



# AAF 2018 Summer University

**Algiers : July 8th – July 14th**

Venue: USTHB -Algiers

**Batna : July 15th – July 19th**

Venue: Batna2 University

**Deadline for registration : May 30<sup>th</sup>, 2018**

**Program, Registration and Abstract submission:**

[http://www.usthb.dz/summer\\_university/](http://www.usthb.dz/summer_university/) or <http://algerianamericanfoundation.org>

## MEETINGS PROGRAMS

Smart Grids  
(Algiers and Batna)

Smart Grid Basics and Issues  
Technical Issues  
Renewable Energy and Storage  
Electric Vehicles  
Operation and Architectures  
Cyber Security  
Poster Presentations  
Open Discussions

Biotechnology, Imaging and  
Health sciences (Algiers)

Bioengineering and medicine.  
Advances in molecular Imaging  
techniques and clinical applications  
Bioimaging applications and  
associated research  
Animal models of disease  
Translating basic research into applied  
science and applying for patients

Civil Engineering  
(Algiers)

Non-destructive evaluation and  
rehabilitation of existing concrete  
and masonry buildings and  
structures  
Modeling of catastrophic risk  
Seismic design of confined masonry  
Non-linear pushover analysis  
Seismic design of new buildings  
Seismic evaluation and retrofit of  
existing buildings

# AAF 2018

## Summer University

### SUMMARY

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The 2018 AAF Summer University is the first summer program initiated by the Algerian American Foundation (AAF-CEST). This program has multiple goals:

- 1) Share the experience and scientific knowledge gained abroad with the Algerian Scientific community in Algeria.
- 2) Establish a link between the students in Algeria (nationwide) and the Scientific community in Algeria and abroad.
- 3) Build a network between the Algerian professionals abroad and in Algeria

The ultimate goal is to benefit the future generation of Algerian scientists, create opportunities for collaborations and increase the possibilities for internships abroad by building realistic and action-based bridges between the communities in Algeria and abroad.

This initiative will enable the scientific community abroad to work with the scientific community in Algeria and contribute in building a country in the forefront of development; “the Algerian dream”.

We hope, the 2018 AAF Summer University program will be successful and will constitute the first step to a series of summer programs to be held on an annual basis in the future across the country, to become a tradition!

Finally, I am very grateful for the contribution of everyone who made this dream become a reality including, MESRS, DG-RSDT, ONOU, USTHB, BATNA2, Algerian Embassy in USA, US Embassy in Algeria, General consulate of Algeria in US, AAF and everyone else who is devoted to the summer program.

I am looking forward to meeting everyone this summer.

Best regards,

**Pr. Taha Merghoub**  
*AAF-CEST president*

# **Committees:**

- **Organization**
- **Scientific**

### AAF Organising Committee

BELBLIDIA	Lotfi	USA
BOUK'HIL	Hind	Fr
CHAKER	Amar	USA
FELIACHI	Ali	USA
MERGHOUB	Taha	USA

### USTHB Organising Committee

BOUDOUR	Mohamed	DZ
BOUROUBA	Mehdi	DZ
HADDADI	Smail	DZ

### BATNA 2 Organising Committee

MOKHNACHE	Leila	DZ
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**G1 :Smart Grids**

BOUDOUR	Mohamed	DZ	
BOUKTIR	Tarek	DZ	
MOKHNACHE	Leïla	DZ	
BACHA	Seddik	Fr	
BENBOUZID	Mohamed	Fr	
BAGHZOUZ	Yahia	USA	
FELIACHI	Ali	USA	(Chair)

**G2: Biotechnology, Biomedical Engineering, Bioimaging and Health Sciences : Emphasis on Cancer**

BOUROUBA	Mehdi	DZ	(Co-chair)
TOUIL-BOUKOFFA	Chafia	DZ	
ZERGOUN	Ahmed	DZ	
BOUK'HIL	Hind	Fr	(Co-chair)
AMRANI	Yassine	UK	
BOUMRAH	Derradji	UK	
KACHA	Wassil	UK	
ASSELAH	Jamil	CAN	
BOUKARI	Hacène	USA	(Co-chair)
CHENNA	Ahmed	USA	
MERGHOUB	Taha	USA	
OUHIB	Zoubir	USA	

**G3: Civil Engineer : Existing and Historical Buildings in a Seismic Region**

HADDADI	Smaïl	DZ	
BOURAHLA	Noureddine	DZ	
KENAI	Saïd	DZ	
BRANCACCIO	Antonio	IT	
BELARBI	Abdeldjelil	USA	
BENDIMERAD	Fouad	USA	
CHAKER	Amar	USA	(Chair)
HAMROUN	Leïla	USA	
KHEMICI	Omar	USA	

# Smart Grids

## Topic 1 : Smart Grids Program

### 1-Program Coordinators:

Ali Feliachi, USA (Chair)	Mohamed Benbouzid, FR	Leila Mokhnache, DZ
Yahia Baghzouz, USA	Mohamed Boudour, DZ	
Seddik Bacha, FR	Tarek Bouktir, DZ	

### 2-Program Description:

Regulation, economics, environment are key factors in the drastic changes in the production, distribution and operation of electric power systems. Advances in power electronics and communication, and emphasis on renewable energy and electric vehicles, as well as consumer participation in both production and consumption of electricity are the major drivers in making the power system a Smart Grid. The objective of this course is to present the state of the art in smart grids from basic background to case studies. Participants are also encouraged to present posters on their related activities and interact with the instructors. Some of the topics that will be presented are:

- Smart Grid Basics and Issues
- Technical Issues
- Renewable Energy and Storage
- Electric Vehicles
- Operation and Architectures
- Cyber Security
- Poster Presentations and Open Discussions

Algeria has plans to exploit solar and wind energy. Integration of these resources with the current grid is certainly an important issue that this course will address. Several researchers at Algerian universities are pursuing similar activities and this proposed course will be a forum to exchange ideas which might lead to collaboration in both research and teaching.

### 3-Covered topics:

This program is broad and will cover basic concepts, advanced techniques and most recent scientific and technological achievements in the field.

The main topics of the program will include:

- Smart Grid Overview
- Power System Basics
- Distributed Energy Resources, Intermittent Resources
- Voltage/Var Technical Issues
- Power Quality, disturbances monitoring using advanced signal processing techniques
- Disturbance classification, voltage sag and swell signatures
- Communication Cybersecurity
- Storage
- Vehicles to Grid: V2G
- Smart Buildings
- Impact of High PV Penetration on Power System Operation - a Case Study
- Energy Storage Systems in the Residential Sector - A Case Study
- Microgrids – a Case Study
- Participants Posters and Discussions

### 4-Desired Learning Outcomes:

Participants will be exposed to the latest technologies and learn theoretical and practical knowledge on diverse relevant aspects of smart grid issues, solutions and case studies.

Instructors will guide and assist participants, working in academia and research centres to develop their skills, establish working relationships and build partnerships for future collaborative projects between Algerians abroad and Algerians at home.

### 5-Who Should Attend the Course?

Faculty members and graduate students in the field of electric power systems, engineers, economists, information technology personnel who deal with any aspects of smart grid design, planning and operation.

Sonelgaz and other energy companies could also benefit from this course





IEEE Transactions on Power Systems (USA), ETEP - European Transactions on Electrical Power Engineering, Turkish Journal of Electrical Engineering & Computer Sciences, Turkey, Applied Soft Computing. He served as Conference Chairman for Seven International Conferences in Electrical Engineering in Algeria and Tunisia. He is with the Department of Electrical Engineering in Ferhat Abbas University, Setif 1, Algeria. He has served as Director of Institute of Electrical Engineering, University of Larbi Ben M'Hidi, Oum El Bouaghi and President of the Scientific Council of the department of Electrical Engineering in University of Setif 1. He is currently a member of the Board of the University of Setif 1. He teaches courses in power system analysis, and integration of renewable energy systems to the grid at the University of Setif 1.



Ali Feliachi received the Diplôme d'Ingénieurs Electrotechnique from the Ecole Nationale Polytechnique of Algiers, Algeria, in 1976, and the MS and Ph.D. degrees in Electrical Engineering from the Georgia Institute of Technology, Atlanta, GA in 1979 and 1983 respectively.

Before coming to the USA he has taught at the Ecole Supérieure de Chimie of the University of Algiers and at the Lycée Ourida Meddad in El-Harrach, Algeria. He also worked at SONELGAZ in 1976.

At Georgia Tech, he was employed as a Graduate Research Assistant and a Postdoc after graduation. He worked, as a consultant, for Georgia Power Company before joining the Lane Department of Computer Science and Electrical Engineering at West Virginia

University in 1984 where he is currently a Full Professor and the Director of the Advanced Power & Electricity Research Center (APEREC). He also held the Electric Power Systems Endowed Chair Position for 15 years until 2017.

His research interests are modeling, control and simulation of smart grids and electric power systems. He has secured over nine million dollars in external funding from electric utilities (Allegheny Power, Duquesne Light), US DoE, US DoD, NSF, and EPRI (Electric Power Research Institute). He has published over 280 journal and conference articles in his field of expertise.

Specifically, in Algeria, he has given several conference plenary talks and he has taught a short course (one week) on Real-Time Control of Power Systems as part of the PGS Sonelgaz/USTHB in 2013 and 2015.

