

## Partners and Sponsors



The Society of Digital Information and Wireless Communications



Agence Universitaire de la Francophonie (AUF),  
Bureau Moyen Orient (BMO)  
Lebanon



University of Lille  
France



Laboratoire Génie Civil et geoEnvironnement  
Lille Nord de France  
France



Petroleum - Gas University of PLOIEȘTI  
Romania

IEEE Lebanon Joint Chapter



IEEE Power & Energy Chapter  
Lebanon



**INCER**

The first International Conference of  
Engineering Risk



DICTAP

The ninth International Conference on Digital  
Information and Communication Technology and  
its Applications



The second International Conference on Energy,  
Power, Petroleum and Petrochemical Engineering



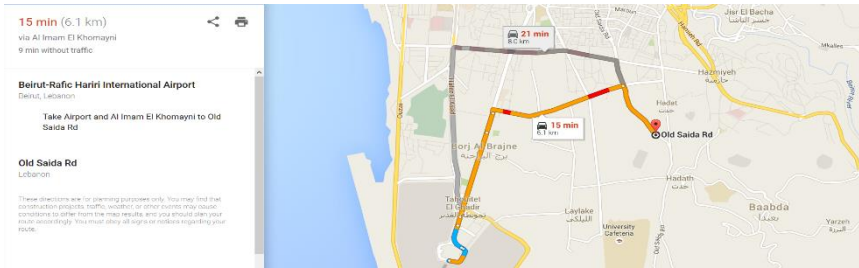
TAECE

The sixth International Conference on  
Technological Advances in Electrical, Electronics  
and Computer Engineering

**April 3-5, 2019**

**Faculty of Engineering - Lebanese University  
Rafic Hariri Campus - Hadath  
Beirut - Lebanon**

**Nearest Airport**  
Beirut-Rafic Hariri International Airport



**Host Country**  
Lebanon

**Participating Countries (18)**

Algeria, Belarus, Canada, China, Egypt, France, Greece, Iraq, Italy, Japan, Jordan, Lebanon, Morocco, Pakistan, Saudi Arabia, Syria, United Arab Emirates, United States of America

**N.B.:**

The time of each presentation including questions is 15 minutes.

**Schedule of the Conferences**

Date	Time	Activity
April 3, 2019 (Wednesday)	8:30 am – 9:15 am	<b>Registration</b>
	9:15 am – 10:00 am	<b>INCER, DICTAP, E3PE &amp; TAECE Opening Ceremony</b>
	10:00 am – 10:15 am	<b>Coffee Break</b>
	10:15 am – 11:00 am	Keynote Presentations by: <b>Pr. Guy Pujolle</b> <b>Pr. Ali Chamkha</b>
	11:00 am – 1:00 pm	Session 1
	1:00 pm – 2:00 pm	<b>Lunch Break</b>
	2:00 pm – 2:45 pm	Keynote Presentation by: <b>Pr. Isam Shahrour</b>
	2:45 pm – 4:45 pm	Session 2
	4:45 pm – 5:00 pm	<b>Coffee Break</b>
	5:00 pm – 6:00 pm	Session 3
April 4, 2019 (Thursday)	8:00 pm – 11:00 pm	<b>Gala Dinner</b>
	8:30 am – 9:00 am	<b>Registration</b>
	9:00 am – 10:30 am	Session 4
	10:30 am – 10:45 am	<b>Coffee Break</b>
	10h:45 am – 12:15 pm	Session 5
	12:15 pm – 1:00 pm	Keynote Presentation by: <b>Pr. Helen Karatza</b>
	1:00 pm – 2:00 pm	<b>Lunch Break</b>
	2:00 pm – 4:15 pm	Session 6
4:15 pm – 4:30 pm	<b>Closing Ceremony</b>	
April 5, 2019 (Friday)	8:30 am – 12:30 pm	Trip

