Topic 3 : Civil Engineering and Architecture

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Dr. Abdelhalim Assassi is currently a lecturer in Architecture, housing, and space syntax at the Institute of Architecture and Urbanism, University of Batna 1, Algeria. He is a member of Architecture and Child' Environment laboratory in the same institution, and a member of the Board of Directors of the University of Batna 1, Algeria. In 2000, he obtained his Architect degree at the Department of Architecture, University of Biskra, Algeria, and his Master of Architecture and urban planning from the Institute of the Regional Planning, University of Provonce (France) in 2004. In 2017, he obtained his PhD in Architecture from Institute of Architecture and Earth Sciences, University of Setif 1, Algeria.
Currently, Dr. Abdelhalim Assassi is a reviewer in the Journal of Architecture and Child's Environment (University of Batna 1, Algeria), in the Journal of Courier of the Knowledge (University of Biskra, Algeria), in International Journal of Innovative Technical and Applied Sciences (University of Tebessa, Algeria), in Scientific Publishing Group (USA), andin International Conference on Sciences, Technology and Social Sciences (Malaysia).
Dr. Abdelhalim Assassi has over 18 years of teaching experience, and he supervised many Master's theses and currently PhD'stheses. He published four books about Architectural heritage, housing and space syntax (Noor publishing, Germany). He also published many articles in international journals and seminars.
His main research interests are based on Architecture and Artificial intelligence using various computer programs that connect the architectural space to the human behavior.

Abdeldjelil BELARBI, Ph.D., P.E., F.ASCE, F.ACI, F.SEI
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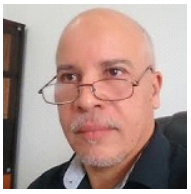
Dr. Abdeldjelil Belarbi is Hugh Roy and Lillie Cranz Cullen Professor Distinguished Professor of Civil Engineering at the University of Houston. Prior to joining the University of Houston in 2009, he was a Distinguished Professor at Missouri University of Science and Technology. During his career he 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 fifteen millions US dollars, has published over 230 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 leading to the newly revised ACI318-19 code with contribution to Shear and Torsion code design 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 and 2019 ACI nVent LENTON Award for Code Simplification and Improvement.



Nouredine BOURAHLA, PhD, Ing.
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Nouredine Bourahla is a Professor of structural dynamics and earthquake engineering, and head of the scientific board of the civil engineering department at ENP (Ecole Nationale Polytechnique) Algiers, Algeria.
After graduating from ENP, 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 IZIIS Skopje.
In 2003, he received the T.K. Shieh award from the ICE (Institution of Civil Engineers, UK) as a co- author 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.costruttorisrl.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.costruttorisrl.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)**, 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.
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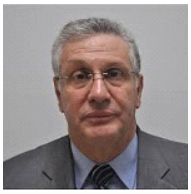

Amar A. CHAKER, Ph.D., F.AEI, F.EMI, F.ASCE
Director, Engineering Mechanics Institute of ASCE

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 Superieures 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 .

Abdelkrim KADID, Ph.D., ING
Department of Civil Engineering
University of Batna2, DZ

Abdelkrim Kadid is a professor of civil engineering. After graduating from the University of Constantine in 1985, he joined the University of Bath (UK) where he got an MPhil degree in structural engineering in 1988. In 1988, he joined the University of Batna as a lecturer, and completed a doctoral thesis in 2007. During his career, he taught more than twenty undergraduate and post graduate courses on subjects related to structural and earthquake engineering and to numerical modelling.
Dr. Kadid is the recipient of a best paper award in a conference in India in 2008 and has chaired two sessions in international conferences. He has also been involved in numerous research projects (CNEPRU and PNR). He has supervised more than fifty undergraduate and post graduate theses. Prof. Kadid is the author and co-author of more than fifty in journals and conferences. He has provided specialized training for engineers on SAP 2000

Toufik KARECH, Ph.D.
Doctor of Civil Engineering
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Mr. Karech Toufik is a Professor of Civil Engineering at the University of Batna and is in charge of the geotechnical team in the natural risk and land use planning laboratory.
He graduated as a Civil Engineer from the University of Constantine, and got a Magister degree in Civil Engineering from the same University.
He was a lecturer at the University of Constantine from 1984 to 1995, before joining the University of Batna in 1995, where he is still in activity.
He is member of the scientific committee of the journal Equipment ENTP Algeria and has served as a member of scientific committees in several seminars around the world. He is an active member of the scientific committee of a Euro-magreb network of unsaturated soils (nonsat).
His main areas of interest include the dynamic behavior of foundations on compressible ground reinforced by ballasted columns to reduce liquefaction in the case of the Kissire dam (jijel), Hydrodynamic behaviour of swelling soils in the Aurès region.
He is the author or co-author of more than 10 publications. He is an associate reviewer and a reviewer in several peer-reviewed journals.

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 982 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.

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Dr. Noureddine Zemmouri is a professor, executive director of the Architecture and Environmental Design Laboratory (LaCoMoFa), president of the scientific board and director of the graduate program Building Science and Sustainability at the University of Biskra, department of Architecture in Algeria.
He serves as the faculty member responsible for most of the coursework in Building Information Modelling and computing in architecture.
He teaches the required courses for the undergraduate Architecture students and the advanced courses for graduate students. Je participate in undergraduate and graduate thesis committees throughout the country. He also served as head of the department for many years.
A Fulbright program visiting professor at the MBS program at the University of Southern California School of Architecture in Los Angeles USA, a distinguished speaker at the Graduate School of Human Environment Studies, Kyushu University Japan and a TWAS and Erasmus Fellow respectively at the Jordan University of Science and Technology and at the Politecnico of Bari, Italy. He has managed projects and design offices in Algeria and the U.K. Most of his research work during the last two years focuses on technology and its implications on architectural and urban design education.
Pr. Zemmouri is also member in many international organisations and group leader in many research projects on environmental design and sustainable urban planning.