Conference Program

Day 1 : April 22, 2019

08h00 — **Registration & Coffee** — Hall CEDOC

09h00 — **Opening Ceremony** — Amphi B

09h30 — **Keynote 1**

Machine Learning for 5G

Pr. Mérouane DEBBAH, CentraleSupelec, Gif-sur-Yvette, France — **Amphi B**

Session Chairs : *Pr. Camel TANOUGAST, Dr. Abdelmadjid MAALI*

10h15 — **Souvenir Photo & Coffee-Break** — Hall CEDOC

10h30 — **Poster Session 1**

Demos — **ASAL:** *Algerian Space Program,* **CONDOR Electronics:** *Solar Panel* & **Microtech Lab:** *Scientific Equipment*

11h45 — **Keynote 2**

From robotizing human labor to humanzing robotics labor

Pr. Abderrahmane KHEDDAR, CNRS-University of Montpellier LIRMM, France — **Amphi B**

Session Chairs : *Pr. Mohamed GUIATNI, Dr. Abdelwahab BAZOULA*

12h30 — **Lunch**

14h00 — **Oral Session 1**

			Tutorial 1	Amphi D
Session A1	Biomedical signal processing	Amphi A	FPGA integration of digital Architectures of transmitter and receivers Ultra Wide Band	
Session B1	Electro-Optics	Amphi B	*Pr. Camel TANOUGAST*	
Session C1	Renewable Energy and Power Systems	Amphi C	*Lorraine University, Metz, France*	

15h30 — **Coffee-Break** — Hall CEDOC

16h00 — **Oral Session 2**

			Tutorial 2	Amphi D
Session A2	Networking and Communication Systems 1	Amphi A	How to improve the efficiency of chalcogenide solar cells	
Session B2	Embedded Systems, Security and Privacy	Amphi B	*Pr. Zahir ROUABAH*	
Session C2	Control and Navigation Systems	Amphi C	*University of Bordj Bou Arreridj, Algeria*	

Day 2 : April 23, 2019

08h30 — **Keynote 3**

Terahertz science and technology: basics and applications

Pr. Jean-Louis Coutaz, IMEP-LAHC, UMR 5130 CNRS, University Savoie Mont-Blanc, France

Session Chairs : *Pr. Lotfy Mokhtar SIMOHAMED, Dr. Mohamed LAZOUL* — **Amphi B**

09h15 — **Keynote 4**

The Green Electricity

Pr. Mohamed BECHERIF, FCLab FR CNRS 3539, University of Technology of Belfort-Montbéliard, France

Session Chairs : *Pr. Abdelhalim ZAOUI, Dr. Khoudir MAROUANI*

10h00 — **Coffee-Break** — Hall CEDOC

10h15 — **Poster Session 2**

Demos — **ASAL:** *Algerian Space Program,* **CONDOR Electronics:** *Solar Panel* & **Microtech Lab:** *Scientific Equipment*

11h00 — **Oral Session 3**

			Tutorial 1	Amphi D
Session A3	Automatic Systems	Amphi A	Learning with the Expectation-Maximization Algorithm	
Session B3	Antenna Systems 1	Amphi B	*Dr. El Korso Mohammed Nabil*	
Session C3	Power converters and Electrical machines	Amphi C	*LEME, Université Paris Nanterre, France*	

12h30 — **Lunch**

14h00 — **Oral Session 4**

Session A4	Signal Processing 1	Amphi A
Session B4	Networking and Communication Systems 2	Amphi B
Session C4	Electromagnetic Compatibility	Amphi C

15h30 — **Coffee-Break** — Hall CEDOC

16h00 — **Oral Session 5**

Session A5	Signal Processing 2	Amphi A
Session B5	Image and Video Processing	Amphi B
Session C5	Antenna Systems 2	Amphi C

17h30 — **Closing Ceremony & Best Paper Award** — Amphi B

Poster Session 1 : 10h30-11h45   Session Chairs : *Dr. Hocine Medjadba, Dr. Mustapha Benssalah and Dr. Djamal Teguig*

