"*Conférence Nationale sur les Télécommunications et ses Applications* "

« CNTA 2021 »

Virtual conference
Ain-Témouchent, Algeria,
December 20-21, 2021

Conference program

Link of virtual class:
https://sites.google.com/view/cnta21/programme

Instructions to authors:
• Oral sessions: Authors of oral presentations will have 10 minutes of presentation and 3 minutes for questions.
• Poster sessions: Authors of poster presentations will have 2 minutes for presentation and 2 minutes for questions.

Foreword

It is our real pleasure to welcome you to the first edition of the National Conference on Telecommunications and its Applications (CNTA'21), organized as an online event owing to the current Covid-19 pandemic and live streamed from Ain-Témouchent-Algeria on December 20 – 21, 2021.

CNTA'21 succeeded to attract an outstanding number of participants from scientists, professors, researchers, students and industrial experts in the field of telecommunications who are taking part in this event. A very rich and attractive scientific program is provided by CNTA'21 highlighting recent advances in Network, System and Optical Telecommunication. Several sessions led by researchers are scheduled in the very rich and diversified technical program. The fact that confirms once again this national conference as an essential national forum for exchange, networking and know-how and technology transfer among participants from academia and industry in matters related to telecommunication field.

We would like to express our heartiest thanks and gratitude to all the invited speakers, authors, reviewers and sessions chairs and to all the organizing committee members for the amazing job that contributed to the overwhelming success of this very special edition of CNTA'21.

Dr. Mohammed DEBBAL
Sciences and Technologies Faculty
Ain-Témouchent, Algeria
CNTA'21 General Chairs

Time GMT+1 09h – 12h30	Conference Day 1 : Monday December 20, 2021	
Link :	**https://meet.google.com/amf-xxtp-jez**	
Session Chair : Dr Meradi Abdelhafid & Dr Badir Benkrelifa Lahouaria		
Opening ceremony		
9h – 10h30	**Prof. Abdelkader ZIADI** Rector of the University (Ain-Témouchent, Algeria)	
	Prof. Lahcen BELARBI Dean of the Sciences and Technologies Faculty (Ain-Témouchent, Algeria)	
	Dr. Mohammed FLITTI Vice-Rector of the University (Ain-Témouchent, Algeria)	
	Dr. Zine El-Abidine KAMECHE Vice-Dean of the Sciences and Technologies Faculty (Ain-Témouchent, Algeria)	
	Dr. Mohammed DEBBAL (General Chair) Sciences and Technologies Faculty (Ain-Témouchent, Algeria)	
	Dr. Zohra SLIMANE (OC Chair) Sciences and Technologies Faculty (Ain-Témouchent, Algeria)	
	Prof. Fethallah KARIM (SC Chair) Technologies Faculty (Tlemcen, Algeria)	
Session Chair : Dr Slimane Zohra & Dr Bentaib Samia		
10h30 – 11h10	**PLENARY CONFERENCE**	**Dr Abdelkerim Amari (Senior Application Engineer at VPIphotonics GmbH, Berlin, Allemagne)** Increasing the capacity of optical communication systems
11h10 – 11h50	**PLENARY CONFERENCE**	**Pr. Benadda Belkacem (Université de Tlemcen)** Objets connectés et Intelligence Artificielle pour le bien-être et le développement durable
11h50 – 12h30	**PLENARY CONFERENCE**	**Dr Bemmoussat Chems-Eddine (Université D'Ain-Témouchent)** 5G and its impact on the internet of things

Topic : Optical and Photonic Telecommunications

(Session 1)

Session Chair : Dr Meradi Abdelhafid & Dr Benzina Amina

Time GMT+1 13h30 – 18h	Conference Day 1 : Monday December 20, 2021	
Link	https://meet.google.com/xjm-rxrp-hqc	
1	Haroun Errachid Adardour	Free Space Optical Communication Link (FSO-CL) using an EDFA for Backup CL Applications under Atmospheric Turbulence Effects
2	Missoum Djamel Eddine	Structural and electronic properties of compound ScNiBi
3	Soumia Imane Taleb	A NONDESTRUCTIVE OPTICAL METHOD BASED ON THE FRESNEL-KIRCHHOFF INTEGRAL APPLIES FOR STUDY OF VOLUME DIELECTRIC BODIES.
4	Imene Hacene	An overview of different optical line protection technologies for fiber to the home networks
5	Youcef Driouche	Temporal self-imaging using a continuous quadratic phase birefringent filter
6	Ahlem Assia Harrat	Dispersion comparison of photonic crystal fiber
7	Chamse Eddine Ouadah	Designing of square photonic crystal fiber with high birefringence
8	Amiri Said	Ab Initio Calculations of electronic and optical properties in Sm0.125Ga0.875N/SmN heterostructure for optical devices applications
9	Hichem Chikh-Bled	Manufacture of a photonic crystal optical fiber for sensors applications
10	Zoutat Mounira	Design of a transmission dielectric diffraction grating in the visible region.
11	Fares Kamel Hamlat	Modeling and design of photonic crystal fibers
12	Samir Benhammou	Analyzes the performance of the FTTH system using the WDM technique
13	Narimane Hadjadji	Nonlinearity Compensation in Single Channel PDM-16QAM Coherent Optical System
14	Ismahen Osmani	Optical optimization of microscope eyepiece using zemax® software
15	Ilhem Mired	The impact of geometric imperfections on chromatic dispersion in microstructured fibers

