

## 2017 Fourth International Conference on Advances in Biomedical Engineering (ICABME) Program

	Thursday, October 19	Friday, October 20
8:00 - 9:00	<i>REGISTRATION</i>	
9:00 - 9:30		<i>Keynote Speaker 3 : Pr. Nazim Agoulmine</i>
9:30 - 9:45	<i>Opening Ceremony</i>	<i>Coffee Break 2</i>
9:45 - 10:15		
10:15 - 10:30		
10:30 - 11:00	<i>Welcome Reception</i>	<i>Neuroengineering (Oral Session 3)</i>
11:00 - 11:45	<i>Keynote Speaker 1 : Pr. Mohamad Sawan</i>	
11:45 - 13:15	<i>Biomedical Signal and Image Processing (Oral Session 1)</i>	<i>Telemedicine and artificial organs (Oral Session 4)</i>
13:15 - 13:30		<i>Lunch</i>
13:30 - 14:15	<i>Lunch</i>	<i>Keynote Speaker 4 : Massimo Mischi</i>
14:15 - 14:30		
14:30 - 15:00	<i>Keynote Speaker 2 : Pr. Peter Stadler</i>	<i>Biomechanics and applications (Oral Session 5)</i>
15:00 - 15:15		
15:15 - 16:00	<i>Bioinformatics (Oral Session 2)</i>	<i>Coffee Break 3</i>
16:00 - 16:30	<i>Biomechanics, Bioinformatics, Biometrics, Imaging (Flash Oral Presentation)</i>	
16:30 - 16:45	<i>Signal and Image Processing (Flash Oral Presentation)</i>	<i>Neuroengineering and biomedical applications(Flash Oral Presentation)</i>
16:45 - 17:15		<i>Telemedicine, m-Health and Therapeutical Devices (Flash Oral Presentation)</i>
17:15 - 17:30	<i>Coffee Break 1</i>	<i>Poster Session II: Neuro Engineering, Therapeutic devices, Telemedicine</i>
17:30 - 17:45	<i>Poster Session I: Bioinformatics, Biometrics, Imaging, Signal and Image processing</i>	
17:45 - 18:30		
18:30 - 18:45		
18:45 - 20:30		
20:30 - 23:00		<i>Gala Dinner</i>

**Thursday, October 19, 08:00 - 09:30**

**REGISTRATION**

Room: University Hall

**Thursday, October 19, 09:30 - 10:30**

**Opening Ceremony**

**Thursday, October 19, 10:30 - 11:00**

**Welcome Reception**

**Thursday, October 19, 11:00 - 11:45**

**Keynote Speaker 1 : Pr. Mohamad Sawan**

Room 1

Chair: Abdallah Kassem (Notre Dame University, Lebanon)

***Management of the Bladder Functions with Spinal Impairment: Monitoring and Subsequent Neurostimulation***

[Mohamad Sawan](#) (Polytechnique Montréal, Canada)

**Thursday, October 19, 11:45 - 13:30**

**Biomedical Signal and Image Processing (Oral Session 1)**

Room 1

Chairs: Karim El Kirat (Université de Technologie de Compiègne, France), Sandy Rihana (Holy Spirit University of Kaslik, Lebanon)

***Spectral Denoising for MR Spectroscopy using Noise Level Function***

[Mathieu Naudin](#) and [Benoit Tremblais](#) (University of Poitiers, France); [Carole Guillevin](#) and [Rémy Guillevin](#) (CHRU Poitiers, France); [Christine Fernandez-Maloigne](#) (University of Poitiers, France)

***Separation and localization of EHG sources using tensor models***

[Saeed Zahran](#) (Lebanese University, Lebanon); [Bayan Alrifai](#) (Paris Sud, France); [Ahmad Diab](#) (Lebanese University- EDST, Lebanon); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Catherine Marque](#) (Université de Technologie de Compiègne, France)

***The European project Digi-NewB: The status after One year and half***

[Guy Carrault](#) (Université de Rennes, France); [Patrick Pladys](#) (CHU Rennes, Rennes, France)

***Entropy and symmetry a new insight***

[Jean-Marc Girault](#) (Université François Rabelais - Tours, France)

