

**THE IEEE SIXTH INTERNATIONAL CONFERENCE ON THE IMAGE AND SIGNAL PROCESSING AND
THEIR APPLICATIONS**



ISPA2019

**Faculty of Sciences & Technology Site -1- Route Belhcel
Mostaganem, Algeria**



24 & 25 November 2019

Program

Sunday, November 24th

08:00-08:30 : Registration

08:30-08:45 : Official opening

Professor Mostefa Belhakem, Rector of University of Mostaganem

Faculté des Sciences Exactes et de l'Informatique

08:45-09:30 : Plenary conference I

Professor Abdenour Hadid

Machine Vision Group, Dept. of Electrical and Information Engineering, University of Oulu, Finland

Deep learning and advanced applications

09:30-10:00 : Coffee Break

Sunday, November 24th

10h00-12h20 : Oral Session

<p>Session: Image Processing (Conference Room 1) <i>Chairs:</i> Pr Abdeldjalil Ouahabi and Pr Baarir Zine-Eddin</p>	<p>Session: Telecommunication (Conference Room 2) <i>Chairs:</i> Pr Sbaa Salim and Dr Didiche Mustapha K. Abderrahmane</p>
<p>10:00 Bilal Attallah, Youcef Brik, Youssef Chahir, Mohammed Djerioui and Abdelwahhab Boudjelal <i>Fusing Palmprint, Finger-knuckle-print for Bi-modal Recognition System Based on LBP and BSIF</i></p> <p>10:20 Abdelhamid Daamouche, Charef-Eddine Korichi and Yasmine Makhlof <i>Roads Recognition using Mathematical Morphology</i></p> <p>10:40 Redouane Kaibou and Mohamed Salah Azzaz <i>Performances Improvement of Chaos-Based Robust Digital Image Watermarking using Advanced Techniques</i></p> <p>11:00 Tayeb Bahram <i>A connected component-based approach for text-independent writer identification</i></p> <p>11:20 Mohammed Khammari <i>Weber pattern and Binarized Statistical Image Features encoded CNN for fingerprint liveness detection</i></p> <p>11:40 Beddad Boucif, Hachemi Kaddour, Postaire Jack-Gerard, Jabloncik František and Messai Oussama <i>An Improvement of Spatial Fuzzy C-means Clustering Method for Noisy Medical Image Analysis</i></p> <p>12:00 D. Bouchaffra, A. Baouta, Faycal Ykhlef, Jun Tan and Meriem Khelladi <i>Land Cover Change Detection based on Homology Theory</i></p>	<p>10:00 Mongar Abdelbasset, Hadjira Badaoui and Abri Mehadj <i>Efficient Demultiplexing of Two Channels Based on Quasi-Square Ring Resonator for Integrated Optics</i></p> <p>10:20 Abderrahim Kouar, Soufiane Tebache, Dalal Zahaf and Samy Labandji <i>UWB Decoupling Approach for Two extremely Close Monopole Antennas</i></p> <p>10:40 Latifa Hacini and Aissaoui Amel <i>A Comparative Analysis of Various Zero Cross Correlation Codes in SAC-OCDMA Systems</i></p> <p>11:00 Baghdad Hadji, Lamy Fergani and Mustapha Djeddou <i>Hybrid Linear Precoding Strategy for Multiuser Massive MIMO Millimeter Wave Systems</i></p> <p>11:20 Abdelbasset Bedda Zekri and Riadh Ajjou <i>Study of mmWave channels for different scenarios</i></p> <p>11:40 Amel Aissaoui and Latifa Hacini <i>Performance Comparison of Different SAC-OCDMA-FSO Detection Techniques in Presence of Atmospheric Losses</i></p> <p>12:00 Mohammed Chetioui, Abdelhakim Boudkhil, Mehdi Damou and Nasreddine Benahmed <i>A New Conical Helix Antenna base on MEMS Technology using Genetic Algorithms</i></p>