## DETAILED PROGRAM


Wednesday April 3, 2019

Time	8:30 am – 9:15 am
Title	<b>Registration</b>

Time	9:15 am – 10:00 am
Title	<b>Opening Ceremony</b>

Time	10:00 am – 10:15 am
Title	<b>Coffee Break</b>

Title	Keynote Presentation
Time	10:15 am – 11:00 am

Room	Auditorium
Chair	Abed Ellatif SAMHAT
Speaker	 Prof. Guy PUJOLLE

### Biography


Guy Pujolle is a Professor at Sorbonne University, Paris, France. He is a pioneer in high-speed networking having led the development of the first Gbit/s network to be tested in 1980. He was at the origin of several inventions and important patents like DPI, Wi-Fi controller, virtual networks, metamorphic networks, and green networks. Guy Pujolle received different prizes for his work and publications, in particular the Grand Prix of French Academy of Sciences in 2013. He is the Editor in Chief of “Annals of Telecommunications”. Guy Pujolle is co-founder of QoS MOS, Utopia Communications, Ether Trust, and Green Communications.

### Presentation Title

**The Plug & Network Paradigm the Ultimate Solution for Network Architectures**

### Abstract

The objective of this presentation is to introduce the new paradigm that will be used in the 2020s: the “Plug & Network” concept. This concept makes it possible to create new generations of networks that are beginning to appear with SDN, NFV and 5G. There are still many problems to be solved, such as scalability and security. This paper describes the basic concept and then examines possible solutions to achieve highly secure networks and self-driven environment.

Room	Room B
Chair	Joyce KHEIR & Lisa DIAB
Speaker	 <p>Prof. Ali Chamkha</p>

### Biography

Ali J. Chamkha is the Dean of Graduate Studies and Research, Professor and former Chairman of the Mechanical Engineering Department, Prince Sultan Endowed Chair for Energy and Environment and the Director of the University Research Center at Prince Mohammad Bin Fahd University (PMU) in the Kingdom of Saudi Arabia. He earned his Ph.D. in Mechanical Engineering from Tennessee Technological University, USA, in 1989. His research interests include multiphase fluid-particle dynamics, nanofluids dynamics, fluid flow in porous media, heat and mass transfer, magnetohydrodynamics and fluid-particle separation. He has served as an Editor, Associate Editor, or a member of the editorial board for many journals. He has authored and co-authored over 650 publications in archival international journals and conferences.

### Presentation Title

**Modeling and Applications of Nanofluids**

### Abstract

This keynote lecture focuses on the heat transfer characteristics of a new innovative class of fluids called nanofluids. The importance of nanofluids in industrial, engineering and scientific applications is highlighted. Models for nanofluids properties are given and the mechanisms of potential heat transfer enhancement are reported. Nanofluids' model applications to various problems such as mixed convection in single and double lid-driven inclined/non-inclined square cavities with constant and variable viscosity effects, mixed convection in a composite (porous media/nanofluid) cavity with inner rotating cylinder, natural convection in trapezoidal enclosures solar collectors, conjugate heat transfer in cavities with conducting objects, melting of nanoparticles enhanced phase-change materials in enclosures, fluid-structure interaction with hybrid nanofluids and others are covered. Also, various aspects of boundary layer flows of nanofluids in porous and nonporous material considering nanoparticle size, shape and type, base fluid type and working temperature for the cases of forced and natural convection are discussed. Conditions for heat transfer enhancements are discussed.

Time	11:00 am – 1:00 pm
------	--------------------

Room	Auditorium
Chair	Isam SHAHROUR & Marwan SADEK

### Civil infrastructures : bridges, structures, dams ...

- 4- Piles in chalk under axial loading ([Mirna Doghman](#); Hussein Mroueh; Sebastien Burlon)
- 7- Estimation of the vulnerability index in Nador city based on dynamic site characteristics ([Aboubakr Chaaraoui](#); Mimoun Chourak)
- 8- A predator-prey optimization for structural health monitoring problems ([Christelle Geara](#); Rafic Faddoul; Alaa Chateauneuf; Wassim Raphael)
- 10- Smart monitoring system for risk management in the underground space ([Isam Shahrour](#); Hanbing Bian; Xiongyao Xie; Zixin Zhang)
- 16- A robust 3D finite element model for concrete columns confined by FRCM system ([Majid Mohammed Ali](#); Mohammed Altaee; Ali Hadi Adheem; Akram Jawdhari)
- 21- Risk due to creep of prestressed concrete at moderate temperature ([Thierry Vidal](#); Hugo Cagnon; Nam Nguyen; Jean-Michel Torrenti; Alain Sellier)
- 24- Resilience assessment of dynamic engineering systems ([Omar Kamouh](#); Gian Paolo Cimellaro; Paolo Gardoni)
- 34- Indoor hazard management using digital technology ([Rania Wehbe](#); Isam Shahrour)