Topic : Telecommunications Systems

(Session 2)

Session Chair : Dr Ferouani Souheyla, Dr Moulessehoul Wassila & Dr Yagoub Réda

Time GMT+1 13h30 – 18h	Conference Day 1 : Monday December 20, 2021	
Link	**https://meet.google.com/tqm-qkor-oao**	
1	Mohammed Guerroui	A Novel Multi-Ring Ultra-Wideband Antenna for Wireless Communication Systems
2	Fayza Bousalah	Miniaturization of patch antennas based on metamaterials for GSM telephone applications.
3	Khouloud Mohammed Belhadj	New design of triband rectangular printed antenna with DGS for mobile communications
4	Wahiba Menasri	Design and FPGA Implementation of Intra Prediction Modes In HEVC/H.265 Codec
5	Fayza Bousalah and Amine Rabah	Circular Polarization Directive Space Antenna Networks.
6	Yamina Belhadef	Design of a ULB diamond monopoly antenna
7	Fatima Zahra Moussa	Rectangular printed antenna with DGS for 5G mobile communications
8	Belgacem Nassima	New 4G Micro Strip Patch Antenna for Smart Phones Communication.
9	Hayet Benosman	Contribution to the Design of Miniaturized Patch Antenna using Complementary Split Ring Resonator Metamaterials
10	Yamani Kouther	Realization and test of RFID patch antenna for SHF band
11	Mohammed Amin Rabah	Miniaturization of printed satellite antenna
12	Djelid Amina	Optimization dual polarization Vivaldi antenna with cone for guiding a missile
13	Rabah Mohammed Amin	Analysis and Design Of Polygonal Antenna by Method of Moments for Ka-band Applications
14	Fatima Zohra Moussa	Design of a rectangular patch antenna based on meta-materials for 5G
15	Tewfik Khiat	Novel hexagonal monopole patch antenna with a circular parasitic resonator for UWB, X-band , Ku-band, WLAN and WiMAX applications
16	Ayad Hanane	MIMO/ Massive-MIMO Precoding Architectures comparison in Multi-User mmWave Systems
17	Souad Berhab	Insert-fed Microstrip Patch Wearable Antenna at ISM band For Body Communications

Topic : Telecommunications Networks

(Session 3)

Session Chair : Dr Bemmoussat Chems-eddine & Dr Souiki Sihem

Time GMT+1 09h – 13h	Conference Day 2 : Tuesday December 21, 2021	
Link	**https://meet.google.com/mtk-zznd-ody**	
1	Nabil Cherif	4G LTE Radio Network Analysis, Design and Simulation
2	Belkacem Imine	A New Variant of McEliece Cryptosystem Based on the Concatenation of Polar Code and CRC code
3	Cheikh Kherici	Performances study of a GPON system with the coexistence of XGS-PON, NG-PON2 PtP-WDM and RF-Video systems.
4	Assia Outamazirt	A Novel Queuing Model for Maximizing Profit of Data Centers with Heterogeneous Services
5	Hassan Aldeeb	Design of an Intelligent System for Controlling Electrical Appliances and Equipment for Homes
6	Aounallah Naceur	Low complexity linear Massive MIMO detector based on Cholesky matrix decomposition
7	Hideyat Zerga	Fog computing and Blockchain in healthcare IoT systems (state of the art)
8	Hamza Lamia	MLearning Applications Modeling Approach
9	Meraouli Hadjer Rania	An Overview of Non-Contact Vital Signs Detection using UWB Pulse Radar
10	Hicham Megnafi	Analysis and evaluation of the radio link by developing an application under MapBasic
11	Menazeli Mohammed Mokhtar	Appointments Management between Patients and Doctors via a Smartphone
12	Tarik Bouzian Berbar	Improved High-Speed Comparator Using Low-Power Technique for Data Converter
13	Asmaa Habibi	A Novel Chain based routing algorithm for underwater wireless sensor networks
14	Benouakta Narimane	A Brief Survey on Machine Learning: Algorithms and Platforms
15	Menezla Fayssal	The effect of the interleaving function on transmissions whit errors correcting codes

Topic : Telecommunications Systems

(Session 4)

