	Wednesday, September 16	Thursday, September 17	Friday, September 18
8:00 - 9:00	REG: *REGISTRATION*		
9:00 - 9:30		KS3: *Keynote Speaker 3 : Pr. Fabrice Wendling*	KS5: *Keynote Speaker 5: Pr. Patrick Flandrin*
9:30 - 9:45	OPN: *Opening Ceremony*		
9:45 - 10:15		CB3: *Coffee Break 3*	CB5: *Coffee Break 5*
10:15 - 10:30		OS2: *Neuroengineering, Image processing, Education (Invited Speakers, Oral Session)*	OS4: *Biomechanics (Invited Speakers, Oral Session)*
10:30 - 11:00	CB1: *Welcome Reception*		
11:00 - 11:45	KS1: *Keynote Speaker 1 : Pr. Bart Bijnens*		
11:45 - 12:00	OS1: *Biomedical Signal Processing (Invited Speakers, Oral Session)*		OS5: *Biomedical Applications (Oral Session)*
12:00 - 13:15		OS3: *Biomedical Applications (Oral Session)*	
13:15 - 13:30			Lunch: *Lunch*
13:30 - 14:15	Lunch: *Lunch*	Lunch: *Lunch*	
14:15 - 14:30			KS6: *Keynote Speaker 6 : Pr. Ghaleb Husseini*
14:30 - 15:00	KS2: *Keynote Speaker 2 : Pr. Peter Stadler*	KS4: *Keynote Speaker 4 : Pr. Mohamad Sawan*	
15:00 - 15:15			FOP31: *Biomechanics and Health Care Managment (Flash Oral Presentation)* FOP32: *Biomedical Signal and Image Processing (Flash Oral Presentation)*
15:15 - 17:00	FOP11: *Bioinformatics, Biometrics, Imaging (Flash Oral Presentation)* FOP12: *Biomedical Signal and Image Processing (Flash Oral Presentation)*	FOP21: *NeuroEngineering (Flash Oral Presentation)* FOP22: *Telemedicine and Therapeutical Devices (Flash Oral Presentation)*	
17:00 - 17:15		CB4: *Coffee Break*	CB6: *Coffee Break*
17:15 - 17:30	CB2: *Coffee Break 2*	PS2: *Poster Session II: Neuro Engineering, Therapeutic devices, Telemedicine*	PS3: *Poster Session III: Biomechanics and Health Care Management, Signal and Image Processing*
17:30 - 18:15	PS1: *Poster Session I: Bioinformatics, Biometrics, Imaging, Signal processing*		

18:15 - 18:30			
18:30 - 20:30			
20:30 - 23:00		Gala: *Gala Dinner: Holiday Inn Hotel, Verdun, Beirut*	

Wednesday, September 16

08:00 - 09:30

REG: REGISTRATION

Room: Hall FoE

09:30 - 10:30

OPN: Opening Ceremony

Room: Conference Room 1

10:30 - 11:00

CB1: Welcome Reception

Room: Hall FoE

11:00 - 11:45

KS1: Keynote Speaker 1 : Pr. Bart Bijnens

Room: Conference Room 1
Chair: Zaher Dawy (American University of Beirut, Lebanon)

Where engineering meets clinical practice: understanding the working of the heart in health and disease
Bart Bijnens (Universitat Pompeu Fabra, Spain)

11:45 - 13:30

OS1: Biomedical Signal Processing (Invited Speakers, Oral Session)

Room: Conference Room 1
Chairs: Bart Bijnens (Universitat Pompeu Fabra, Spain), Ziad O. Abu-Faraj (American University of Science and Technology, Lebanon)

Biometrics and Biomedical Engineering: where is the border?
Amine Naït-ali (Université Paris-Est Créteil (UPEC), France)

Signal and physiological models for heart failure resynchronization therapy
Guy Carrault (Universite de Rennes, France)

Development and use of a multiscale physiological model. Application to the uterine muscle electrical activity
Catherine Marque (Université de Technologie de Compiegne, France)

A survey of complexity analysis of time series derived from nonlinear dynamical systems
Jean-Marc Girault (Université François Rabelais - Tours, France)

13:30 - 14:30

Lunch: Lunch

14:30 - 15:15

KS2: Keynote Speaker 2 : Pr. Peter Stadler

Room: Conference Room 1
Chair: Mohammed Ayache (UIL, Lebanon)

Most human long non-coding RNAs are evolutionary old
Peter Stadler (Leipsig University, Germany)

15:15 - 17:15

FOP11: Bioinformatics, Biometrics, Imaging (Flash Oral Presentation)

Room: Conference Room 2
Chairs: Peter Stadler (Leipsig University, Germany), Mohamad Hajj-Hassan (Lebanese International University, Lebanon)