Room	Room A
Chair	Guy PUJOLLE & Rima ABDALLAH

### Wireless Communications


- 115- Pilot Placement Schemes for Channel Estimation of Proposed 5G-GFDM System (Suleman Tahir, Dr. Shahzad Amin Sheikh, Dr. Omer Bin Saeed)
- 116- The Effects of Increasing Antenna Arrays for MIMO in Mine Tunnels ([ali nehme](#), Nadir Hakem, Nahi Kandil)

- 117- Impact of Initialization on Gradient Descent Method in Localization Using Received Signal Strength ([Hussein Hijazi](#), Nour Zaarour, Nahi Kandil, Nadir Hakem)
- 122- Performance Comparison of Digital Quaternion Modulation System with other Modulation Schemes ([Anam Zahra](#), [Qasim Umar](#))
- 124- Blind Channel Equalization of Star QAM using Dual Dispersion MCMA Algorithm ([Faizan Zaheer](#), [Sheikh Shahzad Amin](#))

Room	Room B
Chair	Ali CHAMKHA & Wael HAMD
<b>Petroleum and Petrochemical Engineering</b>	
510- Photocatalytic degradation of phenolic effluents in petroleum refineries ( <a href="#">Elias Daher</a> , Clovis Francis, Wael Hamd)	
<b>Energy Management and Environmental Issues</b>	
505- Smart switch (SMITCH-LB) for electricity load balancing and optimization ( <a href="#">Johnny Matar</a> , Hicham El Khoury)	
507- Performance of earth-water heat exchanger for cooling applications ( <a href="#">Hanin Atwany</a> , Mohammad Hamdan, Mousa Attom, Bassam Abu-Nabah, Abdulhai Alalami)	
508- Free convection in a square cavity heated by trapezoidal body using a two-phase nanofluid model ( <a href="#">Ali J. Chamkha</a> , Ammar I. Alsabery, Ishak Hashim)	
<b>Control and Robotics</b>	
602- Brian Simulation Using the Leaky Integrate and Fire Neuron for Edge Orientation Detection ( <a href="#">Ali Abou Khalil</a> , Hussein Chible, Ali Hamie, Maurizio Valie, Chiara Bartolozzi)	

Time	1:00 pm – 2:00 pm
Title	<b>Lunch Break</b>

Time	2:00 pm – 2:45 pm
Title	Keynote Presentation

Room	Auditorium
Chair	Fadi HAGE CHEHADE
Speaker	 <b>Prof. Isam SHAHROUR</b>

### Biography

Graduated from the National School of Bridges and Roads (Ponts et Chaussées - Paris), Isam Shahrour is strongly involved in the research, higher education and partnership with the socio-economic sector. He was VP “Research and doctoral program” at the University Lille1 (2007 – 2012) and president of the Innovation Agency “Lille Metropole Technopole” for regional economic development via innovation. Currently, he is director of the Regional Research Laboratory LGCgE and head of the international master "Urban Engineering and Habitat." He coordinates a large-scale Smart City demonstrator “SunRise“. His research activity concerns Smart and sustainable Cities as well as Geotechnical and geo-environmental Engineering. His activity resulted in about 100 refereed journal papers and supervised 60 PhD dissertations. He gave about 15 lectures on the smart city concept and implementation, including a TEDx talk.

### Presentation Title

**How the Smart City could help in City Resilience**

### Abstract

The Smart City concept is based on the use of the digital technology and social innovation to improve the efficiency and safety of urban systems. Through large-scale monitoring of built environment, unbuilt environment as well as urban services and practices, it provides large data about urban systems. Analysis of these data using advanced tools enhances our understanding of the real behavior of urban systems as well as users and their interaction during “normal” events and urban disasters. It helps also to develop forecasting model for urban systems and to use these models to improve the efficiency and safety of urban systems, which constitute the basis for the development of sustainable and resilient cities. The conference includes three parts. The first part proposes to revisit urban challenges with particular focus on sustainability and resiliency and then to figure out research needs to cope with these challenges. The second part presents the Smart City concept and lessons learned from some projects, with focus on successes and failures in smart city implementation. The final part discusses how the Smart City concept could help to improve the resilience of urban systems and discusses some issues to guarantee its successful implementation.