12:30-13:30 Lunch Break

13:30-14:15 : Plenary conference II

Professor Abdeldjalil Ouahabi

Université de Tours UFR Département Électronique et Systèmes de l'Énergie Électrique, France

Image, Imaging and Deep Learning: From Basic to Applications

14:15-15:15 : Poster Session I

Chairs: Pr A. Taleb Ahmed and Dr M. Merah

PI.1: Chahrazed Zekkari, Mohamed Djendi and Abderrezak Guessoum

A comparative study of adaptive and non-adaptive IQ imbalance compensation methods in RX system

PI.2: Mahfoud Hamidia and Abderrahmane Amrouche

Improving Acoustic Echo Cancellation in Hands-free Communication Systems

PI.3: Taisir Ismail

A novel multipath channel estimation approach for ofdm communication systems

PI.4: Wahiba Belgacem, Bousahla Miloud and Sidi Mohammed Meriah

Dual Band Micro-strip Patch Antenna for RFID UHF far-field Reader Applications.

PI.5: Nour El Imane Bellili and Khaled Bekhouche

Low Power Class D Audio Amplifier with High Performance and High Efficiency

PI.6: Grabsia Naima

CEEMDAN and fast kurtogram method for bearing fault detection.

PI.7: Bouhafis Bouras, Mohammed Chetioui, Mehdi Damou and Rachid Bouhmidi

Microwave Filter Optimization Combining Aggressive Space Mapping And Cauchy Methods

PI.8: Reda Yagoub, Mohamed Benaissa, Belkacem Benadda and Mohammed Merzoug

Low Cost RTL-SDR Based Positioning Solution Based on GSM Cell Id

PI.9: Ammar Chouchane, Mohcene Bessaoudi and Abdelmalik Ouamane

Facial Kinship Verification using Tensor Discriminative Subspace based Color Components

PI.10: Hocine Hamil, Mohamed Salah Azzaz, Samir Sakhi, Abdelmadjid Maali, Zahia Zidelmal and Djaffar Ould Abdeslam

Design and FPGA real-time implementation of PWM andPPM modulation for Ultra Wide Band applications

PI.11: Mansouri Boualem, Haddadi Yasser, Chama Zouaoui and Djafari Ali Mohammad

Image Reconstruction based on Bayesian total variation and Hidden Markov Model

PI.12: Khalil Bousbai and Mostefa Merah

A Comparative Study of Hand Gestures Recognition Based on MobileNetV2 and ConvNet Models

PI.13: Kada Becharef, Keltouma Nouri and Turkiya Abes

Enhanced Performance of Substrate Integrated Waveguide Bandstop Filter Based on Metamaterials SCSRRs

PI.14: Kada Becharef, Keltouma Nouri and Turkiya Abes

Application of metamaterials for the design of antenna

PI.15: Rachid Bouhmidi, Bouhafis Bouras and Mohammed Chetioui

ANSYS-HFSS Coupling Matrix Extraction with Immittance Parameters for Microwave Bandpass Filter Tuning

PI.16: Narimane Hadjadji and Hamdi Rachid

Nonlinear Compensation in 32 Gbauds PM-16-QAM and PM-QPSK Coherent Optical Systems

PI.17: Dhai Eddine Salhi, Abdelkamel Tari and Mohand Tahar Kechadi

Sentiment analysis application on Twitter for E-reputation

PI.18: Bentahar Attaouia, Kandouci Malika, Ghouali Samir and Madjidi Radia

Optimization of the gain flatness of EDFA in WDM PON system

PI.19: Fadia Meziani, Souhila Rerbel, Yettou-Nourelhouda Baakek, Sidi Mouhamed Debbal and Naima Hbibes

Frequency Analysis Of Electromyogram Signals (EMGs)

PI.20: Henni Sid Ahmed and Caelen Jean

Automatic Speech Recognition bay System MFCC-LPC-SVM for energy optimization in intelligent building

PI.21: Razika Souadek, Naceur-Eddine Boukezzoula and Nassir Guellil

Awatermarking image algorithmusing Edge insertion and Symmetric Partition Algorithm (SPA)