Neural Network Diagnosis of Heart Disease
Ebenezer Olaniyi (Near East University & Centre of Innovation for Artificial Intelligence, Turkey); Oyebade Oyedotun (Near East University, Cyprus); Abedelkader Helwan (Near East University, Lebanon); Adnan Khashman (Centre of Innovation for Artificial Intelligence, Turkey)
pp. 1-4

Prediction of Anorexic Person from "Thin" or " Dieting" Patient Via Neural Network
Ranim El ahdab (Near East University, Lebanon)
pp. 5-8

A bi-modal palmvein palmprint biometric human identification based on fusing new CDSDP features
Randa Boukhris and Masmoudi Alima (Sfax Engineering School, Tunisia); Dorra Masmoudi (ENIS, Tunisia)
pp. 9-12

Radiation dose levels assessment in digital mammography
Al Kattar Zeina (University, Lebanon); Hanna Balaa (LAEC, Lebanon); Fatina Sleyman, Mariam Zein Fakih, Nourhan Shammas, Zainab Mazeh and Ghadeer Alaa eldine (Lebanese University, Lebanon); Samia Omayrat (UMC, Lebanon)
pp. 13-16

Influence of the acquisition parameters on the image quality in digital mammography
Al Kattar Zeina (University, Lebanon); Huda Harb, Nour Hodroj and Nisrine Raad (Lebanese University, Lebanon); Hanna Balaa (LAEC, Lebanon); Fatina Sleyman (Lebanese University, Lebanon); Samia Omayrat (UMC, Lebanon)

pp. 17-20

ISIBC: An Intelligent System for Identification of Breast Cancer
Abedelkader Helwan (Near East University, Lebanon); Rahib H Abiyev (Near East University, Turkey)
pp. 21-24

Palm Print Recognition
Ahmad Harb (Lebanese University, Lebanon); Mohammed Ayache (UIL, Lebanon); Mahmoud Abbas (LUT, Lebanon)
pp. 25-28

Image Classification Using Kernel Flexible Manifold Embedding
Youssof Traboulsi (University of the Basque Country, Spain); Fadi Dornaika (University of Basque Country and Ikerbasque Foundation, Spain); Ammar Assoum (Lebanese University, Lebanon); Bassam Daya (Lebanese University & IUT Saida, Lebanon)
pp. 29-32

Neuro-Fuzzy System based on Particle Swarm Optimization Algorithm for image denoising application
M. Elloumi (Computers Imaging Electronics and Systems Group (CIELS) from Advanced Control and Energy Management , Tunisia); Mohamed Krid (Computers Imaging Electronics and Systems Group (CIELS) & from Advanced Control and Energy Management Laboratory (CEMLab), University of Sfax, Sfax Engi0neeri, Tunisia); Dorra Masmoudi (ENIS, Tunisia)
pp. 33-36

Comparison between fresh and fixed human biopsies using spectral and lifetime measurements: Fluorescence analysis using one and two photon excitations
Fanny Poulon, Marc Zanello and Ali Ibrahim (IMNC Laboratory, Orsay, France); Amira Zaylaa (American University of Beirut, Lebanon); Pascale Varlet and Bertrand Devaux (Sainte Anne Hospital, France); Darine Abi Haidar (University of Paris DIDEROT, France)
pp. 37-40

FOP12: Biomedical Signal and Image Processing (Flash Oral Presentation)

Room: Conference Room 1
Chairs: Catherine Marque (Université de Technologie de Compiegne, France), Rochdi Merzouki (Polytech Lille, France)

Volume Variation of The Parotid Gland during Adaptive Radiotherapy
Ali Raad (Instructor at the Islamic University of LEBANON, Lebanon); Mohammed Ayache (UIL, Lebanon); Ayman Mourad (Lebanese University, Lebanon); Alaa Abboud (IUL, Lebanon); Rochdi Merzouki (Polytech Lille, France); Éric Lartigau (Centre Oscar Lambret, Lebanon); David Pasquier (Centre Oscar Lambret, France)
pp. 41-44

Segmentation and Extraction of Brain Injury Lesions from MRI Images: Matlab Implementation
Rasha Noureddine and Khalil Tarhini (Lebanese International University, Lebanon); Soha Saleh (Lebanese International University & Rutgers University, Lebanon)
pp. 45-48

3D+t segmentation of PET images using spectral clustering
Hiba Zbib (Université Libanaise, Lebanon); Salam Kdouh (Lebanese University, Lebanon); Sandrine Mouysset (Universite de Toulouse, France); Simon Stute (CEA, Service Hospitalier Frédéric Joliot, France); Jean-Marc Girault (Université François Rabelais - Tours, France); Jamal Charara (Lebanese University & Faculty of Sciences, Lebanon); Mohamad Nassereddine (Lebanese University, Lebanon); Ali Mcheik (LIU, Lebanon); Irene Buvat (Universidad Católica del Maule, Chile); Clovis Tauber (UMRS INSERM U930 Université François Rabelais, France)
pp. 49-52

