Program
The 2nd International Conference on Advances in Biomedical Engineering

Wednesday, September 11
08:00-09:30  Registration
09:30-10:30  Opening Ceremony
10:30-11:00  Coffee Break
11:00-12:00  Keynote Speaker 1
12:00-13:30  Biomedical Signal processing (I)
13:30-14:30  Lunch
14:30-16:00  Biomedical Image Processing (I)
16:00-16:20  Coffee Break
16:20-18:00  Instrumentation and Artificial Organs 1

Thursday, September 12
09:00-10:00  Keynote Speaker 2
10:00-10:20  Coffee Break
10:20-11:40  Telemedicine
11:40-13:00  Biomechanics
13:20-14:30  Lunch
14:30-15:30  Keynote Speaker 3
15:30-17:00  Biomedical Signal processing (II)
20:00-23:00  GALA Dinner

Friday, September 13
09:00-10:00  Keynote Speaker 4
10:00-10:20  Coffee Break
10:20-12:00  Imaging
12:00-14:30  Lunch and Break
14:30-16:00  Biomedical Image Processing (II)
Wednesday, September 11

08:00 - 09:30
Registration
Room: Lobby (Quality Inn Hotel)

09:30 - 10:30
Opening Ceremony
Room: Gallery Room

10:30 - 11:00
Coffee Break
Room: Lobby (Quality Inn Hotel)

11:00 - 12:00
Keynote Speaker 1
Mohamad SAWAN
Room: Gallery Room
Harvesting Energy and Wireless Data Exchange with Implantable Medical Devices

12:00 - 13:30
Biomedical Signal processing (I)
Room: Gallery Room

Ultrasound based study of the Humeral Artery systolic and diastolic function via Transverse Impedance
    Offa Lounini (Faculty of Medicine of Tunis & Laboratory of Biophysics and Medical Technology, Tunisia); Fatma Essafi (Faculty of Medicine of Tunis, Tunisia); Mohamed Amin Mezghich (National School of Computer Sciences Manoubia, Tunisia); Slim Mhiri (CRISTAL Laboratory, GRIFT research group, Tunisia)

Delta-Fuzzy Similarity Entropy to Discriminate Healthy from Sick Fetus
    Souad Oudjemia (Francois Rabelais, Algeria); Amira Zaylaa (Université François Rabelais - Tours & Inserm, France); Jamal Charara (Lebanese University, Lebanon); Jean-Marc Girault (Université François Rabelais - Tours, France)

Classification of EEG Signals to Detect Epilepsy Problems
    Sally Al-Omar (Al Manar University of Tripoli, Lebanon); Mohamed Khalil (Azm center for research in bioTechnology & Lebanese University, Lebanon); Walid Kamali (AL-Manar University of Tripoli, Lebanon); Alaia Daher (Azm Center for Research in Biotechnology, Lebanon)

Simulation of RF Biological Tissues Response towards Remote Sensing ECG Device
    Mohamad Haji-Hassan (Lebanese International University, Lebanon)

Comparison of Methods for Evaluating Signal Synchronization and Direction: Application to Uterine EMG Signals
    Ahmad Dib (University of Technology of Compiègne, France); Mahmoud Hassan (University of Rennes1, France); Catherine Marque (Université de Technologie de Compiègne, UMR CNRS 7338, France); Brynjulf Karlsson (Reykjavik University, Iceland)
13:30 - 14:30
Lunch
Room: Senator Room

14:30 - 16:00
Biomedical Image Processing (I)
Room: Gallery Room

A Computer-Aided Speech Disorders correction System for Arabic language
Ahmed Farag Seddik (Helwan, Egypt); Ahmed Shahin (Helwan & Helwan, Egypt); Mohamed Eladawy (Helwan University, Egypt)