PI.22: Abdelhakim Boudkhal, Mohammed Chetioui, Mehdi Damou and Nasreddine Benahmed

A New Design of a THz A-Helical Antenna based on MEMS Technology using SNLPs

PI.23: Wiam Djemah, Sihem Hamdad and **Chahinaz Kandouci**

OTDM Transmission Multiplexing and Demultiplexing for Photonic Packet Switched (PPS) Networks

PI.24: Charif Fella, Benchabane Abderrazak and Bebboukha Zoulikha

Multimodal Medical Images Registration Using Biogeography-Based Optimization Algorithm

PI.25: Kadda Djebbar, Malika Mimi, Khadidja Berradja and Abdelmalik Taleb-Ahmed

Deep convolutional neural networks for detection and classification of tumors in mammograms

15:15-15:30 : Coffee Break

Sunday, November 24th

15h30-18h00 : Oral Session

<p align="center"><u>Session: Applications</u> (Conference Room 1) <i>Chairs:</i> Pr Zoubir Ahmed-Foitih and Dr Riadh Ajgou</p>	<p align="center"><u>Session : Signal processing</u> (Conference Room 2) <i>Chairs:</i> Pr Youcef Ferdi and Dr Djamel Samai</p>
<p><u>15:30 Mohammed Farouk Nakmouche</u> and Ahmed Nassim Mahammedi <i>Impact of Metamaterials DGS in PIFA Antennas for IoT Terminals Design</i></p> <p><u>15:50 Hocine Merah</u>, Mokhtaria Mesri, Khaled Tahkoubit and Larbi Talbi <i>PAPR Reduction in MIMO (2x2)-FBMC-OQAM Systems Using Attenuating QAM Symbols</i></p> <p><u>16:10 Soraya Zehani</u>, Abdeldjalil Ouahabi, Malika Mimi and Abdelmalik Taleb-Ahmed <i>Statistical features extraction in wavelet domain for texture classification</i></p> <p><u>16:30 Samia Bentaieb</u>, Abdelaziz Ouamri and Mokhtar Keche <i>SAX2SEX: Gender Classification on 3D Faces using Symbolic Aggregate Approximation</i></p> <p><u>16:50 Merzak Ferroukhi</u>, Abdeldjalil Ouahabi, Mokhtar Attari and Lylia Acef <i>Robust and reliable PPG and ECG integrated biosensor</i></p> <p><u>17:10 Hafida Saidi</u>, Nabila Labraoui, Ado Adamou Abba Ari, Ikram Semahi and Bouchra Ramdane Mamcha <i>Real-time Aging Friendly fall detection system</i></p> <p><u>17:30 Elhocine Boutellaa</u> <i>Detecting falls with recurrent autoencoders and body acceleration data</i></p>	<p><u>15:30 Benchabane Abderrazak</u> and Charif Fella <i>Gradient Based Neural Network for Superfast Capon Spectral Estimation</i></p> <p><u>15:50 Linda Bendjama</u>, Toufik Laroussi and Amar Mezache <i>Statistical Analysis and New Modeling of Real Clutter Signal in FM Radio-based Passive Radars</i></p> <p><u>16:10 Amar Mezache</u>, Taha Hocine Kerbaa and Houcine Oudia <i>Effect of Fractional Order Moments on Parameter Estimation of K-Clutter plus Noise</i></p> <p><u>16:30 Hadjer Ykhlef</u>, Farid Ykhlef and Sylia Chiboub <i>Experimental Design and Analysis of Sound Event Detection Systems: Case Studies</i></p> <p><u>16:50 Ibrahim Kakouche</u>, Mohamed Salah Azzaz, Abdelmadjid Maali and Ammar Mesloub <i>New Measurement Method for Respiration And Heartbeat Estimation Using IR-UWB Radar</i></p> <p><u>17:10 Manel Yakoubi</u>, Hamdi Rachid and Mounir Bousbia Salah <i>Automatic identification and analysis of epileptic seizure</i></p> <p><u>17:30 Belhadj Sabrina</u>, Attia Abdelouahab and Ahmed-Foitih Zoubir <i>EEG Signal Classification for Epileptic Seizures Detection Based on AR Models</i></p>