Dr. Feliachi is a senior member of IEEE, and a member of the honorary societies Pi Mu Epsilon (Math), Eta Kappa Nu (Electrical Engineering), and Sigma Xi (Research). He received the ASEE (American Society for Engineering Education) North Central Section Dow Outstanding Young Faculty Award in 1987, the following awards from the College of Engineering at West Virginia University: Leadership Award in 1989, Outstanding Researcher Award in 1991, 2004 and 2005, Researcher of the Year in 2005, Outstanding Graduate Teacher Award in 1991. In 1994 he received the Claude Benedum Distinguished Scholar Award for the Sciences and Technology from West Virginia University.



Leila Mokhnache was born in the Aures mountains of Algeria. She received the Diplôme de Magister in Electrical Engineering/power systems from the University of Batna, Algeria, in 1997, and the Doctorat d'état in Electrical Engineering from l'Ecole Nationale Polytechnique (ENP) of Algiers in 2004.

She joined the University of Batna in its Electrical Engineering department in 1998 where she chaired more than forty Bachelor projects and about twenty MSc and Phd theses adding to others at ENP as co-chair. Dr. Mokhnache is a full professor and a member of the scientific council. She is leading an innovative training project in green energy where a branch of smart Grids is proposed. Her research interests are modeling and diagnosis of high voltage systems using artificial intelligence. She has published over 115 journal and conference articles in her field of interest.

Dr. Mokhnache developed relationships with industry in Algeria such as Sonelgaz and Sonatrach and many of their auxiliary companies as SPE, SKMK, GRTE, MEI, SKTM and DMB, the prestigious company of gaz at Hassi R'mel and the research labs of Sonatrach at Boumerdes.

She participated in the inaugural Techwomen Program launched by president Obama in 2011 which was held in the Silicon Valley.

She receives many awards mainly the award of the President of her university as the best researcher in April 2013 and was in the 5 top more cited by SCOPUS at her university in 2015.

Summer University: Smart Grids (Batna)					
	Sunday	Monday	Tuesday	Wednesday	Thursday
Batna	15-Jul-18	16-Jul-18	17-Jul-18	18-Jul-18	19-Jul-18
8:30 to 10:00	Opening Ceremony	Voltage/Var (MBo)	Renewable Energy Generation (SB)	US Southwest Renewable Energy Generation (YB)	POSTER SESSIONS
10 to 10:30	Coffee Break	Coffee Break	Coffee Break	Coffee Break	
10:30 to 12:00	Smart Grid Overview (AF)	Power Quality I (MB)	Storage (SB)	Impact of High PV Penetration on Power System Operation - a Case Study	
12:00 to 1:30	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
1:30 to 2:30	Power System Basics (TB)	Power Quality II (MB)	V2G (SB)	Energy Storage Systems in the Residential Sector - A Case Study	Site Visits
2:30 to 2:45	Coffee Break	Coffee Break	Coffee Break	Coffee Break	
3:00 to 4:30	DER, Intermittent Resources (TB)	Communication Cybersecurity (AF)	Smart Buildings (SB)	Microgrids – a Case Study	
6:30 to 8:00	Dinner	Dinner	Dinner	Dinner	Dinner

Summer University: Smart Grids USTHB)							
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Algiers	8-Jul-18	9-Jul-18	10-Jul-18	11-Jul-18	12-Jul-18	13-Jul-18	14-Jul-18
8:30 to 10:30	Joint Opening Ceremony	Renewable Energy Generation (SB)	Voltage/Var (MB)	US Southwest Renewable Energy Generation (YB)	POSTER SESSIONS	Free Time	Round Table
10:30 to 11:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break			Coffee Break
11:00 to 12:30	Joint Plenary Session: "Valorisation de la Recherche et Transfert de Technologie"	Smart Grid Overview (AF)	Power Quality Analysis I (MB)	Impact of High PV Penetration on Power System Operation - a Case Study			Joint Closing Ceremony
12:30 to 14:00	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Algiers Site Visit (starting at 15 h)	
14:00 to 15:30	Storage (SB)	Power System Basics (TB)	Power Quality Analysis II (MB)	Energy Storage Systems in the Residential Sector - A Case Study	Site Visits (Microgrids, Solar, Control Center?)		
15:30 to 16:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break			
16:00 to 17:30	V2G (SB)	DER, Intermittent Resources (TB)	Communication Cybersecurity (AF)	Microgrids – a Case Study			
17:30 to 19:00	Smart Buildings (SB)						
19:30 to 20:30	Dinner	Dinner		Dinner	Dinner		
			Joint Gala Dinner				

# **Biology and Health Sciences**

## Biotechnology, Biomedical Engineering, Bioimaging, and Health Sciences Program: Emphasis on cancer.

### 1-Program Coordinators:

Hind Bouk'hil, FR (Co-chair)	Yassine Amrani, UK	Chafia Touil-Boukoffa, DZ	Wassil Kacha, UK
Hacene Boukari, USA (Co-Chair)	Taha Merghoub, USA	Ahmed Zergoun, DZ	Derradji Boumrah, UK
Mehdi Bourouba, DZ (Co-chair)	Zoubir Ouhib, USA	Jamil Asselah, CAN	Ahmed Chenna, USA

### 2-Program Description:

Cancer treatment has evolved drastically in the last few years and has moved from one size fits all approach to **modern personalized medicine**. As a result, **multidisciplinary approaches to treatment have emerged** and recognized as optimal for cancer care and for improving outcomes. Biotechnology, Biomedical engineering and Health science are key to these advances.

- *Biotechnology* is the applied science of using living organisms and their by-products for commercial development. Everyday items, such as milk, antibiotics, and bio-fuels are commodities of biotechnology. Biotechnologies have contributed considerably in drug delivery and in the development in new cancer targeting agents which has led to the recent emergence of the new field of immune-oncology.

- *Biomedical Engineering* applies principles and design concepts to medicine and biology for healthcare purposes. Biomedical engineering advanced technologies for a broad range of cancer applications, especially early cancer detection, minimally invasive surgery, and targeted therapies.

- *Bioimaging* is a highly multidisciplinary and interdisciplinary applied field that is used to investigate biological systems over a broad scale, from single molecule, to cells, to tissues, to biological organisms. Typically, it covers the complex protocol of preparing the samples, acquiring multidimensional images, applying mathematical and computational tools to process the images, visualizing the structural and/or functional properties of the living objects or systems, and extracting and analyzing relevant information.

- *Health Sciences* apply a variety of disciplines which relate to the application of science to health. They led the integration of multiple fields in medicine as evidenced by the integration of medical imaging and radiation therapy which became very efficient tools in fighting modern diseases (cancer, cardiovascular and brain diseases).

This program is built to complement and support present/future developments in Algeria with an emphasis on the practical and research aspects. It is also essential to learn and develop new techniques and methodologies as they arise in the fields of Biotechnology, Biomedical Engineering, Bioimaging, and Health Sciences. The ultimate goal is to share, implement, adopt and adapt the new developments in personalized medicine for cancer treatment.

### 3-Covered topics:

This program is broad and will cover basic concepts, advanced techniques and most recent scientific and technological achievements in the field. It will focus on preclinical drug discovery, transgenic animal research, inflammatory diseases, analytical chemistry as well as procedure for IND submission and regulatory affairs. It will also focus on healthcare practice, clinical research and most active research and advances in areas such as genomics and state of the art imaging.

The main topics of the program will include:

- In-vitro Culture (Biotech and Agriculture) and cell culture (Bioetch and Health).
- Good laboratory practices and analytical chemistry (RMN 2D, MS, IR, UV, HPLC, LC-MS, and others)
- The use of living organisms and bioprocesses in engineering, technology and medicine.
- Advances in molecular Imaging techniques and clinical applications
- Radiation therapy and related imaging: theory, applications and associated research
- Anatomical/functional imaging (X-ray, mammography, CT, MRI, nuclear medicine and PET)
- Examples of bioimaging modalities include confocal microscopy, SEM, X-ray imaging, CT, MRI and fMRI, PET.
- Imaging fusion and quality control in medical imaging
- Radiation safety, related regulations and good practices
- Translating basic research into applied science and applying for patents

### 4-Desired Learning Outcomes:

Participants will be exposed to the latest technologies and learn theoretical and practical knowledge on diverse relevant aspects of biology, radiotherapy, bioimaging, medical imaging modalities, radiation safety and related national and international legislations.

Instructors will guide and assist participants, working in academia, research centres and hospitals to develop their skills, and will build a network of multiple actors in various fields in Algeria and abroad in order to build future collaborative projects.

### 5-Who Should Attend the Course?

Biologists, radiation oncologists, researchers, radiotherapists, radiologists, medical physicists, microscopists, image scientists, biomedical engineers. Graduate students as well as post-doctoral researchers are welcomed.



## Topic 2 : Biology, Biotechnology & Health Sciences



### **Dr Yassine AMRANI**

*Leicester Respiratory Biomedical Research Unit, Glenfield Hospital, Leicester, UK*

Dr Yassine Amrani is an internationally-recognized medical researcher in the field of asthma pathogenesis with expertise in basic and experimental clinical medicine. He obtained his PhD in Respiratory Medicine with the highest honor "summa cum laude" from the University of Strasbourg, France. He is a member of the Institute for Lung Health and Principal Investigator at Leicester Respiratory Biomedical Research Unit at Glenfield Hospital.