Frequency Content Analysis of Gait -Vertical Ground Reaction Force
Hiba Karout (Rafik Hariri University, Lebanon); Mohamad O. Diab (Rafik Hariri University & College of Engineering, Lebanon); Bassam Moslem (Rafik Hariri University & RHU, Lebanon); Rami Alkhatib (RHU, Lebanon); Christophe Corbier (Université Jean-Monnet, France); Mohamed ElBadaoui (University of Jean Monet, France)
pp. 53-56

High Accuracy Resistance to Current Circuit Design for Resistive Gas Sensor Biomedical Applications
Zeinab Ibrahim Hijazi (University of Genova Italy & Lebanese University EDST, Italy); Daniele Caviglia (University of Genoa, Italy); Maurizio Valle (University of Genova, Italy); Hussein Chible (Lebanese University, Lebanon)
pp. 57-60

Driver Stress Level Detection Using HRV Analysis
Nermine AL-Munla (Doctoral School of Science and Technologie & Lebanese University, Lebanon); Ahmad M. Shahin (Lebanese University, Lebanon); Azzam Mourad (Lebanese American University (LAU), Lebanon); Mohamad Khalil (Lebanese University & Faculty of Engineering, Section 1, Lebanon)
pp. 61-64

Fault Tolerance Level Assessment of a Wireless Communication Link in a System of Systems Concept Modeled using Bond Graph
Ahmad Koubeissi (Polytech Lille, University of Lille 1, France); Mohammed Ayache (UIL, Lebanon); Mahmoud Abbas (LUT, Lebanon); Rochdi Merzouki (Polytech Lille, France); Blaise Conrard (CRIStAL - Univ Lille 1, France)
pp. 65-68

Ambulatory Physical Activity Representation and Classification using Spectral Distances Approach
Hala Abdul Rahman (ENS - Rennes, France); Guy Carrault (Universite de Rennes, France); Di GE (University of Rennes 1, France); Jacques Prioux and Alexis Le Faucheur (ENS - Rennes, France); Hassan Amoud (Lebanese University, Lebanon); Remy Dumond (ENS - Rennes, France)
pp. 69-72

Pregnancy Monitoring Using Graph Theory Based Analysis
Noujoud Nader (Lebanese University & Azm Center, Lebanon); Mahmoud Hassan (University of Rennes1, France); Wassim El Falou (Lebanese University, Lebanon); Ahmad Diab (Lebanese Universitgy- EDST, Lebanon); Catherine Marque (Université de Technologie de Compiegne, France); Mohamad Khalil (Lebanese University & Faculty of Engineering, Section 1, Lebanon)
pp. 73-76

Direct Graphical Analysis of the Fetal Heart Rate Variability during Labor
Ali Mohydeen and Oussama Bazzi (Lebanese University, Lebanon); Bassam Moslem (Rafik Hariri University & RHU, Lebanon)
pp. 77-80

Multiscale Analysis of Heart Rate Variability for the Characterization of Subjects with Reflex Syncope during Head-Up Tilt Test
Aline Taoum and Hassan Amoud (Lebanese University, Lebanon); Nadine Khodor (University of Rennes 1, France); Guy Carrault (Universite de Rennes, France); David Matelot (University of Rennes1, France); François Carre (Université de Rennes 1, France)
pp. 81-84

Channel selection for monovariate analysis on EHG
Dima Alamedine (Université de Technologie de Compiègne, France); Catherine Marque (Université de Technologie de Compiegne, France); Mohamad Khalil (Lebanese University & Faculty of Engineering, Section 1, Lebanon)
pp. 85-88

A New Energy Detector of Micro-Emboli Using a Time-Varying Threshold
Maroun Geryes (Lebanese University, Lebanon); Sébastien Ménigot (Université François-Rabelais de Tours & Inserm U930, France); Walid Hassan (Thomson Reuters & Lebanese University, USA); Marilys Almar and Benoit Guibert (ATYS Medical, France); Corinne Gautier (CHU de Lille, France); Jamal Charara (Lebanese University & Faculty of Sciences, Lebanon); Jean-Marc Girault (Université François Rabelais - Tours, France)
pp. 89-92

Towards a Usable and an Efficient Elder Fall Detection System
Mohamad Daher (Lille University - Science and Technology, Lebanon); Ahmad Diab (Lebanese Universitgy- EDST, Lebanon); Maan El Badaoui El Najjar (Université des Sciences et Technologies de Lille, France); Francois Charpillet (Université de Lorraine, France); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon)
pp. 93-96