Time	2:45 – 4:15 pm
------	----------------

Room	Auditorium
------	------------

Chair	Jacqueline SALIBA & Khalil KAHINE
-------	-----------------------------------

**Invited talk**

Why and how emerging disruptive innovations can shape the new face of construction industry? (Zoubeir LAHFAJ)

**Sustainable development: climate change, air and water pollution, waste treatment**

- 1- PP-CBW/m-LLDPE/micro-CaCO<sub>3</sub> composite films manufactured from bumper waste by blown film extrusion (Nancy Zgheib; Sylvain Seif; Nembr Hajj)
- 11- Smart technology for the protection of urban biodiversity (Isam Shahrour; Thi Hai Yen Pham; Ammar Aljer; Alain Lepretre; Celine Pernin; Sana Ounaies)
- 12- Sustainability Management of Solid Waste in Tripoli Lebanon Landfill (Rida Tadmouri)
- 17- Optimal Spatio-Temporal Design for Water Quality Monitoring Network (Youssef Zaiter; François Destanda)
- 33- Risks assessment of urban participatory governance implementation (Mohammad Abuhasirah; Isam Shahrour)
- 38- Phytoremediation of Lebanese polluted waters: a review of current initiatives (Hassana Ghanem; Lamis Chalak; Safaa Baydoun)

Room	Conference Hall
------	-----------------

Chair	Hayssam El GHOUCHE & Jad WAKIM
-------	--------------------------------

**Poster Session**

- 2- Lithium Niobate micro-transducers matrix design (Hala Rammouz; Farouk Benmeddour; Jamal Assaad; Emmanuel Moulin; Lucie Dupont; Nikolay Smagin; Youssef Zaatari; Ziad Herro)
- 6- Bridges' reliability between specific loading case and realistic traffic (Fatima El Hajj Chehade; Rafic Younes; Fadi Hage Chehade; Hussein Mroueh)

- 15- Effect of Successive Impact Loads From a Drop Weight on a Reinforced Concrete Flat Slab (Ali Jahami; Yehya Tamsah; Ossama Baalbaki; Mohamad Darwiche; Youmn Al-Rawi; Mohamad Al Ilani; Sandy Chaaban)
- 32- Environmental evaluation of geopolymer bricks (Nicolas Youssef; Andry Zaid Rabenantoandro; Zakaria Dakhli; Fadi Hage Chehade; Zoubeir Lafhaj)
- 40- Different applications of RRE on nonsymmetric algebraic Riccati equation in transport theory (Rola Moallem)
- 41- Investigation of exhaust gas heat recovery unit for diesel power generator (Farouk Fardoun)
- 43- Effect of Ion Beam Assisted Deposition technology on the cathode of solar cells (Mohamad Chakaroun; Mohamad El-Khatib; Alaa Saleh)
- 44- Seismic Soil Structure interaction for Shear wall structures (Marwan Sadek; Fadi Hage Chehade; Ahmed Arab; Bassem Ali Ali)
- 52- Risk of damage and desiccation cracking of construction materials based on raw earth (Joanna Eid)

Room	Room A
------	--------

Chair	Clovis FRANCIS & Elie NASR
-------	----------------------------

**Data uncertainty and security**

- 19- An Improved Earned Value Analysis Tool for Mitigating Progress Risks in Long Duration Projects (Bassam Hussein; Amin Haj-Ali; Ali Fayad; Elie Maalouf)
- 42- Wi-Fi network vulnerability analysis and risk assessment in Lebanon (Elie Nasr; Mohammad Jalloul; Joseph Bachaalany; Roy Maalouly)
- 50- Improvement of Criminal Identification by Smart Optimization Method (Reem Razzaq AbdulHussein)
- 51- Operating Room Management System: Patient Programming (Bilal AbouSaleh; Abdallah El Moudni; Bilal Bou saleh; Oussama Barakat; Ghazi Bousaleh, Lina CHAHAL)