P1-20	First principles calculation of the structural and electronic properties of (001) and (110) growth axes InN/GaN superlattices: *B.B. Bouiadjra, N. Mehnane, M. Oukli, N. Oukli and H. Belghoul*
P1-25	Cooperative SVSF-SLAM Algorithm for UGVs in dynamic environment: *F. Demim, A. Nemra, A. Boucheloukh, E. Kobzili, M. Hamerlain and A. Bazoula*
P1-67	Discovering community structure in complex networks: *B. Saoud.*
P1-68	Study the Properties of a composite material of 100% SnO2 deposited by spray pyrolysis: *W. Daranfed, N. Guermat, M. Khalfallah and K. Mirouh*
P1-171	Modeling and simulation of the effect of temperature on poly crystalline zinc oxide thin film transistor: *S. Naceur, N. Sengouga and A. Mefthah*
P1-219	Vertical and lateral forces calculation between a permanent magnet and a hard type-II superconductor using integral approach and critical state model: *A. Azzouza, H. Allag and J.P. Yonnet*
P2-259	Evaluation of the characteristic impedance of a shielded microstrip line with anisotropic substrate : *D. Sayad, C. Zebiri, S. Daoudi and F. Benabdelaziz*
P1-279	A novel ultra wideband chaotic generator for communication systems: *R. Fellah, M.S. Azzaz, C. Tanougast, D. Teguig and S. Sadoudi*
P1-299	Development of a new experimental architecture on through-wall-imaging using ultra-wide-band impulse radar: *M. Saad, A. Maali and M.S. Azzaz*
P1-300	Experimental study of a soft magnetic composite shielding effectiveness: *K. Benzaoui, A. Achour, A. Zaoui and D. Moussaoui*
P1-309	Hardware implementation for the secure client/server communication using chaos-based cryptosystem: *B. Bouteghrine, M. Rabiai, C. Tanougast and S. Sadoudi*

Oral Session A1 : 14h00 – 15h30   Session Chairs : *Dr. Makhlouf Laouchedi, Dr. Ahmed Dallil*

A1-100	CT and MRI images fusion based on variance and pixel significance : *B. Latreche, S. Saadi, M. Kious, A. Benziane and H. Naimi*
A1-103	Iterative reconstruction acceleration using parallel computing in computed tomography : *A. Goumri, M. Laouchedi and F.O. Boumghar*
A1-130	Modified active contour method for left ventricle analysis in cardiac cine MRI : *S. Dali Youcef, M. Messadi and A. Bessaid*
A1-140	ECG beat classification using ASVM and time-frequency features : *R. Lekhal, Z. Zidelmal, H. Hamil and D. Ould-Abdeslam*
A1-284	Square root unscented kalman filter to train multilayer perceptron for denoising electrocardiogram signal : *S. Gaamouri, M. Bousbia Salah and R. Hamdi*

Oral Session B1 : 14h00 – 15h30   Session Chairs : *Pr. Jean-Louis Coutaz, Dr. Hichem Chettat*

B1-55	Conception of a Remote Interferometric Listening Device: *N. Belghachem, A. Stihi and A. Kebaili*
B1-142	New biochemical sensor architecture for the detection of the protein concentration based on 2D photonic crystalsdefects: *F.Bounaas, A. Labbani and F. Brik*
B1-224	Growth and characterization of InAs/GaSb superlattice photoconductors on GaAs substrate for MWIR and LWIR ranges: *D. Benyahia and P. Martyniuk*
B1-266	AlGaN/InGaN/GaN/BGaN UV P-I-N Photodetctor: *M. Khaouani and A. Hamdoune*
B1-289	Detection and identification of suspicious substances by terahertz time-domain spectroscopy: *N.Maamar, M. Lazoul and J.L. Coutaz*

Oral Session C1 : 14h00 – 15h30   Session Chairs : *Pr. Zahir Rouabah, Dr. Bekheira Tabbache*

C1-147	Constraints Reduced on the PEM fuel cell in hybrid electric vehicle application by using multilevel inverters: *H. Abdellaoui, K. Ghedamsi, A. Mecharek*
C1-211	DTC-based shoot trough control for Z-source power inverter fed induction motor: *H. Derbane, B. Tabbache, A. Ahrich and F. Belkhiri*
C1-242	Study of the temperature field distribution in a Water-Cooled photovoltaic panel: *S. Ait Saada, I. Kecili and R. Nebbali*
C1-291	Real time simulations of power systems in transient stability with power system stabilizers: *H. Terfa, L. Baghli and R. Bhandari*
C1-301	An improved PEMFC fuel cell developed model for prognostics and health management: *A. Smadi and F. Khoucha*

Oral Session A2 : 16h00 – 17h30   Session Chairs : *Pr. Mérouane Debbah, Pr. Khalida Ghanem*