Optimized spectral clustering for segmentation of dynamic PET images
Hiba Zbib (Lebanese University, Université de Tours, Lebanon); Sandrine Mouyset (INPT-Enserc-IRIT, France); Simon Stue (CEA/SHFJ Orsay, France); Jean-Marc Girault (Université François Rabelais - Tours, France); Jamal Charara (Lebanese University, Lebanon); Sylvie Chalon (UMRS INSERM U930 CNRS ELI106 Université François Rabelais, France); Laurent Galineau (UMRS INSERM U930 Université François Rabelais, France); Irene Buvat (IMNC, Universités Paris 7 & Paris 11, Orsay, France); Clovis Tauber (UMRS INSERM U930 Université François Rabelais, France)

Heartbeat tracking device for detecting arrhythmia
Iyad Jaradat (Arab American University, Palestine); Ahmad Bazour (Arab American University, Palestine); Ghadeer Khalaf (Arab American University, Palestine)

Platform for EEG signal Processing for motor imagery - application Brain Computer Interface
Marie Saker (Holly Spirit University of Kaslik, Lebanon), Sandy Rihana (USEK, Lebanon)

Comparative analysis on image compression techniques for chromosome images
Mohktar Mansour (University USTO - Oran, Algeria); Hassan Mouhadjer (University USTO -Oran, Algeria); Adda Alipacha (University USTO - Oran, Algeria)

16:00 - 16:20
Coffee Break
Room: Lobby (Quality Inn Hotel)

16:20 - 18:00
Instrumentation and Artificial Organs I
Room: Gallery Room

Biorobotic Hand
Mohamad Haj-Hassan (Lebanese International University, Lebanon); Joseph Babayan (Lebanese International University, Lebanon); Rabah Abou Kansour (Lebanese International University, Lebanon); Mustapha Barakat (Jean-Monnet Saint Etienne University, France)

Effects of Predictive maintenance(PM), Proactive Maintenance(PoM), Preventive Maintenance(PM) on minimizing the faults in medical instruments
Mohammed Ayache (UL, Lebanon); Ali Jezzini (IUL, Lebanon); Lina El Khansa (IUL, Lebanon); Makki Bassem (IUL, Lebanon); Maya Zein (Lebanese University, Lebanon)
Asthma Care Apps
Abdallah Kassem (Notre Dame University, Lebanon); Mustapha Hamad (Notre Dame University-Louaize, Lebanon); Chady El Mouchary (Notre Dame University, Lebanon); Gilles Bou Jaoude (Notre Dame University, Lebanon); Elie Neghawi (Notre Dame University, Lebanon); Cesar Merhej (Notre Dame University, Lebanon)

Microwave Techniques for Biological Tissue Detection
Paula Mediavilla (University Of Cantabria, Spain); David Vegas (University of Cantabria, Spain); Antonio Tason (University of Cantabria, Spain); Tomás Fernández (University of Cantabria, Spain); Angel Mediavilla (University of Cantabria, Spain); José Gutiérrez (Marques de Valdeciudad University Hospital, Spain)

Electrode-Gel-Skin Interface Characterization and Modeling for Surface Biopotential Recording: Impedance Measurements and Noise
Hyem Saadi (Instrumentation Laboratory, LJNS, USTHB, Algeria); Mokhtar Attari (Houari Boumediene University, Algeria)

Thursday, September 12

09:00 - 10:00
Keynote Speaker 2
Metin AKAY
Room: El Assil Room 1
Advances (Innovations) in Neural Engineering

10:00 - 10:20
Coffee Break
Room: Coffee Break hall

10:20 - 11:40
Teledmedicine
Room: El Assil Room 1

Towards a better support of Machine Type Communication in LTE-Networks: Analysis of Random Access Mechanisms
Nour Kouzayha (Lebanese University, Lebanon); Nada Chendeb Taher (Lebanese University, Lebanon); Yacine Ghamri-Doudane (ENSIE & Université Paris-Est (LIGM Lab), France)

Analysis and Enhancement of WiMAX Scheduling for Teledmedicine Support
Nicole Chalita (Lebanese University, Lebanon); Rana Abdallah (Lebanese University, Lebanon); Nada Chendeb Taher (Lebanese University, Lebanon)

sensors-based context plateform for a home care application
Mirvat El makssoud (Lebanese University, Lebanon)