Monday, November 25th

08:00-08:30 : Registration

08:30-09:15 : Plenary conference III

Professor Amir Nakib, HDR^{1,2}

¹Associate Professor Université Paris Est (UPE),

² Laboratoire Images, Signaux & Systèmes Intelligents LISSI (EA. 3956), Dépendant conjointement de l'Université Paris-Est Créteil (UPEC) et l'Institut Universitaire de Technologie de Créteil-Vitry (IUT-CV).

Real-time Automatic Incident Detection using GPU based architectures

09:15-09:45 : Coffee Break

Monday, November 25th

09h45-12h05 : Oral Session

<p><u>Session: Telecommunication</u> (Conference Room 1) <u>Chairs:</u> Pr Sbaa Salim and Dr Didiche Mustapha Kamel Abderrahmane</p>	<p><u>Session: Image Processing</u> (Conference Room 2) <u>Chairs:</u> Pr Abdenour Hadid and Pr Amir Nakib</p>
<p><u>09:45 Abdellatif Berkat</u>, Noureddine Boukli Hacene and Zineb Berkat <i>Design and Experimental Validation Of compact antenna for Ultra-Wideband Application</i></p> <p><u>10:05 Ghania Khraimech</u> and Fatiha Merazka <i>Integration of Network Coding in a Multi-Source Multi-Relay Cooperative Wireless Network</i></p> <p><u>10:25 Mohammed Moulay</u>, Mehadjji Abri and Hadjira Badaoui <i>Compact Quad-Band bandpass Filter Based on Complementary Split Ring Resonators as DGS</i></p> <p><u>10:45 Turkiya Abes</u>, Keltouma Nouri, Boubakar Seddik Bouazza, Kada Becharef and Mehdi Damou <i>Gain Enhancement of Microstrip Sawtooth Antenna Array based on Substrate-Integrated Waveguide Technology for Dual-Band Applications (Ku/ K)</i></p> <p><u>11:05 Ahmed Zitouni</u> and Noureddine Boukli-Hacene <i>H-shaped Stacked UWB Dielectric Resonator Antenna With Dual Band-Notched Characteristics for WLAN/ITU Bands</i></p> <p><u>11:25 Mohamed Saad</u>, Abdelmadjid Maali and Mohamed Salah Azzaz <i>A New FPGA Experimental Architecture for Through Wall Imaging Applications</i></p> <p><u>11:45 Moundher Messaadi, Hichem Bendecheche</u>, Djamel Teguig and Said Sadoudi <i>Novel Four-dimensional Chaotic Oscillator for Sub-1GHz Chaos-Based Communication Systems</i></p>	<p><u>09:45 Elaouaber Zineb Aziza</u>, Lazouni Mohamed El Amine, Messadi Mohamed and Bessaid Abdelhafid <i>Decision tree CART algorithm for diabetic retinopathy classification</i></p> <p><u>10:05</u> Ridha Ilyas Bendjillali, Mohammed Beladgham, Khaled Merit and Miloud Kamline <i>Enhanced Face Recognition System Based on Deep CNN</i></p> <p><u>10:25 Assia El Mahdaoui</u>, Abdeldjalil Ouahabi and Mohamed Said Moulay <i>Image Recovery Using Total Variation Minimization on Compressive Sensing</i></p> <p><u>10:45 Aberkane Sabrina Amina</u> and Elarbi Boudihir Mohamed <i>Deep Reinforcement Learning for Real-world Anomaly Detection in Surveillance Videos</i></p> <p><u>11:05 Khaled Harrar</u> <i>Trabecular Texture Analysis using Morpho-Clinical Features and Bayes Classifiers</i></p> <p><u>11:25 Mohamed Chouai</u>, M. Merah, José-Luis Sancho-Gomez and M. Mimi <i>Dual-energy X-ray images enhancement based on a discrete wavelet transform fusion technique for of luggage inspection at airport</i></p> <p><u>11:45 Nadia Kermouni Serradj</u>, Sihem Lazzouni and Messadi Mohammed <i>Digital mammograms analysis using fractal and multifractal methods</i></p>