17:15 - 17:30

CB2: Coffee Break 2

Room: Hall FoE

17:30 - 18:30

PS1: Poster Session I: Bioinformatics, Biometrics, Imaging, Signal processing

Papers of sessions FOP11 and FOP12
Room: Hall FoE

Thursday, September 17

09:00 - 09:45

KS3: Keynote Speaker 3 : Pr. Fabrice Wendling

Room: Conference Room 1
Chair: Jamal Charara (Lebanese University & Faculty of Sciences, Lebanon)

Neuromodulation in brain disorders: models and technologies
Fabrice Wendling (INSERM, France)

09:45 - 10:15

CB3: Coffee Break 3

Room: Hall FoE

10:15 - 12:00

OS2: Neuroengineering, Image processing, Education (Invited Speakers, Oral Session)

Room: Conference Room 1
Chairs: Fabrice Wendling (INSERM, France), Amine Naït-ali (Université Paris-Est Créteil (UPEC), France)

In-vitro neuro-electronic interfaces: micro transducer arrays and biomedical applications
Sergio Martinoia (University of Genova, Italy)

Towards adding richer dynamics of neural population activity in modeling of brain rhythms: a nonlinear estimation-based approach
Fadi Karameh (American University in Beirut, Lebanon)

Image Processing based Clinical Decision Support Systems for Breast Cancer Diagnosis
Dorra Sellami Masmoudi (National Engineering school of sfax, Tunisia)

Lean Reengineering of Engineering Education
Brynjar Karlsson (Reykjavik Univerrsity, Iceland)

12:00 - 13:30

OS3: Biomedical Applications (Oral Session)

Room: Conference Room 1

Chairs: Jean-Marc Girault (Université François Rabelais - Tours, France), Ali Hamie (Arts Sciences & Technology University in Lebanon (AUL), Lebanon)

A Simple Noninvasive Approach for Fetal Electrocardiogram Extraction Based on Wavelet Transform

Abed Al Raoof Bsoul (Yarmouk University, Jordan)

pp. 97-100

Uterine Electromyography signals denoising using discrete wavelet transform

Manel Limem and Mohamed ali Hamdi (National Institute of Applied Sciences and Technology, Tunisia)

pp. 101-103

Dense-EEG source connectivity and dynamics of brain networks

Mahmoud Hassan (University of Rennes1, France); Fabrice Wendling (INSERM, France)

pp. 104-106

Characterization of the spiking and bursting activity of the subthalamic nucleus in patients with Parkinson's disease

Gabriele Arnulfo (University Hospital Wuerzburg, Germany); Andrea Canessa (University of Genoa, Italy); Nicolò Pozzi and Jens Volkmann (University Hospital Wuerzburg, Germany); Paolo Massobrio and Sergio Martinoia (University of Genova, Italy); Frank Steigerwald and Ioannis Isaias (University Hospital Wuerzburg, Germany)

pp. 107-110

13:30 - 14:30

Lunch: Lunch

14:30 - 15:15

KS4: Keynote Speaker 4 : Pr. Mohamad Sawan

Room: Conference Room 1

Chair: Abdallah Kassem (Notre Dame University, Lebanon)

Heterogeneous Microdevices for the Recovery of Neural Functions

Mohamad Sawan (Polytechnique Montréal, Canada)

15:15 - 17:00

FOP21: NeuroEngineering (Flash Oral Presentation)

Room: Conference Room 1

Chairs: Mohamad Sawan (Polytechnique Montréal, Canada), Sergio Martinoia (University of Genova, Italy)

Home-based Therapy of Chronic Stroke Survivors' Upper Limb Assisted by a Finger Movement Tracking Device

Nour Elhoda Saleh (Lebanese University, Lebanon); Bilal Debs and Eliane Moussallem (Lebanese International University, Lebanon); Ahmad Rifai Sarraj (Lebanese University, Lebanon); Soha Saleh (Lebanese International University & Rutgers University, Lebanon)

pp. 111-114

Visual objects categorization using dense EEG: A preliminary study
Rouby El Lone (Doctoral School of Science and Technology, Lebanon); Mahmoud Hassan (Université de Rennes 1, LTSI, France); Aya Kabbara (Lebanese University, Lebanon); Rima Hleis (Lebanese University, Engineering 1 and 3, Lebanon)
pp. 115-118

SimNet: A new algorithm for measuring brain networks similarity
Ahmad Mheich and Mahmoud Hassan (University of Rennes1, France); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); Claude Berrou and Olivier Dufor (Télecom Bretagne, France); Vincent Gripon (Telecom Bretagne, France); Fabrice Wendling (INSERM, France)
pp. 119-122

Adaptive Input Design for Nonlinear Kalman-Based Estimation of Neuronal Activity Models
Mahmoud Madi and Fadi Karameh (American University of Beirut, Lebanon)
pp. 123-126

Gabor Transform For Interictal High Frequency Oscillations Classification
Nisrine Jrad (University of Rennes 1 & LTSI lab, France); Amar Kachenoura (University of Rennes1-LTSI & Inserm - UMR 1099, France); Isabelle Merlet (University of Rennes 1, France); Fabrice Wendling (INSERM, France)
pp. 127-130