**Fault tolerant systems, diagnosis and prognosis**

- 23- Identification of a non-stationary system using the Multi-Model approach (Khaled Fawaz)
- 49- Ensuring the sustainability of real-time embedded system under both QoS and Energy Constraints (Nadine Abdallah; Maryline Chetto; Maissa Abdallah)

**Naturals: earthquake, landslide, forest fire, flood, tsunami, avalanche**

- 14- Backward Kolmogorov Equation Approach to Compute Statistics of Elasto-plastic Systems (Jonathan Wylie)

**Chemical: pollution, explosion, Fire**

- 13- Physicochemical Properties of Chemical Pollutants Available in Food Contact Materials (FCM) (Joseph Saab)

<b>Room</b>	<b>Room B</b>
<b>Chair</b>	<b>Maher RAFEI &amp; Khaled HAJAR</b>
<b>Electrical Engineering</b>	
304- Resonant Behavior Analysis of Split-Ring Resonator Due to Positional Change of Dielectric Material (Sanaan Haider, Tahir Ejaz, Tahir Zaidi, Muhammad Muneeb ul Hassan, Muhammad Asad)	
305- Electricity issues in Lebanon: Let the people talk (Ahmad hably, <u>Khaled Hajar</u> )	
<b>Renewable Energy</b>	
506- Design of Solar Panel Intercooled by Refrigeration System ( <u>Nader Nader</u> )	
502- Hybrid Control Based on Sliding Mode Fuzzy of DFIG Power Associated WECS ( <u>lakhdar saihi</u> )	
511- Optimization of PV/Wind Power System Case study: Supplying Large Industry Load in Egypt (Hamdy Ziedan, Ashraf Nasr EL-Deen Mourad)	

<b>Time</b>	<b>4:45 pm – 5:00 pm</b>
<b>Title</b>	<b>Coffee Break</b>

<b>Time</b>	<b>5:00 pm – 6:00 pm</b>
-------------	--------------------------

<b>Room</b>	<b>Auditorium</b>
<b>Chair</b>	<b>Clovis FRANCIS &amp; Sorina MORTADA</b>
<b>Special Session</b>	
International Activities within EU funded projects framework : HEBA and CLAIM case studies	
- Strategic Roadmap for EU funded projects ( <u>Clovis Francis</u> )	
- Solar Energy in Lebanon ( <u>Elias El Kinab</u> )	
- Photocatalytic degradation of microplastics derived from petroleum sources ( <u>Wael Hamd</u> ).	
Round Table	
- Topic and leads discussion (Ghada Ballout)	

<b>Time</b>	<b>20:00 pm – 23:00 pm</b>
<b>Title</b>	<b>GALA Dinner</b>
<b>Address</b>	<b>RAMADA PLAZA</b> Australia Street Raouche Beirut

Thursday April 4, 2019

Time	8:30 am – 9:00 am
Title	<b>Registration</b>

Time	9:00 am – 10:30 am
------	--------------------

Room	Auditorium
Chairs	Thierry VIDAL & Nazir CHEBBO
<b>Fault tolerant systems, diagnosis and prognosis</b>	
9- Monitoring of reinforced concrete short ties with the acoustic emission technique ( <a href="#">Jacqueline Saliba</a> )	
18- Introducing systemic risk management to engineering consultation industry: A case study ( <a href="#">Reem S. AbdAlla</a> ; Fouad Khalaf)	
22- Reliability analysis of non-destructive testing models within a probabilistic approach ( <a href="#">Wafaa Abdallah</a> )	
28- A Systemic Risk Management Model to Manage the Equipment Maintenance System in Oil and Gas Companies ( <a href="#">Hany Khalil Baselious</a> )	
<b>Naturals: earthquake, landslide, forest fire, flood, tsunami, avalanche</b>	
3- Influence of non-plastic fines on the cyclic resistance of sands to liquefaction ( <a href="#">Loyal Jradi</a> )	
5- Landslide susceptibility mapping based on triggering factors using a multi-modal approach ( <a href="#">Rouba Kaafarani</a> ; Grace Abou-Jaoude; Joseph Wartman; Miriam Tawk)	