Using translational "bench-to-bedside" approaches, Dr Amrani made key discoveries regarding the pathogenesis of severe asthma, a disease poorly controlled by current therapies. Throughout his career, Dr Amrani received over \$6 million worth of research and programme grants (as PI, co-PI and collaborator) from National Institute of Health (US), American Lung Association (US), Parker B. Francis Foundation (US) and Wellcome trust (UK). He received grant awards from various medical foundations: Parker B. Francis Fellowship Award (USA), Association Française pour la Recherche Thérapeutique, Fondation pour la Recherche Médicale (Paris, France), Association Claude Bernard and Fondation pour la Recherche Médicale (Paris, France). He has published over 100 peer-reviewed articles/reviews in top medical journals and wrote 10 book chapters in pulmonary medicine. His H-index is 38 (scopus). He has delivered over 50 lectures in different Universities and international meetings including American Thoracic Society and American Academy of Allergy Asthma and Immunology. He has served as a chair/member of committee panels for funding bodies (UK, Ireland, USA, France) and is an ad hoc reviewer for > 41 top journals (including Nature Com, Proc Natl Acad Sci USA, J Clin Invest, J Allergy Clin Immunol among others).



### **Dr Jamil ASSELAH**

*McGill University Health Centre, Montréal, CAN*

Trained in Algiers and Paris as a medical oncologist, Dr. Asselah completed a 2-year fellowship on phase 1 clinical trials at the Investigation Unit of the Curie Institute Cancer Centre in Paris, France. In 2008, he joined the Université de Sherbrooke as an Assistant Professor, developing new research protocols in breast cancer and standardizing treatment practices at the Centre Hospitalier Universitaire de Sherbrooke, where he also launched the oncology residency program.

He joined McGill in 2011 as an Assistant Professor in the Department of Oncology and is now Associate Professor and director of Oncology Undergraduate Medical Education. He is on staff as a medical oncologist at the McGill University Health Centre, where he spearheaded a working group standardizing treatment guidelines for breast cancer. He was the first Site Lead for the Rossy Cancer Network.

Dr. Asselah has been the principal investigator in numerous clinical research protocols, and has been part of several research groups at the Provincial and National level. His research interests include Breast Cancers, Gastrointestinal Cancers, and Cancers of the Head and Neck.



### **Dr Hacene BOUKARI**

*Delaware State University, Dover – Delaware, USA*

Hacene Boukari, PhD, is Professor of physics at Delaware State University, Dover, Delaware, USA. He obtained his Diplome des Etudes Supérieures from the Université d'Annaba, Algeria and his PhD degree in Chemical Physics from the University of Maryland, College Park, Maryland, USA. His research career started while working on a 22-million-dollar NASA-funded project (Zeno Experiment) to design, build, and operate a high-resolution spectrometer for studying the behavior of superfluid xenon in microgravity aboard the NASA space-shuttle. The goals of this project were accomplished in two NASA space missions in 1994 (Discovery) and 1996 (Columbia).

Before joining Delaware State University, he held the position of Director of Imaging at Albert Einstein College of Medicine in New York (2009-2010), was a Senior Scientist at the National Institutes of Health in Bethesda, Maryland (2000-2009), was a Senior Researcher at the National Institute of Standards and Technology (1997-1999) in Gaithersburg, Maryland, and was a Postdoctoral Fellow (1992-1997) at the University of Maryland, College Park, Maryland. He worked on diverse projects, including understanding the transport properties of supercritical fluids (NASA), elucidating the nucleation and growth of silica nanoparticles (UMd), characterizing the mesoscopic structure of ceramic materials and polymeric gels (NIST), determining interactions of biopolymers and cells (NIH),

and probing diffusion of nanoparticles in complex biological media (NIH,NSF,NNSA).

Currently, his work focuses on bridging advanced novel optical and imaging techniques and integrative nanomedicine to elucidate and quantify interactions and mechanisms of transport of biomacromolecules in cellular systems, paving the way for designing diagnostic biomarkers, understanding assembly processes in biological systems, and understanding pathways for drug delivery.

Dr. Boukari received the researcher award from NASA for his work on the Zeno project and the DSU research and service Awards. He is currently the DSU-PI of the NIH-funded Delaware INBRE program, the DSU-PI of the NNSA-funded ROSES program, and co-PI of the NASA-funded O\*STAR Center. He has published more than 45 peer-reviewed papers and book-chapters in diverse fields such as critical phenomena, optical physics, biophysics, polymer science, and biomedical optics. He was an invited speaker to many professional conferences and academic/research institutions, in particular the Materials Research Society. He is a member of several professional societies: SPIE, the American Physical Society, the Biophysical Society, and the American Association of Physicists in Medicine; a member of the Editorial Board of Nanoscience; and a frequent reviewer of many journals. His collaborative research and educational activities have been funded by DoD, NSF, NIH, DoE, and NASA.



### **Dr Hind BOUK'HIL**

*Spin Safety®, Rennes, FR*

Dr Hind Bouk'hil was born and raised in Algeria. She received her BS of Physics and her BS in E.E.A. (Electronics Electrotechnics Automatics) from University of Rennes 1 (Rennes, France). She went on to receive a M.Sc. in « Signals and Images in Biology and Medicine » (DEA « SIBM », Diplôme d'Etudes Approfondies) during which she specialized in Nuclear Physics applied to Medical Imaging.

During her PhD in « Biological and Medical Engineering », her work focused on the assessment of the contribution of the wave-matter in the characterization of the heating effects of metallic biomaterials in Magnetic Resonance Imaging (MRI). Her work was published in renowned international journals.

After her PhD, Dr Bouk'hil created the company Spin Safety®, an innovative high technology company.

Spin Safety® has been very successful for the past 15 years and has been providing expertise in Quality Assessment and Safety in MRI and expertise in Radiation Protection in Odontology. As such, Dr Bouk'hil has been the winner of various Innovation Awards.

For more than 20 years, Dr Bouk'hil has been lecturer in Universities (eg: Sciences, Medical, Odontology) and Institutes in the fields of MRI, XR-Imaging and Radiation Protection.

Since 2006, Dr Bouk'hil has been certified « Personne Compétente en Radioprotection (PCR) » for France (eg. RPA& RWA in UK). She has become a reference who offers her expertise to multiple entities (eg: Autorité de Sûreté Nucléaire (French Nuclear Safety Agency)), participates in research activities (CHRU de Tours...) and is a member of professional organizations in her field (eg : Réseau PCR Grand Ouest (France)).



### **Dr Derradji BOUMRAH**

*GlaxoSmithKline, Ware, UK*

Boumrah Derradji is currently working at GlaxoSmithKline as a Regulatory Affairs CMC specialist.

Derradji graduated in June 1985 from University of Constantine with a D.E.S in Chemistry. He went on to receive his PhD degree in January 1986 from Strathclyde University, Scotland. In 1991 he received his PhD from the Department of Pure & Applied Chemistry, Strathclyde University, UK.

In January 1990, he started working at the University of Bath, UK, as a Post-doctoral Research Associate, while he was writing up his PhD thesis.

In October 1998, he joined Key Organics Ltd, as Research Chemist. He was involved in the synthesis of Biological active compounds to be tested as Agonist, antagonist and inhibitors.

In May 2000, he joined Evotec OAI, Oxford, UK, as a senior Chemist, where he worked on process chemistry. In October 2001, he joined Biofocus plc, UK, as senior Scientist.

In February 2004 has joined Pfizer, UK. His role involves the development of processes in the lab and transferring them to supply chain (pilot plant) and PGM. Also, has joined the Veterinary Medicine Regulatory Department to acquire skills in Regulatory affairs.

Derradji has experience in Organic/Medicinal Chemistry and process development Chemistry. He is a Regulatory Affairs Professional with experience in the generic and pharmaceutical drugs sectors.





**Pr Mehdi BOUROUBA**

*USTHB, Algiers, DZ*

Pr. Bourouba Mehdi is specialized in tumor biology. After graduating in Biological Engineering in 1993 from USTHB and obtaining his DIU in Immunology from Paris 7 University in 2000, he obtained his PhD in 2005 from the TK Karlsruhe University in collaboration with the German Research Center on Cancer (DKFZ). After his post-doctoral trainings in France (CNRS, INSERM), he pursued a specialization at Harvard Medical School (2016) on Cancer biology and advanced antitumor therapies. He joined USTHB in 2009. Pr. Bourouba has since supervised several doctorates and master's projects on the biology of the cancers of the upper aerodigestive tract.

His field of study includes the identification of predictive biomarkers of metastasis and resistance to therapies, as well as the development of interference approaches to tumor development and recurrence.



**Dr Ahmed CHENNA**

*Oncology Group, Monogram Biosciences, Inc., Integrated Oncology-LabCorp, Inc., San Francisco, USA*

Dr. Ahmed Chenna is a principal scientist in the oncology group at Monogram Biosciences Inc., part of Laboratory Corporation of America and managed the oncology reagent group. He played a key role in the development and validation of VeraTag™ technology for cancer biomarker products such as Her1, Her2, Her2-Her2 homodimer, P95, Her3, Her3-PI3K, Her2-Her3 heterodimer, and c-met. VeraTag™ technology can accelerate the development of targeted therapeutics, improve clinical trial design and results, clarify and individualize the selection of medications, and optimize outcomes for patients with cancer and other serious diseases. In 1999 to 2004, he worked at ACLARA Biosciences as a senior scientist and lab supervisor in the Advanced Technologies Group, where he was the co-inventor of VeraTag™ technology for gene expression multiplexing up to 50 genes.

