



Program

The 2nd International Conference on Advances in Biomedical Engineering

Wednesday, September 11

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

Thursday, September 12

09:00-10:00	<i>Keynote Speaker 2</i>	
10:00-10:20	<i>Coffee Break</i>	
10:20-11:40	<i>Telemedicine</i>	<i>Neuroengineering</i>
11:40-13:00	<i>Biomechanics</i>	<i>Bioinformatics</i>
13:20-14:30	<i>Lunch</i>	
14:30-15:30	<i>Keynote Speaker 3</i>	
15:30-17:00	<i>Biomedical Signal processing (II)</i>	<i>BIOMEMS and instrumentation</i>
20:00-23:00	<i>GALA Dinner</i>	

Friday, September 13

09:00-10:00	<i>Keynote Speaker 4</i>	
10:00-10:20	<i>Coffee Break</i>	
10:20-12:00	<i>Imaging</i>	<i>Biomedical Signal processing (II)</i>
12:00-14:30	<i>Lunch and Break</i>	
14:30-16:00	<i>Biomedical Image Processing (II)</i>	<i>Health care system</i>

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

Olfa Laouini (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 Manouba, Tunisia); Slim M'hiri (CRISTAL Laboratory, GRIFT research group, Tunisia)

Delta-Fuzzy Similarity Entropy to Discriminate Healthy from Sick Fetus

Souad Oudjemia (François 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); Mohamad Khalil (Azm center for research in bioTechnology & Lebanese University, Lebanon); Walid Kamali (AL-Manar University of Tripoli, Lebanon); Alaa Daher (Azm Center for Research in Biotechnology, Lebanon)

Simulation of RF Biological Tissues Response towards Remote Sensing ECG Device

Mohamad Hajj-Hassan (Lebanese International University, Lebanon)

Comparison of Methods for Evaluating Signal Synchronization and Direction: Application to Uterine EMG Signals

Ahmad Diab (University of Technologie of Compiègne, France); Mahmoud Hassan (University of Rennes1, France); Catherine Marque (Université de Technologie de Compiègne, UMR CNRS 7338, France); Brynjar 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 Mouysset (INPT-Enseeiht-IRIT, France); Simon Stute (CEA/SHFJ Orsay, France); Jean-Marc Girault (Université François Rabelais - Tours, France); Jamal Charara (Lebanese University, Lebanon); Sylvie Chalou (UMRS INSERM U930 CNRS ERL3106 Université François Rabelais, France); Laurent Galineau (UMRS INSERM U930 Université François Rabelais, France); Irene Buvat (IMNC, Universites 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 Bzour (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

Mokhtar 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 Hajj-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(PdM), Proactive Maintenance(PoM), Preventive Maintenance(PM), on minimizing the faults in medical instruments

Mohammed Ayache (IUL, Lebanon); Ali Jezzini (IUL, Lebanon); Lina ELkhansa (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 Moucary (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 Tazon (University of Cantabria, Spain); Tomás Fernández (University of Cantabria, Spain); Angel Mediavilla (University of Cantabria, Spain); José Gutierrez (Marques de Valdecilla University Hospital, Spain)

Electrode-Gel-Skin Interface Characterization and Modeling for Surface Biopotential Recording: Impedance Measurements and Noise

Hyem Saadi (Instrumentation Laboratory LINS, 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

Telemedicine

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 (ENSIIE & Université Paris-Est (LIGM Lab), France)

Analysis and Enhancement of WiMAX Scheduling for Telemedicine Support

Nicole Challita (Lebanese University, Lebanon); Rana Abdallah (Lebanese University, Lebanon); Nada Chendeb Taher (Lebanese University, Lebanon)

sensors-based context platform 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 Hassanpoor (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 Gwénéael (Department of Fundamental Neuroscience, University of Geneva, Geneva, France); Laurent Albera (Université de Rennes1 & Inserm, France); Lotfi Senahdji (Université de Rennes 1 & Inserm, France); Fabrice Wendling (INSERM, 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 fluxes 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 Harmouche (CHU PontChaillou Rennes, France); Amedeo Anselmi (CHU PontChaillou Rennes, France); Mahmoud Maasarani (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 (Azm center for research in bioTechnology & Lebanese University, Lebanon); Mohammed El Badaoui (University of Saint Etienne, France); Mohamad Khalil (Azm 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 & Université Libanaise, Lebanon)

