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Program

Registration

OC: Opening Ceremony

Coffee Break

K1: Keynote Speaker 1

Harvesting Energy and Wireless Data Exchange with Implantable Medical Devices

S1: Biomedical Signal processing (I)

Delta-Fuzzy Similarity Entropy to Discriminate Healthy from Sick Fetus

Souad Oudjemia (François Rabelais, Algeria); Amira Zaylaa (François Rabelais University of Tours & INSERM U930, France); Jamal Charara (Lebanese University, Lebanon); Jean-Marc Girault (Université François Rabelais - Tours, France)
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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 Univesrsity, Lebanon); Walid Kamali (AL-Manar University of Tripoli, Lebanon); Alaa Daher (Azm Center for Research in Biotechnology, Lebanon)
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Simulation of RF Biological Tissues Response towards Remote Sensing ECG Device

Fatimah Toameh (Lebanese International University, Lebanon); Hicham Bizri (Lebanese International University, Lebanon); Walid Hassan (LIU, Lebanon); Ali Hage-Diab (Lebanese International University, Lebanon); Lina Mustapha (Lebanese International University, Lebanon); Mohamad Hajj-Hassan (Lebanese International University, Lebanon)
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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 Universtity, Iceland)
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Lunch

S2: Biomedical Image Processing (I)

A Computer-Aided Speech Disorders correction System for Arabic language

Ahmed Farag Seddik (Helwan, Egypt); Ahmed Shahin (Helawn & Helwan, Egypt); Mohamed Eladawy (Helwan University, Egypt)
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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)
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Heartbeat tracking device for detecting arrhythmia

Iyad Jaradat (Arab American University, Palestine); Ahmad Bzour (Arab American University, Palestine); Ghadeer Khalaf (Arab Aemrican University, Palestine)
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Platform for EEG signal Processing for motor imagery - application Brain Computer Interface

Marie Saker (Holly Spirit University of Kaslik, Lebanon); Sandy Rihana (USEK, Lebanon)
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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)
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Coffee Break

S3: Instrumentation and Artificial Organs I

A Review of Microelectrode Array Technologies: Design and Implementation Challenges

Bahareh Ghane-Motlagh (Polytechnique Montreal, Canada); Mohamad Sawan (Polytechnique Montréal, Canada)
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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)
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Biorobotic Hand

Joseph Babayan (Lebanese International University, Lebanon); Rabah Abou Kansour (Lebanese International University, Lebanon); Mustapha Barakat (Jean-Monnet Saint Etienne University, France); Ali Hage-Diab (Lebanese International University, Lebanon); Mohamad Hajj-Hassan (Lebanese International University, Lebanon)
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Electro-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)
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Effects of Predictive maintenance(PdM), Proactive Maintenance(PoM),Preventive Maintenance(PM),on minimizing the faults in medical instruments

Ali Jezzini (IUL, Lebanon); Mohammed Ayache (UIL, Lebanon); Lina ELkhansa (IUL, Lebanon); Makki Bassem (IUL, Lebanon); Maya Zein (Lebanese University, Lebanon)
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S5: Telemedicine

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 (L3i Lab, University of la Rochelle, France)
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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)
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sensors-based context platform for a home care application

Mirvat El maksoud (Lebanese University, Lebanon)
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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)
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S7: Neuroengineering

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)
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***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)
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Detection and classification of fast ripples using wavelets

Amar Kachenoura (University of Rennes1-LTISI & Inserm - UMR 1099, France); Birot Gwénäel
(Department of Fundamental Neuroscience, University of Geneva, Geneva, France); Laurent Albera
(Université de Rennes1 & Inserm, France); Lotfi Senadji (Université de Rennes 1 & Inserm,
France); Fabrice Wendling (INSERM, France)
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***Visual Feedback Discordance Mediates Changes in Brain Activity and Effective Connectivity: A
Stroke fMRI Dynamic Causal Modeling Study***

Soha Saleh (Rutgers University, School of Health Related Professions, USA); Sergei Adamovich
(New Jersey Institute of Technology, USA); Eugene Tunik (Rutgers University, School of Health
Related Professions, USA)
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Coffee Break

S4: Biomechanics

***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)
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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
(Université Libanaise & Faculte de Genie, Lebanon); Mohamad Halimi (Université 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)

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S6: Bioinformatics

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)

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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)

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Study and Implementation of a Network Point Health Smart Home Electrocardiographic

HAMLIL Nabila (Tlemcen University, Algeria); Mohammed Benabdellah (University of TLEMEN, Algeria)

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

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

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About Detection and Diagnosis of Freezing of Gait

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

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S8: Biomedical Signal processing (II)

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

Racha El Berbari (University of Balamand, Lebanon); Chaza Chahine (Lebanese University, Lebanon)

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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 Univesrity, Lebanon)

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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)

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Fetal ECG extraction from abdominal composite recordings - A preliminary study

Jamila 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)

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

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

K3: Keynote Speaker 3

Biometrics for healthcare, security and forensics

S9: BIOMEMS and instrumentation

Nanostructured Porous Silicon Membrane for Hemodialysis

John Saliba (Lebanese University, Lebanon); Jamal Charara (Lebanese University, Lebanon); Mohamad Hajj-Hassan (Lebanese International University, Lebanon)
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Porous Silicon Cantilever for DNA Immobilization and Detection

Hamza Zeine (Lebanese University, Lebanon); Jamal Charara (Lebanese University, Lebanon); Mohamad Hajj-Hassan (Lebanese International University, Lebanon)
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Design of an Ultrasonic Auditory-Vision Teaching Device

Rayan Fayad (Lebanese International University, Lebanon); Ali Hage-Diab (Lebanese International University, Lebanon); Mohamad Hajj-Hassan (Lebanese International University, Lebanon)
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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); Frédéric Pain (Laboratoire IMNC- Université Paris-Sud, France); Darine Abi Haidar (University of Paris DIDEROT, France)
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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)
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GALA Dinner

S10: Imaging

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

Yeihya 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 Univesrsity, Lebanon)

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

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

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

Nicole Challita (Lebanese University, Lebanon); Bacem Bakhache (Lebanese University, Lebanon)

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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)

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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)

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S11: Biomedical Signal processing (II)

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

Amira Zaylaa (François Rabelais University of Tours & INSERM U930, France); Jamal Charara (Lebanese University, Lebanon); Jean-Marc Girault (Université François Rabelais - Tours, France)

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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)

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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)

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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)

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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)

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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)
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Human Motion Tracking for Rehabilitation using Depth Images and Particle Filter Optimization

Benoît Penelle (Université Libre de Bruxelles, Belgium); Olivier Debeir (ULB, Bruxelles, Belgium)
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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)
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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)
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S13: Health care system

Effects of GSM antennas in Urban Cities

Ali Harmouch (Lebanese University, Lebanon); Hassan Haddad (Lebanese University, Lebanon); Georges Chahda (Notre Dame University, Lebanon)
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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)
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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)
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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)
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Healthcare Design Planning criteria that every biomedical engineer should know

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