A2-95	Autonomous base manager based on cognitive radio systems dedicated to 5G networks: *M.Z. Baba-Ahmed, B. Benmammar and N. Mbarek*
A2-119	Performance of spatial modulation OFDM detectors over adverse Nakagami-m fading channel in the presence of spatial correlation: *F. Berrahma, K. Ghanem, M. Djeddou and H. Bousbia-Salah*
A2-133	Hierarchical codebook design and channel estimation in millimeter wave mimo systems with low-resolution rf phase shifters: *B. Hadji, L. Fergani and M. Djeddou*
A2-330	A Simple ADMM Solution To Sparse-Modeling-Based Detectors For Massive MIMO Systems: *Y. Meslem, A. Aissa-El-Bey and M. Djeddou*
A2-331	PAM-PPM hybrid modulation for UWB-SIMO system communication: *S. Allouche and M. Djeddou*

Oral Session B2 : 16h00 – 17h30   Session Chairs : *Pr. Camel Tanougast, Dr. Allailou Boufeldja*

B2-1	Reconfigurable hardware architecture of HEVC quantization: *W. Menarsri, A. Skoudarli, A. Belhadj and M.S. Azzaz*
B2-99	Chaos based UNICODE date encryption (CBUDE) to Enhance E-Gouvernment security systems: *M.A. Krimil, M.S. Azzaz and S. Sadoudi*
B2-174	Context element monitor dedicated to health domain: *S. Belhadi and R. Merzougui*
B2-287	Risk cryptography planning in telecommunications systems 'CRYP-TS': Attack strategy & ethical hacking: *S. Bennabti, A.B. Dinar, R. Merzougui, B. Merabet and S. Ghouali*
B2-333	Protection against small UAVs attack based on radio frequency jamming: *R. Telli, M. Benssalah and B. Allailou*

Oral Session C2 : 16h00 – 17h30   Session Chairs : *Pr. Mustapha Hamerlain, Dr. Hakim Bouadi*

C2-42	Adaptive fault-tolerant control for a class of MIMO uncertain nonlinear systems with sensor faults: A Low-pass filter-based fast estimation: *H. Khebbache, S. Labiod and M. Tadjine*
C2-44	Fuzzy PDE Model-Based geometric control design for a diffusion-reaction process: *S. Raab, H. Habbi and A. Maidi*
C2-84	Arduino based robust control of SEPIC DC-DC converter: *F. Ounis and N. Golea*
C2-116	Cooperative control of wireless interconnected multi-quadrotor system with time-varying formation shape: *A. Allam, M. Tadjine, A. Nemra, E. Kobzili and R. Merzouki*
C2-223	Differential geometric approach control scheme for twin rotor MIMO system: *S. Bououden*

Poster Session 2 : 10h15-11h00   **Session Chairs :** *Dr. Azzedine Bouaraba, Dr. Mohamed Aissani and Dr. Ammar Mesloub*

P2-16	Towards a system of Algerian baccalaureate transcripts analysis and recognition : *A. Kefali and S. Drabsia*
P2-36	Asymmetric blumlein line for broadband pulse generation : *Y. Achour and J. Starzynski*
P2-62	Efficient EM-algorithm for MIMO-OFDM semi blind channel estimation : *A. Ladaycia, A. Belouchrani, K. Abed-Meraim and A. Mokraoui*
P2-115	Induction motor's rotor faults diagnosis at variable speed using an STFT-MLA combination : *A.F. Aimer, A.H. Boudinar, M.A. Khodja and A. Bendiabdellah*
P2-123	Finite element modeling and performances studying of a BDFIM, a case of a machine with 8-4 pairs of poles : *I. Nezzari and A. Kessal*
P2-164	Performance evaluation of robust level set methods for medical image segmentation : *M. Larbi and A. Rouini*
P2-182	Analysis and design of Vivaldi antipodal (antenna array ava) for passive imaging applications : *F. Benzerga, M. Abri and H. Badaoui*
P2-195	EMG signal for Parkinson's disease classification using FLP and ANN : *H. Bengacemi, A. Mesloub, K. Abed-Meraim, A. Ouldali and O. Buttelli*
P2-232	Corona effect produced by lightning strokes on distribution feeders : *Z. Anane, J. A. Morales Garcia, R. Cabral and A. Bayadi*
P2-244	Dual energy source with Three-level NPC inverter for autonomous systems : *F.Hadjou, B. Tabbache, S. Noui, E.M. Berkouk and M. Benbouzid*
P1-288	Power reduction techniques on network on chip : *M. Benazia, I. Kemassi and D. Belkebir*
P2-323	Reliable evolving Cloud-based temperature sensor fault detection for thermal heat exchanger : *M. Mouhoun, H. Habbi and O. Lamraoui*