12:10-13:15 Lunch Break

13:15-14:15 : Poster Session II

Chairs: Pr A. Taleb Ahmed and Dr M. Merah

PII.1: Mehdia Hedir, Fethi Demim and Boualem Haddad

A comparative analysis of the Ground Clutter Suppression on Meteorological images

PII.2: Ferial Guidoum, Mohamed Lamine Tounsi, Tan-Phu Vuong, Nouredine Ababou and Mustapha C.E Yagoub

Enhancing performances of a 60 GHz Patch Antenna Using Multilayer 2D Metasurfaces

PII.3: Zemmal Nawel, Nabihia Azizi, Amel Ziani and Nacer Eddine Benzebouchi

An Enhanced Feature Selection Approach based on Mutual Information for Breast Cancer Diagnosis

PII.4: Besma Bessekri, Kedir-Talha Malika, Zairi Hadjer and Escid Hammoudi

Development of an Electromyography-Based Hand Gesture Recognition System for Upper Extremity Prostheses

PII.5: Sara Seninete, Malika Mimi, Bilal Djamal Eddine Cherif and Abdelazziz Ould Ali

Vibration Signal Analysis for Bearing Fault Diagnostic of Asynchronous Motor using HT-DWT Technique

PII.6: Souad Benabdallah and Nourreddine Boukli-Hacene

Miniature microstrip antenna design for ultra-wideband applications

PII.7: Mohammed Debbal, Bouregaa Mouweffeq, Hicham Chikh-Bled, M. Chikh-Bled and M. Chamse Eddine Ouadah

Effect of temperature on dispersion properties in a water-filled photonic crystal fibers

PII.8: Mohammed Belkheir and Mehdi Rouissat

Performance Analysis of RZ-PPM Coding in Optical Wireless Systems

P11.9: Asmaa Ouessai and Mokhtar Keche

Calibration of Fundamental Diagram for Macroscopic Freeway Traffic Flow Model Using Whale Optimization Algorithm

P11.10: Yettou Nour El Houda Baakek, Sidi Mohamed Debbal, Souhila Rerbal and Fadia Meziani

Effect of the Marijuana binaural beats on the brain

P11.11: Sarra Dali Youcef, Mohamed Messadi and Abdelhafid Bessaid

Left ventricular Analysis Method in Cardiac Cine MRI

P11.12: Lamia Chaouche Ramdane, Habib Mahi and Abdelhafid Bessaid

Combination of different clustering algorithms

P11.13: Mohammed Sofiane Bendelhoum, Mohamed Reda Lahcene, Fayssal Menezla and Abdelkrim Benali

Medicals Images Transmitting Using MC-CDMA System

P11.14: Mohanad Alayeddi, Abdelhamid Cherifi and Abdelhak Ferhat Hamida

Performance enhancement of SAC-OCDMA system using anew optical code

P11.15: Meche Abdelkrim, Dahmani Mohammed, Maamar Bettayeb, Mokhtar Keche and Abdelaziz Ouamri

Efficiency of Quadrature Kalman filter within long range target tracking problem

P11.16: Abelhakim Ridouh, Daoud Boutana and Salah Bourennane

Classification of EEG Signals using SVM

P11.17: Menezla Fayssal, Bendelhoum Mohammed Sofiene and Mahdjoub Zoubir

The Effect of Error Correcting Codes in the Chain of Transmission and Comparison between the Performances of these Codes

P11.18: Sidi Mohammed Hadj Irid, Mourad Hadjila and Haroun Errachid Adardour

Design and Implementation of an IoT Prototype for the Detection of Carbon Monoxide

P11.19: Imane Mehidi , Djamel Eddine Chouaib Belkhiat and Dalel Jabri

An Improved Clustering Method Based on K-Means Algorithm for MRI Brain Tumor Segmentation

