristics of an inverted equilateral triangular patch using spectral domain approach, Randa Bedra, Mohamed Bedra, Bediaf Akram, Sami BEDRA, Djemai Arar, Tarek Fortaki. Batna 2 Univ.

Session O3 (Lecture room 3): Optical Telecommunications

Chairs: **Dr. Lahcene Hadj Abderrahmane, Dr. Leila Graini and Dr. Abderrazak Hellassi.**

14:00-14:20: Chromatic Dispersion Compensation Using Bragg Grating Networks: Mathematical Analysis and OPTISYSTEM Simulationaper, Abdessamad BENDEHINA, Fayssal MENEZLA, Bahidja Boukenadil. Univ Center, El-Bayadh.

14:20-14:40: An Indoor Li-Fi System Using Solar Cells for Simultaneous Communication and Energy Harvesting, Halim Chouabia (Guelma Univ), Abdesslem Babouri (Guelma Univ), Ameur Chaabna (USTHB), Oussama Rezaiguia (Guelma Univ), Xun ZHANG (ISEP, Paris).

14:40-15:00: Hybrid DWDM-FSO Link Performance Analysis for Robust Next-Generation Connectivity, Hanane Djellab (Tebessa Univ); Oumaima Allaoua (Tebessa Univ); Farouk Boumehrez (Khenchela Univ); Fouzia Mammri (Khenchela Univ); Abdelhakim Sahour (Khenchela Univ); Saidi Riad (Batna 2 Univ).

16:00-17:30 Visit to «Telecommunications Institute of Guelma University»

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Second Day -December 2nd, 2024-

09:00-10:00 *Plenary Session 3 (Conference room)*

"New Approaches for Modeling and Elaboration of Optoelectronic Devices: Sensing and Photovoltaic Applications," Pr. Fayçal Djeflal, University of Batna 2, Algeria.

Chairs : Dr. Fayçal Boulsina, Dr. Leila Graini

10:00-10:30 *Coffee Break*

10:30-11:30 *Plenary Session 4 (Conference room)*

"Enhancing Quality of Experience (QoE) in 5G and Beyond Networks through Innovative Network Architectures," Dr. Mohamed-Aymen Labiod. Paris-Est Créteil University (UPEC), France.

Chairs : Pr. Ahcene Boualleg, Dr. Farouk Boumehrez

11:00-12:00 *Round table and closing of the workshop*

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