***Aggregation, Integration, or Full-fledged Cyber-Physical System? Way of Researcher in Biomedicine***

[Evgeny L. Wasserman](#) (St. Petersburg Institute for Informatics and Automation of Russian Academy of Sciences & St. Petersburg State University, Russia); [Nikolay K Kartashev](#), [Sergey B. Roudnitsky](#) and [Oleg V. Zhvalevsky](#) (St. Petersburg Institute for Informatics and Automation of Russian Academy of Sciences, Russia)

**Thursday, October 19, 13:30 - 14:30**

**Lunch**

**Thursday, October 19, 14:30 - 15:15**

**Keynote Speaker 2 : Pr. Peter Stadler**

### Room 1

Chair: Ahmad M. Shahin (Lebanese University, Lebanon)

#### ***Catching Monsters in RNA Land: Mapping Atypical Transcripts***

[Peter Stadler](#) (Leipzig University, Germany)

### **Thursday, October 19, 15:15 - 16:00**

#### **Bioinformatics (Oral Session 2)**

### Room 1

Chairs: Peter Stadler (Leipzig University, Germany), Guy Carrault (Universite de Rennes, France)

#### ***How can artificial intelligence estimate your age, predict or rejuvenate your face appearance?***

[Amine Naït-ali](#) (Université Paris-Est Créteil (UPEC), France)

#### ***The emerging field of clinical Bioinformatics: Infrastructure, analytical tools, and knowledge bases***

[Mohamed Abouelhoda](#) (Nile University, Lebanon)

### **Thursday, October 19, 16:00 - 17:15**

#### **Biomechanics, Bioinformatics, Biometrics, Imaging (Flash Oral Presentation)**

### Room 1

Chairs: Mohamed Abouelhoda (Nile University, Lebanon), Nazim Agoulmine (University of Evry Val d'Essonne, USA), Samer Mohammed (University of Paris-Est Creteil Val de Marne, France), Mohamad Hajj-Hassan (Lebanese International University, Lebanon)

#### ***Ambient Assistive Living System Using RGB-D Camera***

[Mohamad Daher](#) (Lille University - Science and Technology, Lebanon); [Abdallah Dib](#) (BeeTech Company, Chamber of Commerce, Tripoli-Lebanon, Lebanon); [Ahmad Diab](#) (Lebanese University- EDST, Lebanon); [Maan El Badaoui El Najjar](#) (Université des Sciences et Technologies de Lille, France); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Francois Charpillet](#) (Université de Lorraine, France)

#### ***Involuntary Tremor Controlled Using Mechanical Means***

[Sarah S Gebai](#) (Lebanese International University, Lebanon); [Mohamad S Hammoud](#) (Beirut International University (BIU), Lebanon); [Ali Hallal](#) (Lebanese International University, Lebanon); [Ali Alshaer](#) (Lebanese International University, Lebanon)

#### ***Dynamic identification of a human-exoskeleton system***

[Randa Kaddaj Mallat](#) (LISSI, University of Paris Est Créteil, France); [Vincent Bonnet](#) (University of Paris Est Créteil, France); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Samer Mohammed](#) (University of Paris-Est Creteil Val de Marne, France)

#### ***Predicting heart failure class using a sequence prediction algorithm***

[Carine Bou Rjeily](#) (IRTES-SET, France); [Georges Badr](#) (Université Antonine, Lebanon); [Amir Hajjam el hassani](#) (Université de Technologie de Belfort Montbeliard & Nanomedicine Lab Imagery & Therapeutics, France); [Emmanuel Andrès](#) (CHU Strasbourg, France)

#### ***Multidimensional Segmentation of Heterogeneous Data***

[Halima Saker](#) (University of Leipzig, Lebanon); [Peter Stadler](#) (Leipzig University, Germany); [Ahmad M. Shahin](#) (Lebanese University, Lebanon)

#### ***Graph analysis of uterine networks using EHG source connectivity***

[Noujoud Nader](#) (Lebanese University & Azm Center, Lebanon); [Catherine Marque](#) (Université de Technologie de Compiègne, France); [Mahmoud Hassan](#) (University of Rennes1, France); [Maxime Yochum](#) (Université de Rennes 1, France); [Wassim El Falou](#) (Lebanese University, Lebanon); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Saeed Zahran](#) (UL, Lebanon)

***Postural stability analysis - A review of techniques and methods for human stability assessment***

[Khaled Safi](#) (Center AZM, EDST Lebanese University & LISSI Laboratory 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)