Reconstruction of depth-EEG signals: a spatiotemporal model to simulate realistic epileptic activities
Mohamad Shamas (Universite de Rennes 1, France); Fabrice Wendling (INSERM, France); Mahmoud Hassan (University of Rennes1, France); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); Wassim El Falou (Lebanese University, Lebanon); Isabelle Merlet (University of Rennes 1, France); Biraben3 Arnaud and Pasnicu Anca (Epilepsy Surgery Pôle Neurosciences Cliniques CHU Pontchaillou F-35000 Rennes, France)
pp. 131-133

Entropy Complexity Analysis of Electroencephalographic Signals During Pre-Ictal, Seizure and Post-Ictal Brain Events
Amira Zaylaa (American University of Beirut, Lebanon); Ahmad Harb (Lebanese University, Lebanon); Faten Khatib (Sharp Chula Vista Medical Center, USA); Ziad Nahas (AUB, Lebanon); Fadi Karameh (American University of Beirut, Lebanon)
pp. 134-137

Reduction of Stimulus Artifacts in Ictal EEG Recordings during Electroconvulsive Therapy
Hassan Farhat (AUB, Lebanon); Fadi Karameh (American University of Beirut, Lebanon); Ziad Nahas (AUB, Lebanon)
pp. 138-141

An efficient P300-speller for Arabic letters
Aya Kabbara (Lebanese University, Lebanon); Mahmoud Hassan (University of Rennes1, France); Wassim El Falou (Lebanese University, Lebanon); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon)
pp. 142-145

Feature Selection for Activity Classification and Dyskinesia Detection in Parkinson's Disease Patients
Nahed Jalloul (Universite de Rennes 1, France); Fabienne Porée (Université de Rennes 1, France); Geoffrey Viardot (Biotrial, France); Philippe L'Hostis (Biotrial Core Lab, France); Guy Carrault (Universite de Rennes, France)
pp. 146-149

Objective Measures in Cochlear Implanted Patients: A Computational Framework to Evaluate Artifact Rejection Methodologies
Faten Mina (University Claude Bernard Lyon 1 & Lyon Neuroscience Research Center (CRNL Inserm U1028 CNRS UMR5292), France); Virginie Attina (University Claude Bernard Lyon 1 & Lyon Neuroscience Research Center (CRNL) - INSERM U1028 CNRS UMR5292, France); Evelyne Veuillet (University Claude Bernard Lyon 1 & Service d'Audiologie & d'Explorations Orofaciales - Hospices Civils de Lyon, France); Eric Truy (Service d'Audiologie & d'Explorations Orofaciales - Hospices Civils de Lyon, France); Yvan Duroc (University Claude-Bernard Lyon 1, France); Hung Thai-Van (Service d'Audiologie & d'Explorations Orofaciales - Hospices Civils de Lyon & Lyon Neuroscience Research Center (CRNL Inserm U1028 CNRS UMR5292), France)

pp. 150-153

FOP22: Telemedicine and Therapeutical Devices (Flash Oral Presentation)

Room: Conference Room 2

Chairs: Fadi Karameh (American University of Beirut, Lebanon), Dorra Masmoudi (ENIS, Tunisia)

A generic Simulink based model of a wireless sensor node: Application to a medical healthcare system

Ramzy Rammouz (Lebanese University - Lebanon, France); Lioua Labrak (Nanotechnology Institute of Lyon, France); Nacer Abouchi (CPE Lyon, France); Joseph Constantin (Lebanese University Faculty of Sciences II, Lebanon); Youssef Zaatar and Doumit Zaouk (Lebanese University, Lebanon)

pp. 154-157

Multisensor guided walker for visually impaired elderly people

Kabalan Chaccour, Jean Eid and Rony Darazi (Antonine University, Lebanon); Amir Hajjam (UTBM, SeT, France); Emmanuel Andrès (CHU Strasbourg, France)

pp. 158-161

Smart Assistive Navigation System for Blind and Visually Impaired Individuals

Michel J Owayjan, Ali Hayek, Hassan Nassrallah and Mohammad Eldor (American University of Science & Technology, Lebanon)

pp. 162-165

Patient Vital Signs Monitoring via Android Application

Roy Abi Zeid Daou (Lebanese German University, Lebanon); Elias Aad (Holy Spirit University, Lebanon); Farid Nakhle (American University of Science and Technology, Lebanon); Ali Hayek and Josef Boercsoek (University of Kassel, Germany)

pp. 166-169

M-health application for Neonatal Incubator signals monitoring through a CoAP-based multi-agent system