In the 1990's, he worked as Staff Scientist in the University of Berkeley-Lawrence Berkeley National Laboratory, Life Science Division, and as a postdoctoral research associate, in *Department of Pharmacological Sciences, School of Medicine*, State University of New York at Stony Brook on DNA damage, repair, and replication. People are exposed daily to environmental chemicals classified as mutagens and/or carcinogens such as vinyl chloride; mucochloric acid from chlorination of drinking water; the widely administered therapeutic halonitrosoureas, e.g. BCNU and benzene metabolites, p-benzoquinone and others which damage DNA. The aim of the work was to identify and understand the mechanism by which such DNA damage may lead to the biological endpoints, such as mutation and ultimately, cancer. Dr. Chenna was a co-principal investigator of two-awarded NIH sponsored research grants for \$3.2 million.

From 1986 to 1990, he was a Ph.D. Student, Strathclyde University, Glasgow, Scotland, (UK), where he designed and synthesized a series of a novel compounds tested for their potential biological activity in Central Nervous System (CNS) and anti-cancer by Organon Laboratories Ltd., UK. Dr. Chenna graduated in 1985 from University of Constantine, Algeria, B.Sc. in chemistry. Dr. Chenna has over 25 years of experience in research, development, supervision of scientists, research associates and graduate students in academia and biotechnology companies.

In 2010, he chaired the scientific committee of the Biotech World Conference, Oran, Algeria and currently serving as a member of the Scientific Board of the Biotechnology Center of Constantine, Algeria and a consultant for Life Science Division, Lawrence Berkeley National Laboratory. He is a member of the American Chemical Society (ACS) and the American Association for Cancer Research (AACR), served in the board of the Algerian American Association of Northern California (AAA-NC) and a member and one of the founders of the Algerian Competences Association (ACA). Dr. Chenna authored over 70 technical publications & conference abstracts including 13 US patents.



**Pr Taha MERGHOUB**

*Melanoma and Immunotherapeutics Service, Memorial Sloan Kettering Cancer Center, New York, USA*

Taha Merghoub, PhD was born and raised in Algeria. He received his B.A. degree from the University of Algiers, Algeria, DES (Diplôme D'Etudes Supérieures) in Genetics. He went on to receive a M.S. (Applied Biology and Genetics) and Ph.D. degree (Human Genetics). He is currently faculty (Attending Lab Member) in the Melanoma and Immunotherapeutics Service, Department of Medicine, Memorial Sloan Kettering Cancer Center (MSKCC), New York, USA. He is the co-director of the Ludwig collaborative laboratory at MSK. He is also the lead for the tissue repository of the Melanoma disease management team at MSKCC and he is a Member Researcher of the Parker Institute for Cancer Immunotherapy at MSK.

His research focuses on the interplay between tumors and the immune system in early stages of cancer formation, and the development of novel immunotherapeutic treatment strategies with particular focus on melanoma as a

model system. The FDA has approved multiple immune therapies recently (anti-CTLA-4, anti-PD1/PDL-1 and T-VEC) and he is now aiming to combine these treatments with conventional therapies that are known to modulate the immune system such as radiation therapy. He also has interest in studying the genetic determinants of response to immune therapies. His career is focused on developing immunotherapies for the treatment of cancer. He has been working on pre-clinical model and validating the relevance of the findings in clinical samples of patients treated with immunotherapies. His research is conducted within the Ludwig Collaborative and Swim Across America lab and in partnership with members of the Melanoma DMT and other MSK investigators with shared research interests. Dr. Merghoub has published over 100 peer-reviewed papers and book-chapters. His research has also received funding from several federal agencies and philanthropic organizations.

Taha Merghoub is involved in multiple organizations and some of them aim at helping Algerians both here in USA and in Algeria. He served in multiple associations (including AAF, AASA, ACA and the Harlem Children Society) that aim to help Algerian students, scientists and health professional.



### **Dr Zoubir OUHIB**

*Lynn Cancer Institute – Florida Atlantic University, Boca Raton, USA*

Zoubir Ouhib is currently the chief Medical Physicist at the Lynn Cancer Institute of Boca Raton Regional Hospital located in Boca Raton, Florida (USA). He is an Assistant Professor at the Florida Atlantic University at the department of Medical Physics.

He received a Master Degree in Nuclear Engineering in 1978 from Georgia Institute of Technology and a Master Degree in Medical Physics from University of Cincinnati in 1982. He is board certified by the American Board of Radiology in radiation therapy and is a Fellow of both the American College of Radiology (ACR) (2015) and the American Brachytherapy Society (ABS) (2018).

In 1982, he started as a staff physicist at the Wellman Cancer center in Lakeland, Florida. In 1986, he became the chief of Medical Physics at the Tampa General Hospital in Tampa, Florida. He joined Dartmouth Hitchcock Medical Center in 1992 and in 1994 he became the director of the medical physics department at the Elliot Hospital in Manchester, New Hampshire. In 1998, he joined the Boca Raton Regional Hospital (Boca Raton, FL) where he is currently the Chief Medical Physicist.

Member of several committees: Apex (ASTRO), ACMUI (NRC), ACRRO (ABS liaison), ABS (Board of directors), ABS (Patient safety, co-chair), ABS (International committee, Vice-chair), AAPM (Chair of BTSC), AAPM Task Groups (TG-121, HEBD, TG-167, TG-244, TG-236, TG182, WG on Brachytherapy, TG-253, TG-288, TG-292)

He has served as a reviewer for several medical physics and radiation oncology journals. He served for several years as chair of the American Brachytherapy School entitled "Quality Management in Brachytherapy". He published several international peer-reviewed articles and has served as a speaker at several national and international meeting (AAPM, ASTRO, ESTRO, ABS). He was the author of multiple chapters in several books and articles related to breast, prostate, skin, and radiobiology. He served as president of the Florida AAPM Chapter (2002). While Brachytherapy has been his focus, patient safety and quality assurance in radiation therapy were his primary areas of interest.



### **Pr Chafia TOUIL-BOUKOFFA**

*LBCM – Team « Cytokines and NO Synthases », USTHB, Algiers, DZ*

Pr Chafia Touil-Boukoffa obtained her Doctorate Degree in Biochemistry-Immunology in 1998 at the university of sciences and technology (USTHB), Algiers, Algeria. Since this period, she has developed many projects in the field of immunology and biotechnology in collaboration with Curie Institute-Interferon and cytokine research-365 Unit-Paris -France). Since 2000, she is a head of "Cytokines and NO Synthases" Team-laboratory ([www.lbcm.usthb.dz](http://www.lbcm.usthb.dz)). Her research projects are about the study of cytokines and NO Synthases involvement in the mechanisms of pathogenesis and immune responses in parasite disease and in auto-immune and inflammatory disease which are frequent in Algeria (Uveitis, Behçet disease, inflammatory bowel disease, systemic inflammatory vasculitis.). She is an author of many publications in the immunology and biomedicine field and she has received international and national awards for her works. Since June 2015, she has been nominated as a member of Algerian Academy of Sciences and Technology