Oral Session A3 : 11h00 – 12h30   **Session Chairs :** *Pr. Mokhtar Attari, Dr. Abdelkrim Nemra*

A3-17	Fault detection of uncertain systems based on interval data driven approach : *C. Chakour*
A3-43	MDAC dedicated for 10-Bit 50-MHz pipeline ADC : *M. B. Guermaz, B. Lehouidj, T.B. Berbar and M.T. Belaroussi*
A3-184	New relaxed lmi delay-dependent stability conditions of Sampled-Data linear systems via Input-Delay approach : *A. Gaidi, F. Bourahala, H. Lehouche and O. Guenounou*
A3-239	Fractional block structured models identification : *L. Sersour, K. Hammar, T. Djamah and M. Bettayeb*
A3-267	3D estimation using multispectral stereo-vision : *F. Benyounes and A. Nemra*

Oral Session B3 : 11h00 – 12h30   **Session Chairs :** *Pr. Hocine Kimouche, Dr. Toufik Boudiar*

B3-35	UWB patch antenna design and realization in the bandwidth 780MHz to 4.22GHz: *C. Benkalfate, M. Feham, A. Ouslimani and A. Kasbari*
B3-40	Frequency-Tunable Sensing-Antenna for wireless sensor applications: *R. Khelladi, M. Djeddou and F. Ghanem*
B3-153	A Modified circular monopole UWB antenna with WiMAX/WLAN dual band notch function, *F. Guichi and M. Challal*
B3-168	Bandwidth enhancement of 5 GHz triangular patch antenna based on dgs technique for UWB applications: *Z. Bendahmane, S. Ferouani and C. Sayah*

Oral Session C3 : 11h00 – 12h30   **Session Chairs :** *Pr. El Madjid Berkouk, Dr. Farid Khoucha*

C3-165	Experimental performance test of shunt active power filter using indirect current control identification algorithm : *A. Bouhouta, S. Moulahoum, N. Kabache and A. Benyamina.*
C3-217	Co-simulation based-FPGA of digital phase Shifted-PWM generator for MMC control : *E.B. Atoui, T. Mesbah, H. Atoui and S. Kelaiaia*
C3-231	Multilevel SVM for six-phase multilevel inverters to drive dual stator induction machine : *L. Bekrar, O. Bouhali, K. Marouani and N. Rizoug*
C3-238	Modeling and analysis of dual star induction machine fed by three to six phase direct matrix converter : *L. Khaldi, K. Iffouzar, K. Ghedamsi and D. Aouzellag*
C3-304	Direct torque Control under grid voltage dip of DFIG-based Wind Turbine using an accurate model : *E. Bounadja, Z. Boudjema and A. Djahbar*
C3-310	Detection of inter turn short circuit fault in induction motor using artificial neural network approach : *A. Lakrout, M. Bendjebbar and N. Henini*

Oral Session A4 : 14h00 – 15h30   **Session Chairs :** *Dr. Mourad Adnane, Dr. Mustapha Benssalah*

A4-201	Morphological operations and artificial neural networks for multi-scale colored texture classification : *B. Khaldi, O. Aiadi, M.L. Kherfi and Y. Khaldi*
A4-233	Neural unscented kalman filter for noise removal from electrocardiogram signal : *S. Gaamouri, M. Bousbia Salah and R. Hamdi*
A4-272	Low cost sparse subspace tracking algorithm based on shear and givens rotations : *N. Lassami, A. Aïssa-El-Bey and K. Abed-Meraim*
A4-209	Three-dimensional localization in multistatic PCL radars : *O. Mahfoudia and M. Zouaghi*
A4-320	Epilepsy detection within EEG signals using EMD and DWT : a comparative study : *L.H. Hasnaoui and A. Djebbari*

Oral Session B4 : 14h00 – 15h30   **Session Chairs :** *Pr. Adel Belouchrani, Pr. Mustapha Djeddou*