Personalized Temporal Medical Alert System
Juan-Pablo Suarez-Coloma (University of Grenoble, France); Christine Verdier (University Joseph Fourier Grenoble, France); Claudia Roncancio (LSR -IMAG Laboratory, France)
Neuroengineering

Room: El Assil Room 2

Effect of BDNF Secretion by Astrocyte on Learning and Memory: A Modeling Approach

Hossein Hassanpour (Amirkabir University of Technology, Iran); Ali Fallah (Amirkabir University of Technology & Associate, Iran); Mohsin Raza (Baqiyatallah University of Medical Sciences, Iran)

A portable system for quantitative assessment of parkinsonian bradykinesia during deep-brain stimulation surgery

Houde Dai (Technical University of Munich, Germany); Lorenzo T. D’Angelo (Technische Universität München, Germany)

Detection and classification of fast ripples using wavelets

Amar Kachenoura (University of Rennes1-LTSI & Inserm - UMR 1099, France); Birot Gwénéel (Department of Fundamental Neuroscience, University of Geneva, Geneva, France); Laurent Albera (Université de Rennes1 & Inserm, France); Lotfi Senhadji (Université de Rennes 1 & Inserm, France); Fabrice Wendling (INSEERM, France)

Visual Feedback Discordance Mediates Changes in Brain Activity and Effective Connectivity: A Stroke fMRI Dynamic Causal Modeling Study

Soha Saleh (University of Medicine and Dentistry of New Jersey, USA); Sergei Adamovich (New Jersey Institute of Technology, USA); Eugene Tunik (University of Medicine and Dentistry of New Jersey, USA)

11:40 - 13:00

Biomechanics

Room: El Assil Room 1

Simulations of flexes and pressures including the time-dependence of the microvascular resistances in coronary three vessel disease

Agnes Drochon (University of Technology of Compiègne & BMBI Laboratory, France); Majid Harmouch (CHU Pontchaillou Rennes, France); Amedeo Anselmi (CHU Pontchaillou Rennes, France); Mahmoud Maasarami (Lebanese University, Lebanon); Chiara Mariano (Politecnico di Torino, France); Herve Corbineau (CHU Pontchaillou Rennes, France); Jean-Philippe Verhoye (CHU Pontchaillou Rennes, France)

Walking analysis: Empirical Relation between Kurtosis and Degree of Cyclostationarity

Firas Zakaria (Arm center for research in bioTechnology & Lebanese University, Lebanon); Mohammed El Badawi (University of Saint Etienne, France); Mohamad Khalil (Arm center for research in bioTechnology & Lebanese University, Lebanon); Sofiane Maiz (University of Saint Etienne Jean Monnet, France); François Guillet (University Saintetienne, France); Khaled H. Khalil (Universite Libanaise & Faculte de Genie, Lebanon); Mohamad Halimi (Universite Saint Joseph & Universite Libanaise, Lebanon)

Sensitivity Evaluation of HOS Parameters by Data Fusion from HD-eEMG Grid

Mariam Al Harrach (EDST & Lebanese University, France); Fouaz Sofiane Ayachi (McGill University, Canada); Sofiane Boudaoud (UMR University of Technology of Compiègne (UTC), France); Jeremy Laforeti (University of Technology of Compiègne (UTC), France); Frederic Marin (University of Technology of Compiègne (UTC), France)

Combining numerical and clinical methods to assess aortic valve hemodynamics during exercise

Kamran Hassani (Science and Research Branch, Islamic Azad University, Iran)

Bioinformatics

Room: El Assil Room 2

Resilient Bio-Inspired Wireless Sensor Network based on Genes Regulatory Network

Nour El-Muwass (Lebanese University, Lebanon); Nada Chendeb-Taher (Lebanese University, Lebanon); Agoulmine Nazim (University of Evry Val d’Essonne, France)
Image Analysis Platform for Yeast Biologists

Mohamed Klei (Leiden University, The Netherlands); Ginny Anema (Leiden University, The Netherlands); Paul van Heusden (Leiden University, The Netherlands); Fons Verbeek (Section Imaging & BioInformatics, The Netherlands)