***Inexpensive Virtual Assisted Rehabilitation System (VARS) for Lower Part Injuries***

[Samar Bayan](#), [Ali Cherry](#), [Kamilia Assaf](#) and [Lara Hamawy](#) (LIU, Lebanese International University, Lebanon); [Mohamad Raad](#) (LIU- Lebanese International University, Lebanon); [Marwa Yassin](#) (LIU, Lebanon)

***Development and modelling of a control system of multi-jointed biotechnical objects***

[Vladimir Mikhailov](#) (Saint Petersburg Institute for Informatics and Automation of Russian Academy of Sciencis, Russia); [Dmitry Kuzmin](#) (Saint Petersburg Institute for Informatics and Automation of RAS, Russia)

***An Investigation of Feature Combinations of Time-Domain Power Spectral Descriptors Feature Extraction for Myoelectric Control of Hand Prostheses***

[Ali H. Al-Timemy](#) (Centre for Robotics and Neural Systems (CRNS) & University of Plymouth, United Kingdom (Great Britain))

***Sensitivity Analysis of a Human Finger Model***

[Samar Allouch](#) (Lebanese University, Lebanon); [Jeremy Laforet](#) (University of Technology of Compiègne (UTC), France); [Rafic Younes](#) (Lebanese University, Faculty of Engineering, Lebanon); [Sofiane Boudaoud](#) (UMR University of Technology of Compiègne (UTC), France); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon)

***Towards Real Time Kinect Anlysis System for Early Diagnosis of Gait Cycle Abnormalities***

[Abbas Ismail, AMI](#) and [Hassan Shouman](#) (Lebanese International University, Lebanon); [Ali Cherry](#) (LIU, Lebanese International University, Lebanon); [Mohamad Hajj-Hassan](#) (Lebanese International University, Lebanon)

**Signal and Image Processing (Flash Oral Presentation)**

**Room 2**

Chairs: Ali El Zart (Beirut Arab University, Lebanon), Christine Fernandez-Maloigne (Université de Poitiers & XLIIm CNRS Laboratory, France), Catherine Marque (Université de Technologie de Compiègne, France), Jean-Marc Girault (Université François Rabelais - Tours, France), Mohammed Ayache (UIL, Lebanon)

***Precise Assessment of HD-sEMG Grid Misalignment Using Nonlinear Correlation***

[Roger AL Khoury](#) (Universite de Technologie de Compiègne & Lebanese University, France); [Vincent Carriou](#) (Université de Technologie de Compiègne (UTC), France); [Ahmad Diab](#) (Lebanese University- EDST, Lebanon); [Jeremy Laforet](#) (University of Technology of Compiègne (UTC), France); [Sofiane Boudaoud](#) (UMR University of Technology of Compiègne (UTC), France)

***Boosting-Based Decision Tree for Improved Screening of Vibroarthrographic Signals***

[Ali H. Al-Timemy](#) (Centre for Robotics and Neural Systems (CRNS) & University of Plymouth, United Kingdom (Great Britain))

***Blind Navigation System for Visually Impaired Using Windowing-Based Mean on Microsoft Kinect Camera***

[Ali Ali](#) (Lebanese International University, Lebanon); [Mohammad Abou Ali](#) (President Elias Hrawi Governmental Hospital, Lebanon)

***Multichannel EHG Segmentation for automatically identifying contractions and motion artifacts***

[Amer Zaylaa](#) (UTC - LU & Koura Hospital, Lebanon); [Ahmad Diab](#) (Lebanese University- EDST, Lebanon); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Catherine Marque](#) (Université de Technologie de Compiègne, France)

***Ensemble of Bagged Tree Classifier for The Diagnosis of Neuromuscular Disorders***

[Kadhim Al-Barazanchi](#) and [Auns Al-Neami](#) (Al-Nahrain University, Iraq); [Ali H. Al-Timemy](#) (Centre for Robotics and Neural Systems (CRNS) & University of Plymouth, United Kingdom (Great Britain))

***Preliminary Study of the Mean Scatterer Spacing Estimation from Pellets using Wavelet-Based Cepstral Analysis***

[Remie Nasr](#) (Lebanese University, Lebanon); [Omar Falou](#) (American University of Culture and Education & Lebanese University, Lebanon); [Ahmad M. Shahin](#) (Lebanese University, Lebanon); [Elizabeth Berndt](#), [Lauren Wirtzfeld](#) and [Kolios Michael](#) (Ryerson University, Canada)