B4-85	Mobility-aware network selection in a heterogeneous wireless environment : *F. Bendaoud, M. Abdennebi and F. Didi*
B4-105	Measuring Apparatus Effect on In-Vivo Chanal Characterization for Human Body Communication : *F. Maamir, R. Touhami, S. Tedjini and M. Guiatni*
B4-167	Noisy independent component analysis for multi-carrier-interleave division multiple access in wireless communication systems : *E.H. Meftah*
B4-203	Analytical models for solar energy harvesting in wireless sensor networks : *M. Khiati and D. Djenouri*
B4-243	Sensor network localization in an indoor environment using genetic algorithm and grey wolf optimizer : *M.A. Ouamri and M. Azni*

Oral Session C4 : 14h00 – 15h30   **Session Chairs :** *Pr. Hassane Mohellebi, Dr. Achour Alles*

C4-11	Parameters identifications optimization high frequency transformer winding model for failure diagnosis : *A. Chanane, H. Houassine and O. Bouchhida*
C4-39	Efficiency of a Two-Stage Chopper in the photovoltaic energy conversion system controlled by the MPPT_super twisting mode sliding control (STSMC) algorithm: *B. Belabbas, T. Allaoui and M. Denai*
C4-50	Study of flashover discharge propagation : *S. Boughrara, S. Flazi, A. Ouis and N. Naoui*
C4-98	High repetition rate marx generator using inductive charging : *Y. Achour, J. Starzynski and W. Lodyga*
C4-237	Comparative study for magnetic radiated field signals discrimination linked to electrical discharges : *M. Gueraichi, H. Moulai and A. Nacer*
C4-303	Using the finite volume method in the calculation of electromechanical constraints in the isolation of high voltage cable : *A. Rouini, A. Hadjadj and M. Larbi*

Oral Session A5 : 16h00 – 17h30   **Session Chairs :** *Pr. Abderrezak Guessoum, Dr. Ammar Mesloub*

A5-107	Hands-Free communication improvement in airplane by a new dual RNQ adaptive algorithm: *A. Bentahar, Y. Benghanem and M. Djendi*
A5-109	Analysis of the GO-CFAR detector in homogeneous and non-homogeneous Weibull clutter for MIMO Radar : *M. Baadeche and F. Soltani*
A5-298	New algorithm's implementation for non-unitary joint diagonalization based on generalized givens rotation : *S. Meziani, A. Mesloub, A. Belouchrani and K. Abed-Meraim.*
A5-270	Robust joint relaxed maximum likelihood calibration and direction of arrivals estimation with sparse arrays : *A. Bouiba, M.N. El Korso and T. Boukaba*
A5-318	Parzen-Rosenblatt restoration of Markov chains corrupted by nongaussian noise : *A. Hamache, M.E. Boudaren and R. Zibani*

Oral Session B5 : 16h00 – 17h30   **Session Chairs :** *Pr. Youcef Smara, Dr. Azeddine Bouraba*

B5-221	New mixture modeling for speckle distribution in high resolution SAR images : *N. Gharbi, A. Bouaraba and B. Rekioua and and M. Benssalah*
B5-236	Improved adaptive non-uniformity correction in infrared focal plane arrays : *A. Boutemedjet and A. Khellal*
B5-273	Microcalcifications detection and segmentation using multifractal analysis based on wavelet transform : *N. Kermouni Serradj, S. Lazzouni and M. Messadi*
B5-327	Extended spatiotemporal binary features for background subtraction in video surveillance applications : *H. Bouaziz, M. Taibi, A. Taleb-Ahmed and Y. Ruichek.*
B5-328	Hyperspectral image pansharpening based on unconstrained least square spectral unmixing : *M.A. Bendoumi, R. Saadi and T. Benlefki*

Oral Session C5 : 16h00 – 17h30   **Session Chairs :** *Pr. Keltouma Nouri, Dr. Mouloud Challal*

C5-81	Miniaturized UWB antenna with Tri-band notched characteristics : *M. Debab, A. Bendaoudi and Z. Mahdjoub*
C5-114	Signal temporal analysis in ultra wideband wireless underground sensor networks : *H. Zemmour, G. Baudoin and A. Diet*
C5-156	The WCIP method applied to modeling inhomogeneous and homogeneous resonant cavities for multiband applications : *I. Adoui, M. Titaouine, H. Choutri and H. Baudrand*
C5-207	Proposed of New Multi-Band Inset Fed Stairs Bow-Tie Antenna : *S. Berhab, A. M.Abri and B.Fellah*
C5-225	Wideband Tri-Dimensional crooked wire antenna : *F. Benmahmoud, P. Lemaitre Auger and S. Tedjini*