Lina Nachabe (Instructor & AUCE Lebanon, Lebanon); Bachar A. ElHassan (Lebanese University, Faculty of Engineering, Branch1 & order of Engineers and Architects - Tripoli, Lebanon); Marc C. Girod-Genet (INT - GET, France); Jamil Jammas (Mr., Lebanon)

pp. 170-173

Beam shaping systems for small animal proton therapy

Lena Mouawad (Lebanese University & University of Strasbourg, Lebanon); Ziad El Bitar (Cnrs France, France); Ahmad Osman and Mohamad Khalil (Lebanese University, Lebanon); Ziad Francis (Université Saint Joseph, Lebanon)

pp. 174-177

Radiation safety issues relevant to radioisotope production medical cyclotrons

Al Kattar Zeina (University, Lebanon); Hanna Balaa (LAEC, Lebanon); Mohamad Nassereddine (Lebanese University, Lebanon)

pp. 178-181

A New Method to Enhance Accuracy of Goniometry in Joint Angle Measurement

Soroosh Shahtalebi (K. N. Toosi University of Technology, Iran); Jamshid Abouei (Yazd University, Iran)

pp. 182-185

Thoracic Kyphosis Alert System

Omar Osman, Ibrahim Haidar Ahmad and Ali Hage-Diab (Lebanese International University, Lebanon)

pp. 186-188

S2LV - A Sign to Letter and Voice Converter

Abdallah Kassem (Notre Dame University, Lebanon); Mustapha Hamad (Notre Dame University-Louaize, Lebanon); Christelle Nasrany and Riwa Bou Abdou (NDU, Lebanon)

pp. 189-192

Nanosilver loaded GelMA hydrogel for antimicrobial coating of biomedical implants
Anwarul Hasan (American University of Beirut & Harvard University, Lebanon); Fatima Hajj (Lebanese University & American University of Beirut, Lebanon); Mohamad Nassereddine (Lebanese University, Lebanon)
pp. 193-196

Measurements of Cardiac and Cardiopulmonary Activities Using Contactless Doppler Radar
Sarah Samad (Lebanese University, Doctoral School for Sciences and Technology, Lebanon); Dany Obeid (Kaptalia Monitoring, France); Gheorghe Zaharia (IETR-INSA de Rennes, France); Ghais El Zein (IETR-INSA Rennes, France); Sawsan Sadek (Lebanese University, Lebanon)
pp. 197-200

Utilization of Internet of Things for Designing and Programming e-Health Portable and Wearable Devices for Telemedicine and Biomedical Applications
Monira M. Omar (Arab Academy for SScience, Technology and Maritime Transport (AAST), Egypt); Mahmoud Omar (Assistant Lecturer, Egypt)
pp. 201-204

17:00 - 17:15

CB4: Coffee Break

Room: Hall FoE

17:15 - 18:15

PS2: Poster Session II: Neuro Engineering, Therapeutic devices, Telemedicine

Papers of sessions FOP21 and FOP22
Room: Hall FoE

20:30 - 23:00

Gala: Gala Dinner: Holiday Inn Hotel, Verdun, Beirut

Friday, September 18

09:00 - 09:45

KS5: Keynote Speaker 5: Pr. Patrick Flandrin

Room: Conference Room 1
Chair: Hassan Amoud (Lebanese University, Lebanon)

A time-frequency perspective on biosonar signals
Patrick Flandrin (CNRS-ENS de Lyon, France)

09:45 - 10:15

CB5: Coffee Break 5

Room: Hall FoE

10:15 - 11:45

OS4: Biomechanics (Invited Speakers, Oral Session)

Room: Conference Room 1

Chairs: Patrick Flandrin (CNRS-ENS de Lyon, France), Brynjar Karlsson (Reykjavik Univerrsity, Iceland)

Functional Data Analysis of Electrophysiological Signals
Sofiane Boudaoud (UMR University of Technology of Compiegne (UTC), France)

Intelligent Mechatronic Systems: Application to Healthcare Robotics
Rochdi Merzouki (Polytech Lille, France)

Robots et systèmes ambiants d'assistance
Yacine Amirat (LISSI Laboratory, France)

Microfluidics for Biological and Medical Applications
Mohammad Qasaimeh (New York University, UAE)

11:45 - 13:15

OS5: Biomedical Applications (Oral Session)

Room: Conference Room 1

Chairs: Walid Kamali (AL-Manar University of Tripoli, Lebanon), Mohammad Qasaimeh (New York University, UAE)

An Integrated Health Monitoring System
Norhan Shaker Hammed, Abdel Ghafaar (BioBusiness, Egypt); Mohamed Owis (Faculty of Engineering & Cairo University, Egypt)
pp. 205-208

Impact of Human Hair Configuration on the Human Head Absorption Rate
Ali Harmouch (Lebanese University, Faculty of Engineering First Branch El Arz Street Tripoli, Lebanon); Mohamad Kenaan (Al Kafaat University, Lebanon); Nathalie Ghazi (Notre Dame University, Lebanon)
pp. 209-212