***Automatic Reading and Interpretation of an Antibiogram***

[Ahmad Diab](#) (Lebanese University- EDST, Lebanon); [Abdelwahab Raad](#) and [Mashhour Chakouch](#) (AL-Manar University of Tripoli, Lebanon); [Marwan Osman](#) and [Monzer Hamze](#) (Lebanese University, Lebanon); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Walid Kamali](#) (AL-Manar University of Tripoli, Lebanon)

***Topological persistence based on pixels for object segmentation in biomedical images***

[Rabih Assaf](#) (Université de Reims Champagne-Ardenne & Holy Spirit University of Kaslik, France); [Alban Goupil](#) (Université de Reims Champagne-Ardenne, France); [Mohammad Kacim](#) (Holy Spirit University of Kaslik, Lebanon); [Valeriu Vrabie](#) (Université de Reims Champagne-Ardenne, France)

***Validity of activity measurement using a smart phone***

[Ali Hammoud](#) (American University of Science and Technology, Lebanon); [Rana Jaber](#) (Islamic University of Lebanon, Lebanon); [Hiba S. Othman](#) (American University of Science and Technology, Lebanon)

***Data Reduction through Kernel Sparse Coding***

[Ihab Kamal Aldine](#) (University of the Basque Country, Spain); [Fadi Dornaika](#) (University of Basque Country and Ikerbasque Foundation, Spain); [Blanca Cases](#) (University of the Basque Country, Spain); [Ammar Assoum](#) (Lebanese University, Lebanon)

***MRI and Stereo Vision Surface Reconstruction and Fusion***

[Trishia El Chemaly](#) (Holy Spirit University of Kaslik, Lebanon); [Vincent Groenhuis](#), [Françoise Siepel](#) and [Ferdinand van der Heijden](#) (University of Twente, The Netherlands); [Sandy Rihana](#) (Holy Spirit University of Kaslik, Lebanon); [Stefano Stramigioli](#) (University of Twente, The Netherlands)

***Vertical Ground Reaction Force Spectral Analysis for Fatigue Assessment***

[Ramzi Halabi](#) (Rafik Hariri University, Lebanon); [Mohamad O. Diab](#) (Rafik Hariri University, College of Engineering, Bioinstrumentation Eng., Lebanon); [Bassam Moslem](#) (Rafik Hariri University & RHU, Lebanon); [Mohamed ElBadaoui](#) (University of Jean Monet, France); [François Guillet](#) (University Saintetienne, France)

**Thursday, October 19, 17:15 - 17:30**

**Coffee Break 1**

**Thursday, October 19, 17:30 - 18:30**

**Poster Session I: Bioinformatics, Biometrics, Imaging, Signal and Image processing**

Papers of sessions FOP11 and FOP12

Room: University Hall

**Friday, October 20, 09:00 - 09:45**

**Keynote Speaker 3 : Pr. Nazim Agoulmine**

Room 1

Chair: Nada Chendeb Taher (Lebanese University, Lebanon)

***From small bio-sensors on/in human body to powerful virtual sensors in the Cloud: Opportunities and Challenges in future eHealth***

[Nazim Agoulmine](#) (University of Evry Val d'Essonne, USA)

**Friday, October 20, 09:45 - 10:15**

**Coffee Break 2**

**Friday, October 20, 10:15 - 11:45**

**Neuroengineering (Oral Session 3)**

Room 1

Chairs: Walid Kamali (AL-Manar University of Tripoli, Lebanon), Fadi Karamah (American University of Beirut, Lebanon)

***Brain disorders: A network perspective from dense Electroencephalography***

[Mahmoud Hassan](#) (University of Rennes1, France)

***Medolution a European Research Project for enhancing the self management and follow up of Parkinson Patients***

[Chibani Abdelghani](#) (UPEC University, France)

***System Identification as a searchlight for Neuronal Modeling***

[Fadi Karamah](#) (American University in Beirut, Lebanon)