**Topic 2: Biotechnology, Biomedical Engineering, Bioimaging and Health Sciences : Emphasis on Cancer**

	Dimanche 08 Juillet (1)	Lundi 09 Juillet (2)	Mardi 10 Juillet (3)	Mercredi 11 Juillet (4)	Jeudi 12 Juillet (5)	Vendredi 13 Juillet (6)	Samedi 14 Juillet (7)	
	08h00-09h00 : Accueil des participants							
8h30-10h30	09h00-10h30 <b>Cérémonie d'ouverture</b> Discours des Officiels (DGRSDT, USTHB, AAF...)  Présentation de l'AAF, ses actions et ses objectifs (?)	"Animal modeling in cancer" Pr T. Merghoub  "Laboratory Animal experimentation in Algeria. Present and perspectives of evolution" Pr M. Bourouba	"Recherche impliquant les patients: Recherche en Médecine, pourquoi, comment et avec qui?" Dr Y. Amrani	"Le Contrôle de Qualité en IRM : processus de la validation de la phase expérimentale" Dr H. Bouk'hil	"Beyond microscopy: integrating imaging with other data and mathematical modeling" Dr H. Boukari  "Genetic determinants of response to immune therapy a multidisciplinary approach" Pr T. Merghoub	<b>Matinée Off</b>	09h00-10h00  Table ronde Conférenciers/Participants sur l'évènement (pour chaque thème)	
10h30-11h00	Pause Café	Pause Café	Pause Café	Pause Café	Pause Café		Pause Café (10h-10h30)	
11h00-12h30	Séance plénière  Valorisation de la Recherche et Transfert de Technologie  (Intervenant: un représentant du service de Valorisation de l'USTHB)	? Dr Nabil AOUFFEN (DG ATRSS) "Recherche en Sciences de la Santé" 45min  Pr Lynda BOUTEKRAÏT (DG ATRBSA) "Recherche en Biotechnologies et Sciences Agroalimentaires"	"Targeted therapies and their development" Pr T. Merghoub  "Clinical Oncology: Past, Present and Future" Dr J. Asselah	"Le Contrôle de Qualité en IRM : Retour d'expérience" Dr H. Bouk'hil  "Acceptance and commissioning of treatment devices: purpose, process, responsibility and accountability" Dr Z. Ouhib	"Speed Thesis" contest		10h30-12h00  Cérémonie de clôture Discours des Officiels (DGRSDT, USTHB,AAF...) Remise des prix Remise des certificats	
12h30-14h00	Pause déjeuner	Pause déjeuner	Pause déjeuner	Pause déjeuner	Pause déjeuner		<b>A partir de 15h</b>  <b>Visite culturelle à Alger</b>	Départ des participants
14h00-15h30	"Utilisation des modèles animaux dans la Recherche Médicale: facteurs importants à considérer" Dr Y. Amrani  "Comment assurer un meilleur impact translationnel des études animales dans les pathologies humaines" Dr Y. Amrani	"Imaging for single-molecule studies and cellular studies" Dr H. Boukari	"Patient safety and medical errors in radiation oncology (External beam and brachytherapy)" Dr Z. Ouhib	"Methodes et applications en fluorescence quantitative" Dr H. Boukari	"Speed Thesis" contest			
15h30-16h00	Pause Café	Pause Café	Pause Café	Pause Café	Pause Café			
16h00-19h00	"Ethic and Science" Pr T. Merghoub  "Atelier CV/Lettre/Article" G2	"Atelier Modèle Animal" Pr T. Merghoub, Dr Y. Amrani, Pr M. Bourouba & G2  "Atelier CV/Lettre/Article" G2	"How to communicate your talk effectively" Pr T. Merghoub & G2  Session Posters (1h)  "Atelier CV/Lettre/Article" G2	"Atelier ImageJ" Dr H. Bouk'hil, Dr Z. Ouhib & G2  Session Posters (1h)  "Atelier CV/Lettre/Article" G2	"Plan your future and develop your career" G2			
19h30-20h30	Dîner							

# Civil Engineering

## Design, Construction, Rehabilitation, and Resilience of the Built Environment

### **1-Program Coordinators:**

Amar Chaker, USA (Chair)	Smaïl Haddadi, DZ	Noureddine Bourahla, DZ
Abdeldjelil Belarbi, USA	Antonio Brancaccio, IT	Omar Khemici, USA
Fouad Bendimerad, USA	Said Kenai, DZ	Leila Hamroun, USA

### **2-Program Description:**

Major advances have taken place in recent years in: the design, construction and rehabilitation of the built environment; the understanding of the hazards it is exposed to; and the approaches for reducing disaster risk and for enhancing the resilience of the built environment (resilience being the ability to reduce the impact of catastrophes and to recover quickly after a disaster).

While the program will cover broad areas of civil and earthquake engineering, the emphasis will be on the evaluation and retrofitting (or rehabilitation) of existing structures, including historical buildings, a major component in the fabric of many cities in Algeria. Existing structures are particularly challenging due to the lack of detailed information regarding material properties and as-built plans, and to the difficulty associated with the selection of performance objectives for the retrofitted building. Relevant topics will also be presented: building damage analysis; non-destructive testing and ambient vibration testing for assessment of existing buildings; retrofit technology, including the use of composites; advances in techniques for the preservation of historic buildings and monuments; and analysis and design standards for existing buildings.

A second, complementary thrust of the program will be the presentation of recent advances in civil and earthquake engineering, including: advanced topics in concrete; modeling and analysis methods; emerging concepts in modern building codes; modeling of catastrophic risk and disaster risk management; and resilience of interdependent infrastructure systems and communities.

Case studies in the evaluation and retrofitting of existing structures, disaster risk management, and resilience will be presented and discussed.

This program is designed to complement and support present or future developments in Algeria with an emphasis on research and application. Learning new techniques and methodologies as they become available in the areas of civil and earthquake engineering will enhance the participants' professional development. The goal of the program is to share new developments in the design, construction, retrofitting, and resilience of the built environment, and ultimately, to help address challenges in design, construction and disaster risk management in Algeria.

### **3-Covered topics:**

This program is broad and will cover basic concepts, advanced techniques and recent scientific and technological advances in the field.

The main topics of the program will include:

- Non-destructive evaluation and rehabilitation of existing concrete and masonry buildings and structures
- Advanced topics in concrete
- Modeling and analysis methods
- Seismic design principles for new buildings
- Seismic evaluation and retrofit of existing buildings
- Preservation of historic buildings and monuments
- Modeling of catastrophic risk
- Resilience of interdependent infrastructure systems and communities
- Case studies

### **4-Desired Learning Outcomes:**

Participants will be exposed to the latest technologies and learn theoretical and practical knowledge on diverse relevant aspects of the design, construction, rehabilitation and resilience of the built environment. The lecturers will guide and assist participants working in academia, research centers and engineering design and construction companies to develop their skills and will explore the possibility of building a network of researchers and practicing engineers in various fields in Algeria and abroad to consider future collaborative projects and initiatives.

### **5-Who Should Attend the Course?**

Doctoral students, post-doctoral researchers, faculty, graduate students and practicing engineers in the design and construction industry will benefit from this program.

### Topic 3 : Civil Engineering



#### **Abdeldjelil BELARBI, Ph.D., P.E., F.ASCE, F.ACI, F.SEI**

*Hugh Roy and Lillie Cranz Cullen Distinguished Professor  
Department of Civil & Environmental Engineering  
University of Houston, Houston, TX 77204-4003  
E-mail: [belarbi@uh.edu](mailto:belarbi@uh.edu) / Tel: (713) 743-1609 / Fax: (713) 743-0305*

Dr. Abdeldjelil Belarbi is Hugh Roy and Lillie Cranz Cullen Professor Distinguished Professor of Civil Engineering at the University of Houston. Prior to joining the University of Houston in 2009, he was a Distinguished Professor at Missouri University of Science and Technology.

During his career he taught more than fourteen different undergraduate and graduate courses on subjects related to civil and structural engineering. He is actively engaged in a broad spectrum of structural engineering research areas. His primary research contributions focuses on the constitutive modelling, analytical, and experimental investigations of reinforced and prestressed concrete structures. His research has also focused on seismic and wind structural performance of building envelopes, including experimental structural investigation of glass curtain wall systems employed in low- and high-rise buildings, as well as research to smart structures and use of FRP composites with focus on the development of advanced materials and use of FRP for rehabilitation and strengthening of aging and deteriorated civil engineering infrastructure.

Dr. Belarbi has served as principal investigator or co-investigator on numerous research projects with a research expenditure of over fourteen millions US dollars, has published over 220 technical papers and had supervised over 50 MSCE theses and PhD dissertations. Dr. Belarbi is a Fellow of the American Society of Civil Engineers (ASCE), the American Concrete Institute (ACI) and the Structural Engineering Institute (SEI). He is also very active (member and/or Chair) on several technical and educational and national committees within ACI, ASCE, and TRB. He is also a current member of ACI318E dealing with Shear and Torsion code issues.

Dr. Belarbi is the recipient of numerous awards and honors including the 1995 Outstanding Paper Award of the Earthquake Engineering Research Institute (Earthquake Spectra Journal) and the Honorable Mention for Outstanding paper from the Masonry Society. He was also the recipient of *nine* Faculty Excellence Awards and *ten* Outstanding Teaching Awards for his excellence in research, teaching and service contributions to the profession and Missouri S&T. Among other national awards, Dr. Belarbi is the recipient of the 1999 University of Houston Distinguished Young Alumnus Award, the Missouri Governor's award for excellence in teaching, and the James M. Robbins Excellence in Teaching National Award. In 2009 he was inducted as an Honorary Member of Chi Epsilon, the Honor Society of Civil Engineering. He is also the recipient of the 2011 ACI Joe W. Kelly Award.



#### **Fouad Bendimerad, Ph.D., P.E.**

*Chairman and Executive Director, EMI  
Managing Principal, RET International  
Contact: 23 Buena Vista Place, Oakland, California, USA  
|Phone: +1 408 768 8987  
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Civil Engineer (C45371 State of California)*

Dr. Bendimerad is a funding member and currently the Chairman of the Board of **EMI** (the Earthquakes and Megacities Initiative) a non-governmental international scientific organization based in the Philippines and focusing on developing methods and practices in urban disaster risk management and resilience. He is an active researcher, practitioner and educator with focused interest in megacities and urban risk assessment and management, where he is credited with advancing both methodology and concepts. He is recognized by his peer as a driving force behind the global urban disaster risk reduction (DRR) agenda for more than two decades. He is also the initiator of EMI's **Cluster Cities Project**, a global network of megacities officials, researchers, educators, professionals and advocates working together to reduce urban risk. He has developed scientific approaches for implementing participatory processes as means to build ownership, consensus and sustainability in urban resilience planning. He directed and completed several innovative large-scale urban DRR projects included the Risk-Sensitive Re-Development of Barangay Rizal, Makati, Philippines and the Risk-Sensitive Land Use Plan, Kathmandu, Nepal, and the development of the local urban resilience plans for Metro Manila, Kathmandu, Amman, Pasig City, Quezon City, Mumbai, and Dhaka. The latter involved more than 100 stakeholders and an implementation team composed of more than 30 experts and specialists.