P11.20: Hayet Djellali and Souad Guessoum
Modified Search Equations of Artificial Bee Colony applied to Feature Selection

P11.21 : **Cherif Bilal Djamal Eddine**, Bendiabdellah Azeddine and Seninete Sara
A Comparative Study between Two Stator Current HHT and FFT Techniques for IM Broken Bar Fault Diagnosis

14:15-14:30 : Coffee Break

14h30-16h50 : Oral Session

<p><u>Session: Telecommunication</u> (Conference Room 1) <u>Chairs:</u> Pr Baarir Zine-Eddine and Dr Mansour Abed</p>	<p><u>Session : Applications</u> (Conference Room 2) <u>Chairs:</u> Pr Nasr Eddine Berrached and Dr Djamel Samai</p>
<p><u>14:30 Zoubiri Bachir</u>, Mayouf Abdelhalim, Devers Thierry and Mustapha Laouissat <i>Improving L-band Printed Monopole Antenna Performance Using High Impedance Surfaces</i></p> <p><u>14:50 Billal Belmahdi</u> and Khaled Mazighi <i>The Performance of an EDFA in a Long Distance WDM Optical Network</i></p> <p><u>15:10 Zoubiri Bachir</u>, Mayouf Abdelhalim, Devers Thierry and Mansoul Ali <i>A Novel MIMO Antenna Design Based on Spiral Right/Left-Handed Transmission Line with Reduced Mutual Coupling</i></p> <p><u>15:30 Mouad Addad</u> and Ali Djebbari <i>Ternary ZCZ Codes with Inter-Subgroup Zero-zones for Multiuser Communications</i></p> <p><u>15:50</u> Hocine Chaouch and <u>Fatiha Merazka</u> <i>Multiple Description Coding and Forward Error Correction Concealment Methods for ACELP Coders in Packet Networks</i></p>	<p><u>14:30 Messaouda Boumaraf</u> and Fatiha Merazka <i>Speech Encryption Based on 5D Chaotic System for AMR-WB Codec</i></p> <p><u>14:50 Fethi Demim</u>, Abdelkrim Nemra, Abdelouahab Bazoula, Abdenebi Rouigueb, Mustapha Hamerlain and Mehdi Hedir <i>Real-time Application of SLAM Based-Line for Unmanned Ground Vehicle</i></p> <p><u>15:10 Omar Chaab</u>, Nedjoua Refis, Aicha Mehidi, Larbi Bouamama and Serge Simoens <i>Automatic diffracted order detection in spectral domain of digital multiplexed off-axis holograms: Application to spatial filtering</i></p> <p><u>15:30 Arezki Larbi</u>, Mansour Abed and Abdeldjalil Ouahabi <i>Newborn's EEG seizure detection using compact kernel time-frequency distributions and Doppler-lag domain features</i></p> <p><u>15:50 Mohamed Redha Djebbara</u>, Fatima Zohra Filali and Bouchra Triqui <i>Data Replication Strategy Using ELECTRE-I Method In Cloud System</i></p> <p><u>16:10</u> Karima Mahdjane and Fatiha Merazka</p>

16:10 Imededdin Djadour, Hicham Medkour, Mohamed Cheniti, Salih Aidel, Mohammed Akli Belala and Ameer Zegadi
Antenna Array for High Power Harvesting Capability

16:30 Wassila Sekkal, Lotfi Merad and Sidi Mohammed Meriah
Breast cancer Detection Using the SVR Approach For Different Configurations of Microwave Imaging System

Performance Evaluation of Compressive Sensing for multifrequency audio Signals with Various Reconstructing Algorithms

16:30 Houari Horkous
Recognition of Fear and Anger Emotions in Speech Based on KNN Classifier

16:50-17:30: Awards and Closing of the IEEE ISPA 2019

Chairs: Pr Malika Mimi, Pr Abdelmalik Taleb Ahmed and Pr Abdeldjalil Ouahabi