***Stroke-Related Mild Cognitive Impairment Detection during Working Memory Tasks using EEG Signal Processing***

[Noor Kamal Al-Qazzaz](#) (UKM, Malaysia); [Sawal Hamid Md Ali](#) (Universiti Kebangsaan Malaysia, Malaysia); [Siti Anom Ahmad](#) (Universiti Putra Malaysia, Malaysia); [Javier Escudero](#) (University of Edinburgh, United Kingdom (Great Britain))

**Friday, October 20, 11:45 - 13:15**

**Telemedicine and artificial organs (Oral Session 4)**

Room 1

Chairs: Bachar A. ElHassan (Lebanese University, Faculty of Engineering, Branch1 & order of Engineers and Architects - Tripoli, Lebanon), Bacem Bakhache (Lebanese University, Lebanon), Mohamad O. Diab (Rafik Hariri University & College of Engineering, Lebanon)

***IoT for the quality of life of elderly. A case study: Silver@Home***

[Régine Le Bouquin Jeannès](#) (University of Rennes 1, France)

***Empowering Connected Health through Smart Embedded Devices and IoT***

[Abbes Amira](#) (Qatar University, Qatar)

***HDR brachytherapy, risk analysis and dose evaluation for operators in case of source blockage***

[Mirna Jreije](#) (Lebanese University, Lebanon); [Al Kattar Zeina](#) (University, Lebanon); [Hanna Balaa](#) (LAEC, Lebanon); [Jamal Charara](#) (Lebanese University & Faculty of Sciences, Lebanon); [Wael Abdallah](#) (Universite Saint Joseph, Lebanon); [Mirvana Hilal](#) (Lebanese University, Lebanon); [Jean-Noel Foulquier](#) and [Emmanuel Touboul](#) (Hopital Tenon, France)



***Modelling the energy consumption of memory equipped wireless sensor nodes for healthcare***

[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 Zatar](#) and [Doumit Zaouk](#) (Lebanese University, Lebanon)

**Friday, October 20, 13:15 - 14:15**

**Lunch**

**Friday, October 20, 14:15 - 15:00**

**Keynote Speaker 4 : Massimo Mischi**

**Room 1**

Chair: Mahmoud Hassan (University of Rennes1, France)

***Contrast-enhanced imaging for quantitative analysis of angiogenesis***

[Massimo Mischi](#) (Eindhoven University of Technology, The Netherlands)

**Friday, October 20, 15:00 - 16:30**

**Biomechanics and applications (Oral Session 5)**

**Room 1**

Chairs: Ziad O. Abu-Faraj (American University of Science and Technology, Lebanon), Jamal Charara (Lebanese University & Faculty of Sciences, Lebanon)

***Human gait characterization and movement assistance using wearable robots***

[Randa Kaddaj Mallat](#) (LISSI, University of Paris Est Créteil, France); [Vincent Bonnet](#) (University of Paris Est Créteil, France); [Mohamad Khalil](#) (Lebanese University & Faculty of Engineering, Section 1, Lebanon); [Samer Mohammed](#) (University of Paris-Est Creteil Val de Marne, France)

***Biomechanics of Biomimetic and Bioinspired Systems***

[Karim El Kirat](#) (Université de Technologie de Compiègne, France)

***Multi-muscle Force Estimation using Data Fusion and HD-sEMG: an Experimental Study***

[Mariam AL Harrach](#) (BMBI CNRS UMR 7338, UTC); [Sofiane Boudaoud](#) (UMR University of Technology of Compiègne (UTC), France); [Vincent Carriou](#) (Université de Technologie de Compiègne (UTC), France); [Frederic Marin](#) (University of Technology of Compiègne (UTC), France)

***Finite element model of a dynamic spinal implant***

[Mhamad Aoun](#) (ISSAE CNAM LIBAN, Lebanon); [Antonio Ramos](#) (University of Aveiro, Portugal); [Michel Mesnard](#) (Université de Bordeaux, France)

**Friday, October 20, 16:30 - 16:45**

**Coffee Break 3**

**Friday, October 20, 16:45 - 17:45**

**Neuroengineering and biomedical applications(Flash Oral Presentation)**

**Room 1**

Chairs: Régine Le Bouquin Jeannès (University of Rennes 1, France), Fadi Karamah (American University of Beirut, Lebanon), Omar Falou (American University of Culture and Education & Lebanese University, Lebanon), Ali Hage-Diab (Lebanese International University, Lebanon)