Study and Implementation of a Network Point Health Smart Home Electrocardiographic

HAMLIL Nahla (Tlemcen University, Algeria); Mohammed Benabdellah (University of Tlemcen, Algeria)

Face identification by fusion scores 2D neutral and 3D expressions

Mebarka Belahcene (Mohamed Khider University, Algeria); Abdelmalik Ouamane (Electrical Engineering, Algeria); Nawat Gaidi (Mohamed KHIDER Blida University, Algeria)

About Detection and Diagnosis of Freezing of Gait

Mohammed Ayache (UIL, Lebanon); Saad Ali (University le Havre, France); Zaazour Iyad (Lebanese University, Lebanon); Lefebvre Dimitri (Le havre University, France); Guérin Francois (University le Havre, Lebanon). Bejani Paul (NDU Hospital, Lebanon)

13:20 - 14:30

Lunch

Room: Senator Hall

14:30 - 15:30

Keynote Speaker 3

Peter Steadler

Room: El Assil Room 1

New Arrivals in the RNA Zoo: Abundant Circularized and Trans-Spliced Transcripts

15:30 - 17:00

Biomedical Signal processing (II)

Room: El Assil Room 1

Regional myocardial radial velocities estimation from Cine MR Images: Study of a patient-related coefficient effect

Racha Berbari (Lebanese University, Lebanon); Chaza Chahine (Lebanese University, Lebanon)

Binary Particle Swarm Optimization for Feature Selection on Uterine Electrohysterogram Signal

Dima Alamedine (Université de Technologie de Compiègne, France); Catherine Marque (Université de Technologie de Compiègne, UMR CNRS 7338, France); Mohammad Khalil (Azm center for research in bioTechnology & Lebanese University, Lebanon)

Control of the environment for persons with disabilities

Roy Abi Zeid Daou (Lebanese German University, Lebanon); Robert Bachaalani (Lebanese German University, Lebanon); Johnny Abi Nasr (Lebanese German University, Lebanon)

Fetal ECG extraction from abdominal composite recordings - A preliminary study

Khalaf (Lebanese University, Lebanon); Bassam Moslem (Rafik Hariri University & RHU, Lebanon); Oussama Bazzi (Lebanese University, Lebanon); Mohamad O. Diab (Rafik Hariri University & College of Engineering, Lebanon)

Combination Of PCA And SVM For Diagnosis Of Parkinson's Disease

Shahbaldini (Islamic Azad University of Dezful, Iran); Danial Taheri Far (Dezfooz Branch Islamic Azad University, Iran); Zahrat Zareei (FSR University, Iran)
Ab initio simulation of dynamic and quantum properties of biomolecular structures
Ibrahim Sheldak (BSUR, Belarus); Vladislav Nelayev (Belarusian State University of Informatics and Radioelectronics, Belarus); Vacheslav Barkaline (Belarusian National Technical University, Lebanon)

BIOMEMS and instrumentation
Room: El Assil Room 2

A Review of Microelectrode Array Technologies: Design and Implementation Challenges
Bahareh Ghan-Motlagh (Polytechnique Montreal, Canada); Mohamad Sawan (Polytechnique Montréal, Canada)

Nanostructured Porous Silicon Membrane for Hemodialysis
John Saliba (Lebanese University, Lebanon); Mohamad Haji-Hassan (Lebanese International University, Lebanon); Jamal Charara (Lebanese University, Lebanon)

Porous Silicon Cantilever for DNA Immobilisation and Detection
Zeine (Lebanese University, Lebanon); Jamal Charara (Lebanese University, Lebanon); Mohamad Haji-Hassan (Lebanese International University, Lebanon)

Design of an Ultrasonic Auditory-Vision Teaching Device
Rayan Fayad (Lebanese International University, Lebanon); Ali Hage-Diab (Lebanese International University, Lebanon)