Room	Room A
Chairs	Helen KARATZA & Imad TAHINI
<b>Computer Engineering</b>	
108- Developing a novel haptic device for non-rigid computer graphic objects utilizing UAV ( <a href="#">Mohamad Ghaith Alzin</a> , Hiroki Imamura)	
119- The pedagogy of design & technology at Xavier University of Louisiana, New Orleans, LA, USA ( <a href="#">Shayna Blum</a> )	
121- Techniques of new application for acquisition foreign languages: development stages and modern trend ( <a href="#">Imad Tahini</a> , Aliaksei Dadykin)	

Time	10:30 am – 10:45 am
Title	<b>Coffee Break</b>

Time	10:45 am – 12:15 pm
------	---------------------

Room	Auditorium
Chairs	Hanan El Nimry & Farouk FARDOUN
<b>Naturals: earthquake, landslide, forest fire, flood, tsunami, avalanche</b>	
20- Seismic assessment and rehabilitation of a historical masonry mosque ( <a href="#">Ayman Trad</a> )	
25- Earthquake human losses assessment. The case of Chlef city (Algeria) ( <a href="#">Zohra Boutaraa</a> ; Kacem Chaibdra)	
35- Geotechnical and Numerical analysis of Bcharreh Landslide stability (Diala Tabbal; <a href="#">Marwa Saleh</a> )	
45- Structuration of natural muds in a rheological point of view (Yannick Melinge; Damien Rangeard; Fadi Hage Chehade; <a href="#">Saly Serhal</a> )	
48- Seismic internal stability assessment of geosynthetic reinforced earth retaining wall in cohesive soil using limit analysis ( <a href="#">Hicham Alhajj Chehade</a> ; Fadi Hage Chehade; Daniel Dias; Oriane Jjenck)	



Room	Room A
Chair	Hassan AMOUD & Bismark Kweku ASIEDU ASANTE
<b>Signal and Image Processing</b>	
101- Using Deep Learning Detection Of Arrhythmia ( <i>Zhang Yue, Li Feng</i> )	
111- Ventricular Fibrillation Detection Based on Convolution Neural Network (Yue Zhang, Guangbo Shi)	
118- Lebanese Conference Design of facial recognition system implemented in an unmanned aerial vehicle for civil security in south America ( <a href="#">Diego Alberto Herrera Ollachica</a> , Hiroki Imamura)	
120- Speech Recognition and Speech Synthesis Models for Micro Devices ( <a href="#">Bismark Kweku Asiedu Asante</a> , Hiroki Imamura)	
<b>Cryptography and Data Protection</b>	
113- An Efficient Solution Towards Secure Homomorphic Symmetric Encryption Algorithms ( <a href="#">Khalil Hariss</a> , Hassan Noura, Abed Ellatif Samhat, Maroun Chamoun)	