***A scalp-EEG network-based analysis of Alzheimer's disease patients at rest***

[Aya Kabbara](#) (Lebanese University, Lebanon); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Wassim El Falou](#) (Lebanese University, Lebanon); [Hassan Eid](#) (Mazloun Hospital, Lebanon); [Mahmoud Hassan](#) (University of Rennes1, France)

***Developing Cost-Effective Simulators for Patient Management: A Modular Approach***

[Abdullah Alsalemi](#), [Mohammed Al Disi](#), [Ibrahim Ahmed](#), [Yahya Alhomsj](#) and [Faycal Bensaali](#) (Qatar University, Qatar); [Guillaume Alinier](#) (Hamad Medical Corporation, Qatar & School of Health and Social Work, University of Hertfordshire, United Kingdom (Great Britain)); [Abbes Amira](#) (Qatar University, Qatar)

***Estimating the dominant frequency of High Frequency Oscillations in depth-EEG signals***

[Mohamad Shamas](#) (Universite de Rennes 1, France); [Isabelle Merlet](#) (University of Rennes 1, France); [Pascal Benquet](#) (LTSI - Université de Rennes 1, France); [Mohamad Khalil](#) (Lebanese University & Doctoral School of Sciences and Technology, Lebanon); [Wassim El Falou](#) (Lebanese University, Lebanon); [Fabrice Wendling](#) (INSERM, France); [Anca Nica](#) (CHU Rennes, France)

***Classification of meaningful and meaningless visual objects: a graph similarity approach***

[Ahmad Mheich](#) (Télécom SudParis, France); [Mahmoud Hassan](#) (University of Rennes1, France); [Fabrice Wendling](#) (INSERM, France)

***Method of Detection of Early Falling Asleep While Driving using EOG Analysis***

[Jinan Deeb](#) (AL-Manar University of Tripoli, Lebanon); [Firas Zakaria](#) (Doctoral School & Lebanese University, Lebanon); [Walid Kamali](#) (AL-Manar University of Tripoli, Lebanon)

***Eye-Blinks Communication Vehicle: A Prototype***

[Mustafa El-halabi](#) (American University of Science & Technology, Lebanon); [Rayan Haidar](#), [Rami El Kadri](#) and [Chadi Lahoud](#) (American University of Science and Technology, Lebanon)

***Design and Development of a Force-Sensing Shoe for Gait Analysis and Monitoring***

[Kabalan T Chaccour](#) (Antonine University, Lebanon); [Amir Hajjam](#) (UTBM, SeT, France)

***Wireless Body Sensor Network and ECG Android Application for eHealth***

[Abdelbaset Abdelrahim Khalaf](#) (Tshwane University of Technology, South Africa)

***Design of a low cost equipment that may limit Sudden Infant Death Syndrome***

[Roy Abi Zeid Daou](#), [Frederic Maalouf](#) and [Christian Geagea](#) (Lebanese German University, Lebanon); [Ali Hayek](#) and [Josef Boercsoek](#) (University of Kassel, Germany)

***A new system for detecting fatigue and sleepiness using brain connectivity EEG based estimation of fatigue, vigilance and sleepiness for drivers***

[Cynthia Azzi](#) and [Patricia Ghantous](#) (Holy Spirit University of Kaslik USEK, Lebanon); [Sandy Rihana](#) (Holy Spirit University of Kaslik, Lebanon); [Nisrine Jrad](#) (Catholic University of Ovest & LARIS, France); [Mahmoud Hassan](#) (University of Rennes1, France)

***Monitoring Visual Sustained Attention with a low-cost EEG headset***

[Ahmad Mheich](#) (Télécom SudParis, France); [Juliette Guilloton](#) (TELECOM & Management SudParis, France); [Nesma Houmani](#) (Institut Telecom; TELECOM & Management SudParis, France)

***Leg-specific Separation of Running Vertical Ground Reaction Force Signals***

[Ramzi Halabi](#) (Rafik Hariri University, Lebanon); [Mohamad O. Diab](#) (Rafik Hariri University, College of Engineering, Bioinstrumentation Eng., Lebanon); [Bassam Moslem](#) (Rafik Hariri University & RHU, Lebanon); [Mohamed ElBadaoui](#) (University of Jean Monet, France); [François Guillet](#) (University Saintetienne, France)