Optical designs for Multimodal Nonlinear Microendoscope for Optical Biopsy
Hussein Hamzeh (Laboratoire IMNC - Université Paris-Sud, France); Claire Lefort (Laboratoire IMNC - Université Paris-Sud, France); Jamal Charara (Lebanese University, Lebanon); Frederic Louradour (XLIM Institut de Recherche, France); Gaël Latour (Laboratoire IMNC - Université Paris-Sud, France); Darine Abi Haidar (University of Paris DIDEROT, France); Frédéric Pain (Laboratoire IMNC - Université Paris-Sud, France)

A new framework for analyzing the performance of the Glucose-Insulin System
Charbel El Gemayel (INSa de Lyon & Lebanese University, Lebanon); Fabrice Jumel (INSa de Lyon, France); Nacer Absouchi (CPE Lyon, France); Joseph Constantin (Lebanese University Faculty of Sciences II, Lebanon); Antoine Tabet (Lebanese University, Lebanon); Doumit Zaouk (Lebanese University, Lebanon)

20:00 - 23:00
GALA Dinner
Room: Restorant

Friday, September 13

09:00 - 10:00
Keynote Speaker 4
Amine Nait Ali
Room: El Assil Room 1
Biometrics for healthcare, security and forensics

10:00 - 10:20
Coffee Break
Room: Coffee Break hall

10:20 - 12:00
Imaging
Room: El Assil Room 2
Self-Optimized Two Phase Test Sample Sparse Representation Method For Image Classification

Fadi Domaika (University of Basque Country and Berafoad Foundation, Spain); Yousof Traboulisi (University of the Basque Country, Spain); Carmen Hernandez (universidad del Pain Vasco, Spain); Ammar Assoun (Lebanese University, Lebanon)

An Automatic Algorithm For Human Identification Using Hand X-Ray Images

Yehya Kabbara (Lebanese University, Lebanon); Ahmad Chahine (Lebanese University, Lebanon); Amine Nait-ali (Université Paris-Est Créteil (UPEC), France); Mohamad Khalil (Azm center for research in bioTechnology & Lebanese University, Lebanon)

CIMOR: An Automatic Segmentation To Extract Bone Tissue in Hand X-Ray Images

Karim El Soufi (Lebanese University, Lebanon); Yehya Kabbara (Lebanese University, Lebanon); Ahmad Shahin (Lebanese University, Lebanon); Mohamad Khalil (Azm center for research in bioTechnology & Lebanese University, Lebanon); Amine Nait-ali (Université Paris-Est Créteil (UPEC), France)

Enhancement of S-AES using chaos for the support of biomedical applications

Bacem Bakhache (Lebanese University, Lebanon)

Securing biometric data by combining watermarking and cryptography

Mohamed Ould1m (University of Sciences and Technology ORAN-MB-, Algeria); Ahmed Sabri (University of Sciences and Technology mb Oran, Lebanon); Hassan Mouhadjet (University USTO -Oran, Algeria)

Feasibility Study for Magneto Hydrodynamics Hardware Model

Maher Sahbah (HCU, Lebanon); Rami Allkatib (RHU, Lebanon); Nihal Saad (Lebanon, Lebanon); SAlly Sandid (Rafik Hariri University, Lebanon); Mohamad O. Diab (Rafik Hariri University & College of Engineering, Lebanon)

Biomedical Signal processing (II)

Room: El Aal Room 1

Unbiased Recurrence Plot Quantification Of Chaotic Dynamic Systems By Eliminating Sojourn Points

Amira Zaylaa (Université François Rabelais - Tours & Inserm, France); Jamal Charara (Lebanese University, Lebanon); Jean-Marc Girault (Université François Rabelais - Tours, France)

Graph-based analysis of brain connectivity during spelling task

Mahmoud Hassan (University of Rennes1, France); Olivier Dufor (Télécom Bretagne, France); Ahmad Mheich (University of Rennes1, France); Claude Berrou (Télécom Bretagne, France); Fabrice Wendling (INSERM, France)