Dr. Bendimerad is the main author of the Disaster Risk Management and Resilience course for the World Bank, "Words into Action: Guidebook for Local Authorities, for the UNISDR, Putting Words into Action and also the "kit"



for the Making Cities Resilient Campaign including devising the 10 Essentials. He is also one of the authors of "Defining Resilience" a publication of the Asia Development Bank (ADB). He published extensively on the topic of risk assessment and risk management in scientific journals, conference proceedings and lectured at several universities in the United States, Japan, Germany, Turkey, and elsewhere. He has advised several international organizations (such as UN-ISDR, UNDP, UN-HABITAT, World Bank, Asia Development Bank, and American Development Bank), governments and international corporations and maintains an active earthquake engineering consulting practice in California where he is a registered professional engineer for more than 15 years. He was Principal Scientist and Vice President at RMS Inc., a California Corporation for 11 years, and served in the faculty of Stanford University for 13 years. He served as Visiting Professor at the Center for Urban Safety and Security in Kobe, Japan, and also served as Visiting Professor in Karlsruhe Institute of Technology in Germany. He holds Master and Ph.D. degrees in Civil Engineering from Stanford University and Bachelor Degree also in Civil Engineering from Ecole Nationale Polytechnique of Algiers, Algeria. He is a member of several professional and scientific organizations including the Earthquake Engineering Research Institute, the American Society of Civil Engineers, and the Structural Engineers Association of California.



**Nouredine Bourahla, PhD, Ing.**

*Civil Engineering Department  
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Nouredine Bourahla is a Professor of structural dynamics and earthquake engineering and head of the doctoral school of the civil engineering department at the University Saad Dahlab, Blida, Algeria. After graduating from ENP Algiers (Ecole National Polytechnique d'Alger), he joined Bristol University (UK) where he completed a PhD in 1990. At the Earthquake Engineering Research Centre (EERC, Bristol) he was heavily involved in seismic small-scale testing of steel frames on the six axis shaking table. He was also involved in data processing of seismic qualification testing. Beside the research activity, he performed teaching activity as tutor of strength of materials and structural computer aided learning for undergraduate students.

In 1991 he joined the University of Blida (Algeria) as a lecturer, where he co-founded an autonomous civil engineering department, established a research team and built up a resource of tools for full-scale ambient vibration testing of buildings. The team was awarded several research grants CNEPRU and PNR by the Ministry of Higher Education to provide support for postgraduate training (formation par la recherche). In addition to teaching duties at undergraduate and post-graduate levels, he supervised more than 50 PFE (research subjects) and about 30 MSc and PhD theses and provided specialized training on FE modelling and analysis for GECOTEC engineers (continuing education).

In 1992, he pursued a training course on higher education teaching, 'Education engineering and didactic' CEPEC, in Lyon, France and became an active member in higher education curriculum design where he contributed in updating structural dynamics and earthquake engineering syllabus for undergraduate courses.

He worked for two years as a research associate at the national earthquake engineering centre in Algiers (CGS) where he contributed to set a methodology for the seismic vulnerability studies of masonry buildings with a team from IZIS Skopje.

In 2003, he received the TX. Shieh award from the ICE (Institution of Civil Engineers, UK) as a coauthor with a team from Oxford (UK) for a publication on seismic behaviour of knee bracing system.

The interest in structural dynamics continued and extended to experimental modal identification of dams (Taksebt, Koudiet asserdoune, Beni-Haroun) in the perspective of establishment of a vibration based health monitoring schemes. Since 2009, he has been working and leading a R&D unit on cold formed steel to help putting into practice the design and construction of CFS buildings in Algeria.

Prof. Bourahla is author or co-author of more than 80 publications in journals, peer reviewed conferences, reports, books or chapters and he is a member of several scientific boards at universities and national research centres as well as the technical committee of the Algerian seismic code of bridges (RPOA).

As specialist consultant, he has worked on numerous engineering projects such as the design and construction of a world class earthquake laboratory having a 6m x 6m six axis shaking table (CGS), seismic vulnerability studies and strengthening of existing ancient masonry/RC buildings, technical assistance on various types of structures such as high capacity stadiums, cement plants, electrical power plants and other industrial installations.



### **Antonio BRANCACCIO, MSc, PE**

Technical Director  
 COSTRUTTORI Srl  
[www.costruttori.it](http://www.costruttori.it)

Antonio is a structural engineer with a solid technical background acquired internationally along the course of his professional and educational path in the field of assessment and seismic retrofitting of existing structures, infrastructures and historical masonry buildings.

Antonio is the Technical Director of the Italian company **COSTRUTTORI Srl** ([www.costruttori.it](http://www.costruttori.it)) working in the field of design, construction and maintenance of civil and industrial buildings, restoration of historical monumental buildings and seismic retrofit of existing structures and infrastructures.

Additionally, he coordinates the Research & Development Department of the company **EXPERIMENTATIONS** ([www.experimentations.it](http://www.experimentations.it)), specialized in the field of laboratory and site testing of construction materials and soils, NDT testing services, structural assessment, quality control management, third-party engineering consultancy, long-term monitoring and control of structures and infrastructures.

Antonio has been based in Dubai (UAE) working as structural engineer for the company *Thomas Bell-Wright International Consultants*, being involved in many projects located in the Middle-East region. In Italy, for the company *Tec.Inn. Innovative Technologies*, he was involved in the seismic upgrade and structural strengthening of RC and historical masonry buildings in earthquake damaged areas (L'Aquila 2009, Emilia 2012, Central Italy 2016). As consultant engineer, he conducted assessment and restoration projects of relevant historical buildings in North Africa as well as strengthening projects of RC buildings in the Middle East region.

Antonio is a registered engineer in Italy and recent projects include: *Structural assessment and seismic retrofit of the Faculty of Civil Engineering at the University of L'Aquila (Italy) damaged by 2009 L'Aquila earthquake; Structural assessment of the Italian Embassy headquarters in Tripoli and Benghazi (Libya) damaged by fire events during the February 17th Revolution; Structural assessment, damage evaluation and FRP strengthening of a fire damaged industrial warehouse in Dubai (UAE); Structural assessment and design of restoration works of the "Al Nakah" Mosque in Tripoli (Libya); Structural assessment and design of restoration works of the "Ahmed Basha" Koranic School in Tripoli (Libya); Structural assessment and design of restoration works of the "Gurgi" Mosque in Tripoli (Libya); Structural assessment and design of restoration works of the "Murad Agha" Mosque in Tajura (Libya); etc.*

He has a Master of Science in Civil Engineering from the University of Naples Federico II (Italy) and a Master of Science in Structural Engineering from the Missouri University of Science and Technology (USA). He has conducted many projects internationally (Europe, Middle East and North Africa), he is ACI and IABSE member, he currently publishes research papers and speaks at many international technical seminars and conferences.

LinkedIn: [www.linkedin.com/in/engantoniobrancaccio/](http://www.linkedin.com/in/engantoniobrancaccio/)



### **Amar A. Chaker, Ph.D., F.AEI, F.EMI, F.ASCE**

Director, Engineering Mechanics Institute of ASCE

Dr. Chaker obtained a degree of "Ingénieur Civil" from "Ecole Nationale des Ponts et Chaussées", Paris, France and a Ph.D. degree in Civil Engineering from the University of Illinois at Urbana-Champaign.

He joined ASCE in 1999 where he has worked in the Technical and International Activities Division, the Transportation and Development Institute, the Civil Engineering Research Foundation, the Architectural Engineering Institute, and the Building Security Council. He has been the director of the Engineering Mechanics Institute of ASCE since its creation in 2007.

As technical director of the Algerian State Organization for Technical Control of Building Construction (CTC), he co-chaired the committee that developed the Algerian standard for the earthquake-resistant design of buildings and participated in its subsequent revisions. He also participated in major post-earthquake investigations, in a seismic hazard and urban microzonation study for the region of Chlef, and conducted the structural design review and the structural analysis of many complex projects.

He has been a tenured full professor and director of the Civil Engineering Institute of the University of Science and Technology in Algiers, Algeria and has held faculty positions at the University of Illinois at Urbana-Champaign and Drexel University. His areas of interest include earthquake engineering, structural dynamics, computational mechanics, probabilistic methods, and disaster risk management and resilience.

He was the founding president of the Algerian Earthquake Engineering Association. He is a member of ASCE and EERI, and is active in several technical committees. He served on the editorial boards of *Earthquake Engineering and Structural Dynamics* and *Annales Maghrébines de l'Ingénieur*. He is the author or co-author of over 60 publications. He is an associate editor of *Natural Hazards Review* and a reviewer for several peer-reviewed journals.





### **Leila Hamroun-Yazid, AIA, NCARB, LEED AP**

Owner of *Past Forward Architecture*,

Ms. Hamroun has over twenty-five years of experience providing design, planning, management and cultural analysis services primarily for existing buildings. Her projects range from historic urban centers planning, to award-winning restoration projects and design guidelines.