Time	12:15 pm – 1:00 pm
Title	Keynote Presentation

Room	Auditorium
Chair	Abdallah KASSEM
Speaker	 <b>Prof. Helen KARATZA</b>

<p><b>Biography</b></p> <p>Helen Karatza is a Professor Emeritus in the Department of Informatics at the Aristotle University of Thessaloniki, Greece, where she teaches courses in the postgraduate and undergraduate level, and supervises doctoral and postdoctoral research. Dr. Karatza's research interests include Computer Systems Modeling and Simulation, Performance Evaluation, Grid and Cloud Computing, Energy Efficiency in Large Scale Distributed Systems, Resource Allocation and Scheduling and Real-time Distributed Systems. Dr. Karatza has authored or co-authored 220 technical papers and book chapters including five papers that earned best paper awards at international conferences. She is senior member of IEEE, ACM and SCS, and she served as an elected member of the Board of Directors at Large of the Society for Modeling and Simulation International. She served as Chair and Keynote Speaker in International Conferences. Dr. Karatza is the Editor-in-Chief of the Elsevier Journal "Simulation Modeling Practice and Theory" and Senior Associate Editor of the "Journal of Systems and Software" of Elsevier. She was Editor-in-Chief of "Simulation Transactions of The Society for Modeling and Simulation International" and Associate Editor of "ACM Transactions on Modeling and Computer Simulation". She served as Guest Editor of Special Issues in International Journals.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p><b>Presentation Title</b></p> <p style="text-align: center; color: red;"><b>Scheduling complex real-time jobs in the cloud</b></p> <p><b>Abstract</b></p> <p>Cloud computing attracts significant attention from academia, enterprises and industry, as it offers computational services in a cost-effective way for the end users. For many years now, cloud computing has been an important research area. Because of the heterogeneity of shared cloud resources and the large variety of applications processed in the cloud, there are many issues that must be considered, such as: performance, resource allocation, scheduling, energy conservation, reliability, availability, cost, quality of service. Resource allocation and scheduling is important in clouds where there are many alternative resources. The scheduling algorithms must provide a good response time to leasing cost ratio. One of the major challenges in cloud computing is the effective scheduling of real-time complex jobs, in an energy-efficient manner for the cloud provider. Therefore, adaptive scheduling techniques are required in order to reduce the energy consumption while meeting deadlines. In this talk we will present recent research covering various concepts on real-time complex jobs scheduling in the cloud, and we will provide future research directions.</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Time	1:00 pm – 2:00 pm
Title	<b>Lunch Break</b>

Time	2:00 pm – 4:15 pm
Room	Auditorium
Chairs	Elie OTAYEK & Jamal ASSAAD
<p><b>Civil infrastructures : bridges, structures, dams ...</b></p> <p>26- Autonomous vehicles implementation in Lebanon: Opportunities, challenges, and ethical decisions (Elie Otayek; <a href="#">Rania Wehbe</a>; Zaher Massaad)</p> <p>29- Flexural resistance of the polypropylene fibres reinforced cement mixes with waste material (<a href="#">Jad Wakim</a>)</p> <p>30- Construction delay of a penstock (<a href="#">Mohamed El Tani</a>; Fadi Hage Chehade)</p> <p>31- Development of Seismic Fragility Curves of RC Infilled Frame Buildings in Jordan (<a href="#">Hanan Al-nimry</a>)</p> <p>36- Comparative study of modeling methods used to simulate initial stresses in prestressed beams towards manual analysis (<a href="#">Mohamad Al Ilani</a>; Yehya Temsah)</p> <p>37- Numerical study for the effect of hairpin shaped shear reinforcement on one-way shear capacity of reinforced concrete beams (<a href="#">Baraa Elmoussa</a>; Yehya Temsah; Ali Jahami)</p> <p>39- Sustainable safety evaluation of roads network in case of extreme weather events (<a href="#">M Puppio</a>)</p> <p>47- Failure risk of recycled aggregates concrete (<a href="#">Frederic Grondin</a>; Menghuan Guo; Ahmed Loukili)</p> <p><b>Naturals: earthquake, landslide, forest fire, flood, tsunami, avalanche</b></p> <p>46- Assessing Critical Infrastructure resilience to natural hazards through modelling of intradependencies, a focus on road network of Baalbek Hermel (Lebanon) (<a href="#">Chadi Abdallah</a>; Rita Der Sarkissian)</p>	
Time	4:15 pm – 4:30 pm
Title	Closing Ceremony

Friday April 5, 2019

Time	8:30 am – 12:30 pm
Title	<b>Trip to Jeita Grotto</b>



<b>Presentation</b>	<p>Lebanon is a country of karst areas rich with mountains that offer spectacular scenery and scenic view and the mountainous caves are spread in different regions. In one of these regions in the valley of Nahr El-Kalb at 18 km North of Beirut, is found Jeita Grotto, one of the most marvelous natural wonders in the Middle-East, in spacious greenery. The road leading to the caverns is carved in the mountains and surrounded with trees. The all-around nature is perfectly in tune with the site.</p>
---------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>Trip Details</b>	<p><b>Departure time and Location</b> 8:30 am from Lancaster Tamar Hotel Boulevard General Emile Lahoud, Hadath</p> <p><b>Return Time and Location</b> 12:15 pm to City Center 12:30 pm to Lancaster Tamar Hotel</p>
---------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------