New developments in the diagnostic procedures to reduce prospective biopsies breast
Norhène Gargouri (University of Sfax, National School of Engineering, Tunisia); Masmoudi Alima (Sfax Engineering School, Tunisia); Dorra Sellami Masmoudi (National Engineering school of sfax, Tunisia)
pp. 213-216

Bayesian sparse regularized reconstruction in parallel MRI with sensitivity matrix imprecision
Lotfi Chaari (University of Toulouse, IRIT - INP-ENSEEIHT, France - MIRACL Laboratory, Sfax, Tunisia, France)
pp. 217-220

13:15 - 14:15

Lunch: Lunch

14:15 - 15:00

KS6: Keynote Speaker 6 : Pr. Ghaleb Husseini

Room: Conference Room 1

Chair: Mohamad O. Diab (Rafik Hariri University & College of Engineering, Lebanon)

Drug Delivery and Ultrasound
Ghaleb Husseini (AUS, UAE)

15:00 - 17:00

FOP31: Biomechanics and Health Care Managment (Flash Oral Presentation)

Room: Conference Room 1
Chairs: Ghaleb Husseini (AUS, UAE), Sofiane Boudaoud (UMR University of Technology of Compiegne (UTC), France)

Effect of bone density on the compressive mechanical properties of bovine trabecular bone
Anwarul Hasan (American University of Beirut & Harvard University, Lebanon); Haig Achdjian (American University of Beirut, Lebanon)
pp. 221-224

Electrospun PET-PU scaffolds for Vascular Tissue Engineering
Anwarul Hasan (American University of Beirut & Harvard University, Lebanon); George Deeb (American University of Beirut, Lebanon)
pp. 225-228

Normative Plantar Pressure Distribution in Asymptomatic Adult Subjects: A Pilot Study
Ziad O. Abu-Faraj, Remy Mattar, Jad Diab, Salam Wehbe and Carla Merhej (American University of Science and Technology, Lebanon)
pp. 230-233

Experimental Studies and Computer Modeling of Viscoelastic Properties of Heart Valve Leaflets: Implication in Heart Valve Tissue Engineering
Anwarul Hasan (American University of Beirut & Harvard University, Lebanon); George Deeb (American University of Beirut, Lebanon); Hani Al-Hadrami (King Abdulaziz University, Saudi Arabia); Tanvir Mustafy (Polytechnique de Montreal, Canada)
pp. 234-237

Experimental and numerical study of the biomechanics of a human joint
Mhamad Aoun (ISSAE CNAM LIBAN, Lebanon); Antonio Ramos (University of Aveiro, Portugal); Michel Mesnard (Université de Bordeaux, France)
pp. 238-241

Innovative data treatment routines for Atomic Force Microscopy force curves
Rami Klaimi (Lebanese University, Lebanon); Karim El Kirat (Université de Technologie de Compiègne, France)
pp. 242-245

Modeling of Vertical Ground Reaction Forces During Double Stance Phase of the Gait Cycle for Real-time Treadmill Measurements
Hanan Hijazi and Hassan El Makssoud (Lebanese University, Lebanon)
pp. 246-249

Serious Game for Functional Rehabilitation
Halim Tannous (Lebanese University, France); Tien Tuan Dao (Université de Technologie de Compiègne, France); Mircea Dan Istrate (UTC, France); Marie-Christine Ho Ba Tho (Université de Technologie de Compiègne, France)
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The Extent of Medical Reverse Paternalism in Lebanon and its Ethical Implications
Zahraa Chahrour, Sarah Hammoud, Ali Hage-Diab and Bassam Hussein (Lebanese International University, Lebanon)
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Elaboration of an advanced system for quality and management of top hazard alerts dedicated to biomedical and maintenance services
Mohamad Nassereddine (Lebanese University, Lebanon); Zahraa Ahmad Siblani (Co-author, Lebanon); Al Kattar Zeina (University, Lebanon); Hiba Zbib (Université Libanaise, Lebanon)

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Culture of PC12 Neuronal Cells in GelMA Hydrogel for Brain Tissue Engineering
Anwarul Hasan (American University of Beirut & Harvard University, Lebanon); Nour AL Rifai (AUB &UL, Lebanon); Jamal Charara (Lebanese University & Faculty of Sciences, Lebanon)
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Phantoms mimicking the viscoelastic behavior of healthy and fibrotic livers with Magnetic Resonance Elastography technique
Mashhour Chakouch (University of Technology of Compiegne, France); Gwladys Gwladys Leclerc (University of Technology of Compiègne, France); Fabrice Charleux (ACRIM-Polyclinique St Côme, France); Sabine Bensamoun (University of Technology of Compiegne, France)

FOP32: Biomedical Signal and Image Processing (Flash Oral Presentation)