Ms. Hamroun-Yazid is a graduate of the Ecole Polytechnique d'Architecture et d'Urbanisme (Algiers, Algeria), and holds a diploma from the Centre d'Etudes Supérieures d'Histoire et de Conservation des Monuments Anciens (Centre des Hautes Etudes de Chaillot, Paris, France) and an MA in Urban Affairs and Public Policy from the University of Delaware (Newark, USA). She is a LEED® Accredited Professional and meets the Secretary of the Interior's Qualification Standards (36 Cfr 61) for Architectural Historian. Her varied background informs a nuanced perspective on the historical, political, social and economical contexts that shape interventions on the existing building fabric.

Ms. Hamroun-Yazid has a distinguished record in developing strategies for the long-term stewardship of the built heritage with a commitment to customized solutions, adapted to the nature, scale and context of each project. She has developed an effective and inclusive approach that seeks to create consensus between the multitude of stakeholders and governmental entities involved in the process, informed by a thorough - and practical - knowledge of relevant codes and standards, and latest technological innovations. By bringing together design and technical knowledge from the combined disciplines of architecture, planning, conservation, and building diagnostics, she is committed to imaginative design solutions, that provide a contemporary experience while respecting respect the integrity and character of the existing building fabric.

Ms. Hamroun-Yazid has consistently enriched her professional practice with presentations at national conferences, teaching opportunities, educational programming, and mentoring activities. She helped develop content for courses for the National Center for Preservation Technologies & Training (NCPTT) and co-authored the chapter on "Principles of Architectural Preservation" in *A Companion to Cultural Resources Management*, King, ed. (Blackwell 2010) with David Ames, PhD., of the University of Delaware.

She has been a guest speaker at the University of Delaware, an analytical papers review for the University's School of Urban Planning and Public Policy, a guest critic for studios at Philadelphia University and teaches in the Delaware Technical Community College Construction Management and Architectural and Engineering Technology programs. Ms. Hamroun-Yazid is a registered architect in the states of Connecticut, Delaware, Maryland, New Jersey and Pennsylvania. Recent projects include the *Restoration of the Adrian Phillips Theater* and the *Limestone Façade Masonry Restoration* at Boardwalk Hall (National Historic Landmark – 1929), in Atlantic City, New Jersey, *Updated Design Guidelines and Standards* for the New Castle National Historic Landmark District, in New Castle, Delaware, *Non-Destructive Evaluation Building Envelope Assessment* of the Trinity Church (c. 1890), Triad Building, Old Swedes Church (c. 1699 - National Historic Landmark) & Christina Community Center, in Wilmington, Delaware, *Cincinnati Union Terminal Renovation – Pilot Project 1* (1932 – National Historic Landmark), Cincinnati, Ohio, *Feasibility Study for the Adaptive Reuse of New Orleans Medical Center at Charity Hospital* - (1939 - eligible for State/National Register of Historic Places), New Orleans, LA, and the *US Capitol Grounds - Olmsted Hardscape Features Historic Structures Report* (1874 – 1892, National Historic Landmark), Washington, DC .



### **Pr. Said KENAI**

Said KENAI is currently a Professor of concrete technology, building materials and diagnostic and repair of structures at the civil engineering department and chairman of the civil engineering research laboratory, University Saâd Dahleb-Blida1, Algeria. He obtained his engineering degree at the "Ecole Nationale Polytechnique" in Algiers in 1982 and his PhD from the University of Leeds (UK) in 1988. He is a member of ACI, a founding member of the African Materials Research Society (MRS-Africa) and a member of RILEM TC-ISC (In situ strength assessment of concrete). He is currently a member of the advisory committee to the Algerian ministry of higher education and research (Comité sectorial permanent). He is a consultant in charge of quality control and inspection and diagnosis of buildings at the "Société de consultancy and Testing Engineering (SCTE)", Algiers.

He has co-authored over 100 international journal and conference papers and one ELSEVIER chapter book on recycled aggregates. He is a member of the editorial board of many journals such as "advances in concrete construction" of the techno-press, the open civil engineering journal, Scientific Advances Journal of civil and construction engineering, India. He is a reviewer of several international journals. He has been invited as a keynote lecturer in many conferences in Brazil, South-Africa, Jordan and Egypt. He has collaborated on many research projects with colleagues in Belgium, France, England, USA, Brazil and South-Africa. His main research interests include concrete durability, recycling, earth constructions, selfcompacting concrete, non-destructive testing and repair and strengthening of structures.



### Omar Khemici, PhD, PE

Dr. Khemici, a consultant, has thirty-five years of professional experience in the field of earthquake engineering and catastrophe risk management. As Director in the Model Development Group of CoreLogic, a global catastrophe modeling team specializing in the development of risk assessment, risk mitigation and risk transfer software tools, Dr. Khemici's led a team of scientists and engineers whose responsibilities included the development of vulnerability models, the technical documentation, the models validation and the testing of stochastic cat models worldwide. In this capacity, he managed related model components for earthquake, hurricane, flood, wildfire, terrorism and industrial accidents.

In a previous role at CoreLogic, he managed several US and international cat bonds where he provided the analytics for property and liability coverage. He also led for several years the analysis of portfolios of major insurance and reinsurance companies in the US, Europe and Asia.

Dr. Khemici was successively with Jack Benjamin and Associates (JBA) in Mountain View, CA, and Ammann & Whitney in New York, NY before joining EQE International, then ABS Consulting which were acquired by CoreLogic. At JBA and EQE he provided seismic expertise to the US nuclear power industry. He inspected several US plants, analyzed the seismic capacity of their components and provided retrofit solutions. Dr. Khemici contributed to a major utility study for the Electric Power Research Institute (EPRI) defining the Operating Basis Earthquake exceedance criterion in nuclear power plants. In this study he introduced the Cumulative Absolute Velocity (CAV) parameter as a new earthquake damage indicator. At Ammann & Whitney in New York, Dr. Khemici was responsible for the definition of the seismic design provisions of several important facilities including the extension of the Dulles International Airport Terminal in Washington, DC. He also evaluated the seismic resistance of existing unreinforced masonry buildings and provided detailed retrofit schemes.

Dr. Khemici's work in Algeria included teaching various courses at the ENITA, the USTHB and at the University of Algiers. He also participated in the damage surveys conducted by US engineering teams following the 1980 Al Asnam Earthquake and the 2003 Boumerdes Earthquake.

Dr. Khemici received his Engineer degree from the National Polytechnic School in Algiers, in 1975 and his Masters and PhD degrees from Stanford University in California in 1978 and 1982, respectively. He holds a Professional Engineer (PE) License in the State of California.

**Topic 3: Civil Engineering: Design, Construction, Rehabilitation, and Resilience of the Built Environment**

	Sunday 08-jul-18	Monday 09-jul-18	Tuesday 10-jul-18	Wednesday 11-jul-18	Thursday 12-jul-18	Friday 13-jul-18	Saturday 14-jul-18
8:30-10:30 am	Joint Opening Ceremony	Dynamic testing techniques: Use of ambient vibration testing in structural assessment of existing buildings (Nouredine)	Condition assessment of structures (AntonioLeila)	Advanced behavior of reinforced and prestressed concrete (Abdeljelil/Said)	Resilience of infrastructure systems (Amar)	Free Time	Round Table
10:30-11:00 am	Coffe Break	Coffe Break	Coffe Break	Coffe Break	Coffe Break		Coffe Break
11:00 am-12:30 pm	Joint Plenary Session: "Valorisation de la Recherche et Transfert de Technologie"	Nonlinear pushover analysis (Amar)	Understanding megacities risk (Fouad)	Catastrophe risk modeling - Case studies (Omar)	Repair and rehabilitation of concrete Structures (Abdeljelil/Antonio)		Joint Closing Ceremony
12:30- 2:00 pm	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break		
2:00 -3:30 pm	Nonlinear dynamic analysis: applications in seismic design and research (Nouredine)	Catastrophe risk modeling (Omar)	Ultra-high performance concrete (Said)	Strengthening of structures using composites (Abdeljelil)	Case studies in retrofit (Fouad/Leila)	Algiers Site Visit (Starting at 3:00 pm)	
3:30 - 4:00 pm	Coffe Break	Coffe Break	Coffe Break	Coffe Break	Coffe Break		
4:00- 5:30 pm	Emerging concepts in modern standards for design of new buildings and evaluation and retrofit of existing buildings (Amar/Fouad)	Non-destructive testing and evaluation (Said)	Seismic retrofit and repair (Said)	Strengthening and preservation of historic buildings (Antonio/Leila)	Fundamental of urban resilience - Risk-sensitive urban planning (Fouad)		
5:30-6:00 pm	Break	Break	Break	Break	Break		
6:00 - 7:30 pm	Informal discussion with the participants on general topics (e.g., questions and feedback, state of affairs in design and construction in Algeria, retrofit efforts, industrial infrastructure) - Brief presentations of their work by doctoral students (All)	Informal discussion with the participants on general topics (e.g., questions and feedback, state of affairs in design and construction in Algeria, retrofit efforts, industrial infrastructure) - Brief presentations of their work by doctoral students (All)	Informal discussion with the participants on general topics (e.g., questions and feedback, state of affairs in design and construction in Algeria, retrofit efforts, industrial infrastructure) - Brief presentations of their work by doctoral students (All)	Informal discussion with the participants on general topics (e.g., questions and feedback, state of affairs in design and construction in Algeria, retrofit efforts, industrial infrastructure) - Brief presentations of their work by doctoral students (All)	Informal discussion with the participants on general topics (e.g., questions and feedback, state of affairs in design and construction in Algeria, retrofit efforts, industrial infrastructure) - Brief presentations of their work by doctoral students (All)		
7:30 -8:30 pm	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	