Sensitivity Evaluation of HOS Parameters by Data Fusion from HD-sEMG 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 Laforet (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-Mawass (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 Tleis (Leiden University, The Netherlands); Ginny Anemaet (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 Nabila (Tlemcen University, Algeria); Mohammed Benabdellah (University of TLEMEN, 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 Biskra University, Algeria)

About Detection and Diagnosis of Freezing of Gait

Mohammed Ayache (UIL, Lebanon); Saad Ali (University le Havre, France); Zaarour Iyad (Lebanese University, Lebanon); Lefebvre Dimitri (Le havre University, France); Guérin Francois (University le Havre, Lebanon); Bejjani 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); Mohamad Khalil (Azm center for research in bioTechnology & Lebanese Univesrsity, 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

Shahbakhti (Islamic Azad University of Dezfoul, Iran); Danial Taheri Far (Dezfool Branch Islamic Azad University, Iran); Zahra Zareei (FSR University, Iran)

Ab initio simulation of dynamic and quantum properties of biomolecular structures

Ibrahim Shelibak (BSUIR, Belarus); Vladislav Nelayev (Belarusian State University of Informatics and Radioelectronics, Belarus); Viatcheslav 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 Ghane-Motlagh (Polytechnique Montreal, Canada); Mohamad Sawan (Polytechnique Montréal, Canada)

Nanostructured Porous Silicon Membrane for Hemodialysis

John Saliba (Lebanese University, Lebanon); Mohamad Hajj-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 Hajj-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 Abouchi (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 Dornaika (University of Basque Country and Ikerbasque Foundation, Spain); Youssef Traboulsi (University of the Basque Country, Spain); Carmen Hernandez (universidad del Pais Vasco, Spain); Ammar Assoum (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 Naït-ali (Université Paris-Est Créteil (UPEC), France); Mohamad Khalil (Azm center for research in bioTechnology & Lebanese Univesrity, 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 Univesrity, Lebanon); Amine Naït-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 Ouslim (University of Sciences and Technology ORAN-MB-, Algeria); Ahmed Sabri (University of Sciences and Technology mb Oran, Lebanon); Hassan Mouhadjer (University USTO -Oran, Algeria)

Feasibility Study for Magneto Hydrodynamics Hardware Model

Maher Sabbah (HCU, Lebanon); Rami Alkhatib (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 Assil 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 Compiegne (UTC), France); Mariam AL Harrach (EDST & Lebanese University, France); Sofiane Boudaoud (UMR University of Technology of Compiegne (UTC), France); Jeremy Laforet (University of Technology of Compiegne (UTC), France); Fouaz 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 Carrault (Universite de Rennes, France); Hassan Amoud (Lebanese University, Lebanon); Alfredo Hernández (INSERM, France); Philippe L'Hostis (Biotrial 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 Assil Room 1

Functional Brain Networks and Schizophrenia analysis with fMRI by Multiset Canonical Correlation Analysis

Pietro Guccione (Politecnico di Bari, Italy); Luigi Mascolo (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 Ouslim (University of Sciences and Technology ORAN-MB-, Algeria)

Automated Algorithm for Ovarian Cysts Detection in Ultrasonogram

Sandy Rihana (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 Assil 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 Nassereddine (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 Hussein (Telecom SudParis, France)

Healthcare Design Planning criteria that every biomedical engineer should know

Mohamad Nassereddine (Lebanese University, Lebanon); Maya Zein (Lebanese University, Lebanon); Lina ELkhansa (IUL, Lebanon)