Room: Conference Room 2
Chairs: Yacine Amirat (LISSI Laboratory, France), Anwarul Hasan (American University of Beirut & Harvard University, Lebanon)

On the use of EMD for automatic newborn cry segmentation
Lina Abou-Abbas (Ecole de Technologie Superieure, Canada); Leila Montazeri (Ecole Polytechnique, Canada); Christian S. Gargour (ETS, University of Quebec, Canada); Chakib Tadj (Ecole de Technologie Superieure, Canada)
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Capacitive Data Links Intended for Implantable Medical Devices: A Survey
Charles Sawma (Ecole Polytehnique de Montreal, Canada); Abdallah Kassem (Notre Dame University, Lebanon); Mohamad Sawan (Polytechnique Montréal, Canada)
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Classification of Electrocardiogram in Partial Epilepsy
Sarah-Christina Matta (USEK, Lebanon); Sandy Rihana (Holy Spirit University of Kaslik, Lebanon)
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Hybrid Auto Encoder Network for Iris Nevus Diagnosis Considering Potential Malignancy
Oyebade Oyedotun (Near East University, Cyprus); Ebenezer Olaniyi (Near East University & Centre of Innovation for Artificial Intelligence, Turkey); Abedelkader Helwan (Near East University, Lebanon); Adnan Khashman (Centre of Innovation for Artificial Intelligence, Turkey)
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Machine Learning approach to segment Saccharomyces cerevisiae yeast cells
Mohamed S. Tleis (Section Imaging and BioInformatics, The Netherlands); Fons Verbeek (Section Imaging & BioInformatics, The Netherlands)

Low-Cost Dry Swimming Machine using Kinect Biomotion Capture
Joseph Babayan (Lebanese International University, Lebanon); Mohammad Hommaid (LIU, Lebanon); Ali Hage-Diab and Samih Abdul-Nabi (Lebanese International University, Lebanon)
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Non-linear Analysis of Human Stability during Static Posture
Khaled Safi (Center AZM, EDST Lebanese University & LISSI Laboratory Paris-Est University, Lebanon); Ahmad Diab (Lebanese Universitgy- EDST, Lebanon); Inke Marie Albertsen and Emilie Hutin (CHU Henri Mondor, France); Samer Mohammed (University of Paris-Est Creteil Val de Marne, France); Yacine Amirat (LISSI Laboratory, France); Jean-Michel Gracies (CHU Henri Mondor, France); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon)
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Evaluation of HD- sEMG Grid Misalignment with Muscle Fibers using Nonlinear Correlation
Amer Zaylaa (Lebanese University & Koura Hospital, Lebanon); Ahmad Diab (Lebanese Universitgy-EDST, Lebanon); Sofiane Boudaoud (UMR University of Technology of Compiegne (UTC), France); Mariam Harrach (UTC, Lebanon)
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Gait analysis and falls estimation using the slope's variation of synchronous statistics
Claude-Vivien Toulouse (University of Lyon & University Jean Monnet Saint-Etienne, LASPI - Roanne, France)

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The Random Slope Modulation: A New Cyclostationarity Model Applied to Biomechanical Signals

Firas Zakaria (Jean Monnet Saint Etienne university(LASPI) and Lebanese university (EDST), Lebanon); Mohammed El Badaoui (University of Saint Etienne, France); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon)

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ECG classification for Sleep Apnea Detection

Ali Jezzini (IUL, Lebanon); Mohammed Ayache (UIL, Lebanon); Zein Al Abidin Ibrahim (Lebanese University, Lebanon); Lina ELkhansa (IUL, Lebanon)

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Mean Scatterer Spacing Estimation from Pellets Using Cepstral Analysis: A Preliminary Study

Remie Nasr (Lebanese University, Lebanon); Omar Falou (American University of Culture and Education & Lebanese University, Lebanon); Lauren Wirtzfeld, Elizabeth Berndl and Kolios Michael (Ryerson University, Canada)

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On EEG Lossy Data Compression for Data-intensive Neurological Mobile Health Solutions

Ahmad El-Hajj, Mohammad Nasrallah and Zaher Dawy (American University of Beirut, Lebanon)

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Physical Activity Recognition Using Inertial Wearable Sensors - A Review of Supervised Classification Algorithms

Khaled Safi (Center AZM, EDST Lebanese University & LISSI Laboratory Paris-Est University, Lebanon); Ferhat Attal (Paris-Est University, Lebanon); Samer Mohammed (University of Paris-Est Creteil Val de Marne, France); Yacine Amirat (LISSI Laboratory, France); Mohamad Khalil (Lebanese University & Doctoral School of Sciences and Technology, Lebanon)

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17:00 - 17:15

CB6: Coffee Break

17:15 - 18:15

PS3: Poster Session III: Biomechanics and Health Care Management, Signal and Image Processing

Papers of sessions FOP31 and FOP32

Room: Hall FoE