## **Telemedicine, m-Health and Therapeutical Devices (Flash Oral Presentation)**

### **Room 2**

Chairs: Sofiane Boudaoud (UMR University of Technology of Compiègne (UTC), France), Amine Naït-ali (Université Paris-Est Créteil (UPEC), France), Lina ELkhansa (IUL, Lebanon), Ali Harmouch (Lebanese University, Faculty of Engineering First Branch El Arz Street Tripoli, Lebanon)

### ***Advanced Portable Preterm Baby Incubator***

[Mounir Shaib](#) and [Mohamad Rashid](#) (Lebanese International University, Lebanon); [Lara Hamawy](#) (LIU, Lebanese International University, Lebanon); [Mohamad Arnaout](#) (LIU & Electrical Engineer, Lebanon); [Imad El Majzoub](#) (American University of Beirut Medical Center, Lebanon); [Amira J. Zaylaa](#) (Faculty of Medical Sciences, Lebanese University, Lebanon)

### ***Failure-Cost Mathematical Model for Medical Equipment Maintenance***

[Abdelbaset Abdelrahim Khalaf](#) and [Yskandar Hamam](#) (Tshwane University of Technology, South Africa); [Karim Djouani](#) (University Paris Est Créteil (UPEC) & Tshwane University of Technology, South Africa); [Yasser Alayli](#) (University of Versailles, France)

### ***MedBed: Smart Medical Bed***

[Abdallah Kassem](#) (Notre Dame University, Lebanon); [Alain Aoun](#), [Mustapha Hamad](#) and [Elias Nawfal](#) (Notre Dame University-Louaize, Lebanon)

### ***Proposal of a Health Monitoring System for Continuous Care***

[Nawras Georgi](#) (Université de Rennes 1, France); [Régine Le Bouquin Jeannès](#) (University of Rennes 1, France)

### ***Towards Using Blockchain Technology for eHealth Data Access Management***

[Nabil Rifi](#) (Lebanese University, Lebanon); [Elie El Rachkidi](#) (University of Evry Val d'Essonne & Telecom Sud Paris, France); [Nazim Agoulmine](#) (University of Evry Val d'Essonne, USA); [Nada Chendeb Taher](#) (Lebanese University, Lebanon)

### ***Impact of Internet on Diseases Awareness and Patient Empowerment - A Study in Benin (West Africa)***

[Thierry Edoh](#) (Technical University of Munich, Germany); [Victor Zogbochi](#) (University of Abomey-Calavi, Benin); [Pravin Pawar](#) (Philips Research, India); [Joel Hounsou](#) (Institute of Mathematics and Physical Sciences, University of Abomey-Calavi, Benin); [Bidossessi Alahassa](#) (University of Abomey-Calavi, Benin)

### ***Investigating Tegang operator in Pulse Decomposition Analysis***

[Mohannad Sabir](#), [Rabab Alaa Alshammaa](#) and [Muntaha Ibraheem](#) (University of Baghdad, Iraq)

### ***Concussion Detection Using a Commercially Available Eye Tracker***

[Hanaa Khalife](#) and [Mirna Abou Okdeh](#) (International University of Beirut, Lebanon); [Ali Hage-Diab](#), [Amin Haj-Ali](#) and [Bassam Hussein](#) (International University of Beirut)

### ***CS-Based Fall Detection Platform for Connected Health Applications***

[Hamza Baali](#), [Hamza Djelouat](#), [Abbes Amira](#) and [Faycal Bensaali](#) (Qatar University, Qatar)

### ***Classification of normal and abnormal heart sounds***

[Mohammad Nassralla](#) (American University of Beirut, Lebanon); [Zeina EL Zein](#) (AUB, Lebanon); [Hazem Hajj](#) (American University of Beirut, Lebanon)

### ***Intelligent system for diabetes patients monitoring and assistance***

[Lina Nachabe](#) (AUCE & AUCE Lebanon, Lebanon); [Bachar A. ElHassan](#) (Lebanese University, Faculty of Engineering, Branch1 & order of Engineers and Architects - Tripoli, Lebanon); [Dima Al Mouhammad](#) (Mrs., Lebanon); [Marc C. Girod-Genet](#) (INT - GET, France)

**Friday, October 20, 17:45 - 18:45**

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

Papers of sessions FOP21 and FOP22

Room: [University Hall](#)

**Friday, October 20, 20:30 - 23:00**

**Gala Dinner**