Muscle Force Estimation Using Data Fusion from High-Density SEMG Grid

Samar Allouch (University of Technology of Compiégne (UTC), France); Mariam Al Harrach (EDST & Lebanese University, France); Sofiane Boudaoud (UMR University of Technology of Compiégne (UTC), France); Jeremy Laforet (University of Technology of Compiégne (UTC), France); Fouad Sofiane Ayachi (McGill University, Canada); Rafic Younes (Lebanese University, Lebanon)

Variation of the noninvasive Intracranial Pressure, Graphical User Interface Design

Sarah Delaporte (ESITPA, Mont Saint Aignan, France); Paul Avan (University of Auvergne, France); Mohamad Nassereddine (Lebanese University, Lebanon)

Evaluation of T-wave Morphology Parameters in Drug-Induced Repolarization Abnormalities

Nadine Khodor (Lebanese University & University of Rennes 1, Lebanon); Guy Carraut (Université de Rennes, France); Hassan Amoud (Lebanese University, Lebanon); Alfredo Hernández (INSERM, France); Philippe L’Hostis (Biortrial Core Lab, France); Mohamad Khalil (Lebanese University & Faculty of Engineering, Section 1, Lebanon)
12:00 - 14:30
Lunch and Break
Room: Senator Hall

14:30 - 16:00
Biomedical Image Processing (II)
Room: El Ansil Room 1

Functional Brain Networks and Schizophrenia analysis with fMRI by Multiset Canonical Correlation Analysis
Pietro Guccione (Politecnico di Bari, Italy); Luigi Masciolo (Politecnico di Bari, Italy); Giovanni Nico (Consiglio Nazionale delle Ricerche, Italy); Paolo Taurisano (University of Bari, Italy); Giuseppe Blasi (University of Bari, Italy); Leonardo Fazio (University of Bari, Italy); Alessandro Bertolino (University of Bari, Italy)

Human Motion Tracking for Rehabilitation using Depth Images and Particle Filter Optimization
Benoit Penelle (Université Libre de Bruxelles, Belgium); Olivier Debeir (ULB, Bruxelles, Belgium)

Segmentation of Human Chromosome Images Using Distance Regularized Level Set Evolution
Hassan Mouhadjer (University USTO - Oran, Algeria); Mokhtar Mansour (University USTO - Oran, Algeria); Mohamed Oualim (University of Sciences and Technology ORAN-MB, Algeria)

Automated Algorithm for Ovarian Cysts Detection in Ultrasonogram
Sandy Ribah (USEK, Lebanon); Chiraz Skaff (Holy Spirit University, Lebanon); Hares Moussalem (Holy Spirit University, Lebanon); Charles Yaacoub (Holy-Spirit University of Kaslik, Lebanon)

Health care system
Room: El Ansil Room 2

Effects of GSM antennas in Urban Cities
Ali Harmouch (Lebanese University, Lebanon); Hassan Haddad (Lebanese University, Lebanon); Georges Chahda (Notre Dame University, Lebanon)

Certified Expert in Biomedical accidents and risk management: Lebanese experience and future expectations
Mohamad Nassreddine (Lebanese University, Lebanon); Niazi Nehme (Lebanese University, Lebanon); Sarah Delaporte (ESITPA, Mont Saint Aignan, France)

The effect of the air velocity on the collection efficiency of microorganisms by impaction method
Antoine Tabet (Lebanese University, Lebanon); Charbel El Gemayel (INSA de Lyon & Lebanese University, Lebanon); Marie Nawal Sabra (Lebanese University, Lebanon); Aline Msaed (Lebanese University, Lebanon); Gisèle El Dib (Université de Rennes, France)

A Novel Identification/Verification Model Using Smartphone's Sensors and User Behavior
Ghina Dandachi (Lebanese University- Doctoral School for Sciences and Technology, Lebanon); Bachar A. ElHassan (Lebanese University, Faculty of Engineering, Branch1 & order of Engineers and Architects - Tripoli, Lebanon); Anas El Hasseini (Telecom SudParis, France)

Healthcare Design Planning criteria that every biomedical engineer should know
Mohamad Nassreddine (Lebanese University, Lebanon); Maya Zein (Lebanese University, Lebanon); Lina ELkhansa (IUL, Lebanon)