Session Chair : Dr Sekkal Mansouria & Dr Bendimerad Karim

Time GMT+1 13h30 – 18h	Conference Day 2 : Tuesday December 21, 2021	
Link	https://meet.google.com/erx-eehu-koi	
1	Hideyat Zerga	Smart contract based access control for IoT healthcare systems
2	Chekhmane Ghezala	Preprocessing of electrical activity in the brain
3	Beddad Boucif	A Review on an Enhanced Recursive Algorithm for Recovering Highly Corrupted Images
4	Mohammed Berka	New metamaterial absorber based on dual-U shaped (SRRs) array for microwave systems applications
5	Mohammed Berka	Analysis of the Electromagnetic Characteristics of a New Metamaterial Trapezoidal Resonator for Wireless Communications
6	Mehdi Damou	Planar Transmission Line Diagnosis by Schwarz-Christoffel Transformation: Application on MSL and CPW
7	Mohammed Chetioui	Diagnosis of Coupled Resonator Waveguide Filter Using Tunning Step Optimization Technique
8	Mohamed Miloudi	Electromagnetic compatibility of conducted interference in a Forward converter using a microelectronics switch
9	Amina Otmani	The influence of the choice of substrate on microwave filters
10	Nadia Benmessaoud	Choice of The Adequate Analyzing Wavelet in The Phonocardiogram Signal Analysis
11	Ouahab Abdelwhab	Classification of multimodal images using convolutional neural networks (CNN)
12	Mohammed Bendaoud	Study and analysis of the improved chaotic Colpitts oscillator up to 2.5 GHz
13	Razika Souadek	Hybrid watermarking image algorithm based on DWT-TF-DCT
14	Belkacem Hachemi	HW/SW Co-Design of the bandelet decomposition on a Xilinx Zynq SoC for attributes extraction in medical images
15	Tahar Lahreche	Design and Analysis of an RF MEMS Switch Using COMSOL Multiphysics 5.6
16	Addou Sarra	Relevant characterization of breast cancer

Topic : Poster Presentation

(Session 5)

Session Chair : Dr Bentaib Samia & Dr Bencherif Kaddour

Time GMT+1 13h30 – 16h	Conference Day 2 : Tuesday December 21, 2021	
Link	https://meet.google.com/fxv-kgzr-qns	
1	Chahmi Abdelghani	Immunization technique and control of magnetization in embedded systems
2	Mokhtaria Derkaoui	Impact of RZ and NRZ coding on PIN and APD photodiodes performance
3	Hattab Youcef	Depth Advanced Control of an Autonomous Underwater Robot
4	Fayza Bousalah	Patch Antennas Based Cells CSRR for GSM Systems
5	Rahmouna El Bouslemti	A polyvalent coplanar coupler on the ferrite thin films with improving the dimensioning and performance
6	Salima Senhadji	Consequences of PA Nonlinearities on Advanced Modulation Schemes for 5G Wireless Communication
7	Naouel Seghiri	Performance Optimization of Cognitive Radio Networks Using Reconfigurable Printed Antennas
8	Tahraoui Souaad	Diagnostic system for automated vehicles
9	Azza Hafida	Optical Similariton pulse application for Wavelength Division Multiplexing transmitter
10	Bekki Amane	Compressing of medical image using three methods: Discrete Cosine Transform, wavelet, and the finite difference method.
11	Abdelkader Bekkar	An Arduino-based photovoltaic meter for the solar panel
12	Abdellatif Berkat	Machine Learning for Spam Detection
13	Abdelhakim Ziani	Development and Comparison of Improved Clustering Algorithms Applied to Numerical and non-Numerical Data
14	Amar Hichem	Split Ring Resonators SRR for Dielectric Characterization of Liquids
15	Kourdi Zakarya	Antenna patch for channel reception satellite in Ku band satellite
16	Ali Mohamed Ramadan	Integration Between HAP and Terrestrial Networks for the Next Generation Communication

17	Mostefa Kara	A Lightweight Clock Synchronization Technique for Wireless Sensor Networks: A Randomization-Based Secure Approach
18	Fatima Zahra Bechlaghem	Modeling, Simulation and Characterization Of Pseudomophic HEMT Transistor Using III-V Materials
19	Azil Kenza	Design of an extrinsic plastic optical fiber-based sensor for measuring water turbidity
20	Hadjer Abdi	A Dual Watermarking Scheme Based On LWT-SVD And Entropy For Medical Images Security
21	Delfouf Rabah	Dielectric characterization of ternary composite materials: application to the miniaturization of microwave electronic circuits
22	Meryem Romaissa Djellouli	FSO Free Space Optics GEO-GEO Inter satellite Communication: perspectives for DVB-RCS
23	Kourdi Zakarya	TTC antenna for GEO satellite communication in Ku band
24	Mourad Mohammed Benosman	The Improvement of the Heart Rate Detection While Asleep Using ECG-Trunk Muscle Signal
25	Abdelfatih Bengana	The images fusion based on hybrid algorithm