# Registration form

## Submission Form (common)

**First Name\***

**Last Name\***

**E-mail\***

**Phone Number\***

**University\***

- “Doctorant”** (5 000 دج)
- “Universitaire”** (10 000 دج)
- Other** (15 000 دج)

**Hébergement en Cité Universitaire:**  Oui  Non

**Highest education degree and area of expertise**

\*

**PhD research project (Start year)\***

**Name and contact of the mentor (encadrant)**

\*

**Short summary of the research project\***

**Keywords\***



**EasyChair** to upload CV, Abstract, Poster

**\*\* Limited number of spots– Candidates will be selected based on their curriculum**

# Budget

**BUDGET PREVISIONNEL - UNIVERSITE D'ÉTÉ à l'Université des Sciences et de la Technologie Houari Boumédiène - ALGER**  
Du 08 au 15 Juillet 2018 inclus

Rubrique	Tarif Unitaire (DZD)	Quantité	Total Dépenses/ poste (DZD)	Total des Entrées (DZD)
<b>Transport des Formateurs</b>				
Billet d'avion des Conférenciers, du pays de résidence vers l'Algérie	100 000	17	1 700 000	-
<b>Restauration &amp; Hébergement</b>				
<b>Conférenciers (28)</b>				
Nuitées (Hôtel / Petit-Déjeuner inclus)	8 500	153	1 300 500	-
Déjeuners	2 000	241	482 000	-
Dîners	2 000	241	482 000	-
<b>Participants (300)</b>				
Hébergement et repas des Doctorants (ONOU)	1 500 DA/jour/participant	2000	3 000 000	-
Frais d'inscription - Doctorant	5 000 DA/participant	250	-	1 250 000
Frais d'inscription - Universitaire Non Doctorant*	10 000 DA/participant	50	-	500 000
<b>Conférenciers &amp; Participants (50+300)</b>				
Pauses inter-cours	30 000 DA / jour	8	240 000	-
<b>Transport durant l'évènement</b>				
Bus des Conférenciers	10 000 DA/bus/jour	1 bus x 8 jours	80 000	-
Bus des Doctorants	10 000 DA/bus/jour	6 bus x 8 jours	480 000	-
<b>Supports pédagogiques, reprographie et fournitures</b>				
Kit : Programme, CD, Bloc-note, cartables, stylos	1 500 DA/personne	350	525 000	-
Banderoles et Publicité	15 000	3	45 000	-
Frais d'audiovisuel pour les conférences	100 000	1	100 000	-
Accès internet "Summer University"	30 000	1	30 000	-
<b>Divers</b>				
Secrétariat "Summer University"	80 000	1	80 000	-
Frais d'Accueil des participants	50 000	1	50 000	-
<b>SOUS - TOTAL (DZD) par rubrique</b>			8 594 500	1 750 000
<b>TOTAL "Coût de l'évènement" (DZD)</b>			<b>6 844 500</b>	

**BUDGET PREVISIONNEL - UNIVERSITE D'ÉTÉ à l'Université Batna 2 – BATNA**  
Du 16 au 20 Juillet 2018 inclus

Rubrique	Tarif Unitaire (DZD)	Quantité	Total Dépenses/ poste (DZD)	Total des Entrées (DZD)
<b>Restauration &amp; Hébergement</b>				
<b>Conférenciers (7)</b>				
Nuitées (Hôtel / Petit-Déjeuner inclus)	8 500	42	357 000	-
Déjeuners	1 500	35	52 500	-
Dîners	1 500	42	63 000	-
<b>Participants (120)</b>				
Hébergement et repas des Doctorants (ONOU)	1 500 DA/jour/participant	500	750 000	-
Frais d'inscription - Doctorant	5 000 DA/participant	100	-	500 000
Frais d'inscription - Universitaire Non Doctorant*	10 000 DA/participant	20	-	200 000
<b>Conférenciers &amp; Participants (07+120)</b>				
Pauses inter-cours	20 000 DA / jour	5	100 000	-
<b>Transport durant l'évènement</b>				
Bus des Conférenciers	10 000 DA/bus/jour	1 bus x 6 jours	60 000	-
Bus des Doctorants	10 000 DA/bus/jour	2 bus x 6 jours	120 000	-
<b>Supports pédagogiques, reprographie et fournitures</b>				
Kit : Programme, CD, Bloc-note, cartables, stylos	1 500 DA/personne	120	180 000	-
Banderoles et Publicité	15 000	1	15 000	-
Accès internet "Summer University"	30 000	1	30 000	-
<b>Divers</b>				
Secrétariat "Summer University"	80 000	1	80 000	-
Frais d'Accueil des participants	50 000	1	50 000	-
<b>SOUS - TOTAL par rubrique (DZD)</b>			1 777 500	700 000
<b>TOTAL "Coût de l'évènement" (DZD)</b>			<b>1 077 500</b>	



NOM	PRENOM	Statut	E-mail	Pays	Dates		Trajet	
					Aller	Retour		
<b>Groupe 4 : Comité d'Organisation</b>								
BELBLIDIA	Lotfi	Comité Organisation AAF	<a href="mailto:lbelbidia.aaf@gmail.com">lbelbidia.aaf@gmail.com</a>	USA	6 Juillet 2018	21 Juillet 2018	Paris - Alger - Paris	
<b>Groupe 1: Smart Grids</b>								
BACHA	Seddik	Conférencier	<a href="mailto:seddik.bacha@g2elab.grenoble-inp.fr">seddik.bacha@g2elab.grenoble-inp.fr</a>	FR	7 Juillet	9 Juillet	Lyon - Alger - Lyon	
BAGHZOUZ	Yahia	Conférencier	<a href="mailto:yahia.baghzouz@unlv.edu">yahia.baghzouz@unlv.edu</a>	USA	5 Juillet	23 Juillet	McCarran Int. (LAS) - ALG - LAS	
FELIACHI	Ali	Comité Organisation AAF + Conférencier	<a href="mailto:AlFeliachi@mail.wvu.edu">AlFeliachi@mail.wvu.edu</a>	USA	5 Juillet	26 Juillet	PIT - ALG - PIT	
<b>Groupe 2 : Biologie &amp; Santé</b>								
BOUKARI	Hacène	Conférencier	<a href="mailto:hbouk3@gmail.com">hbouk3@gmail.com</a>	USA				
MERGHOUB	Taha	Comité Organisation AAF + Conférencier	<a href="mailto:dmerghoub@gmail.com">dmerghoub@gmail.com</a>	USA	30 Juin 2018	15 Juillet 2018	New York - Alger - New York	(OFFERT par le Pr T. Merghoub)
OUHIB	Zoubir	Conférencier	<a href="mailto:ZOuhib@brhh.com">ZOuhib@brhh.com</a>	USA	04 Juillet 2018	14 Juillet 2018	Fort Lauderdale (FLL) - New York - Alger - NYC - FLL	
ASSELAH	Jamil	Conférencier	<a href="mailto:jamil.asselah@mcgill.ca">jamil.asselah@mcgill.ca</a>	CAN	06 Juillet 2018	15 Juillet 2018	Montréal - Alger - Montréal	(préférence: Air France)
AMRANI	Yassine	Conférencier	<a href="mailto:ya26@leicester.ac.uk">ya26@leicester.ac.uk</a>	UK	07 Juillet 2018	21 Juillet 2018	Londres - Alger - Londres	
BOUK'HIL	Hind	Comité Organisation AAF + Conférencier	<a href="mailto:hboukhil@spinsafety.com">hboukhil@spinsafety.com</a>	FR	07 Juillet 2018	15 Juillet 2018	Paris - Alger - Paris	(préférence: Air Algérie)
<b>Groupe 3 : Génie Civil</b>								
BRANCACCIO	Antonio	Conférencier	<a href="mailto:brancaccioantonio@virgilio.it">brancaccioantonio@virgilio.it</a>	IT				
BELARBI	Abdeldjelil	Conférencier	<a href="mailto:abelarbi@central.uh.edu">abelarbi@central.uh.edu</a>	USA	5 Juillet	13 Juillet	Houston (IAH) -Alger - Houston	(préférence: United Airlines)
BENDIMERAD	Fouad	Conférencier	<a href="mailto:fouadb@emi-megacities.org">fouadb@emi-megacities.org</a>	USA			San Francisco (SFO)-Alger-San Francisco	
CHAKER	Amar	Comité Organisation AAF + Conférencier	<a href="mailto:achaker.AAF@gmail.com">achaker.AAF@gmail.com</a>	USA	5 Juillet	20 Juillet	Washington (IAD)-Alger - Washington	(préférence: United Airline)
HAMROUN	Leïla	Conférencier	<a href="mailto:lhamroun.aaf@gmail.com">lhamroun.aaf@gmail.com</a>	USA	5 Juillet	16 Juillet	Philadelphia (PHL)- Alger-Philadelphia	
KHEMICI	Omar	Conférencier	<a href="mailto:okhemic@gmail.com">okhemic@gmail.com</a>	USA	01er Juillet	01er Août	San Francisco (SFO)-Alger-San Francisco	(Dates flexibles)