

## Topic 1 : Renewable Energy



### **Pr Belkacem ADOUANE**

*Head of the research laboratory: LPEA, Department of Physics, Faculty of Matter Sciences, univ. Batna 1, Batna, DZ*

Belkacem Adouane was born and raised in Algeria. He received his Bachelor in Mechanical Engineering from the university of Batna in 1995, his MSC in Mechanical engineering, thermal power, from the university of Mosul, Irak in 1999. He graduated with a PhD in Mechanical engineering, energy section, from TUDelft, the Netherlands in 2006. His work focused on the combustion of biomass-derived LCV gas in gas turbine combustors. More attention was given to the conversion of ammonia to NOx. He worked after graduation as external consultant for one year with the Dutch energy company Host, dealing with gasification and combustion of LCV gas from chicken manure. After returning home from Holland, he joined the university of Batna in 2006, department of physics, Faculty of Sciences. Since January 2015, he is full professor at the same department. Currently, his main research field is biogas and landfill gas from production to combustion. He is interested in introducing biogas as a renewable vector in the Algerian future energy mix



### **Dr Tahir Cetin AKINCI**

*Istanbul, TR*

Tahir Cetin Akinci received B.S degree in Electrical Engineering, M.Sc. and Ph.D. degrees from Marmara University, Istanbul-Turkey.

His research interests include artificial neural networks, deep learning, machine learning, image processing, signal processing and, renewable energy.

He is currently an Associate Professor in Electrical Engineering Department of Istanbul Technical University (ITU), Istanbul, Turkey.



### **Pr Mounir AKSAS**

*Laboratory of physics and Energetics Applied) LPEA, Department of Materials Sciences, University of Batna1, Batna, DZ*

Mounir Aksas received the B.S. degree in Energy Engineering from the University of Batna, Algeria, in 1995, his M.S and Ph.D. degrees in Fluid Mechanics from the Polytechnic University of Bucharest, Romania in 1998 and 2001 respectively.

From 2002 to 2007 he has taught mathematics at the high School "Le Touar/NAFVECO" in Toulon, France. Since 2007, he has been an Assistant Professor and then full Professor in 2015 at the University of Hadj Lakhdar Batna 1, Algeria, where he has taught Renewable Energy Resources and Technologies and Applied Fluid Mechanics. He is currently a permanent member in the Laboratory of physics and Energetics Applied) (LPEA), Department of Materials Sciences, University of Batna 1. His research interests are in the Thermal Solar Systems and applications (Solar water heating, cooling solar technologies and Heat Pumping technologies) and Modeling of Renewable Energy Systems. Dr. AKSAS is author or co-author of several scientific articles in international journals and conferences, He had supervised several Master and Ph.D. theses.



### **Pr Boubaker AZOUI**

*Electrical Engineering Department, Batna2 University, Batna, DZ*

Boubakeur Azoui was born in 1955 in Ouled Makhlof, Algeria. He Received the Diplôme d'Ingénieur en Electrotechnique", from USTO University, Algeria in 1980, the Magister (1990) and Doctorat d'état (2002) from Batna University, Algeria, with cooperation with TU Berlin Germany (as part of the GIZ cooperation project) . Since 1980, he holds a teaching and research position at the Electrical Engineering Department of Batna University. His area of research interest is in Renewable Energy and their applications. Since 2010, he has published more than 50 papers in journals and communications in conference proceedings. He holds visiting positions in many universities in Algeria. He served as member of scientific committee of different conferences and journals, partial consultant Elsevier for books, and as expert for the evaluation of national research projects. He is currently

the team Leader of solar energy, modeling and experimentation of electromagnetic phenomena in systems and physics of electrotechnical materials in LEB Laboratory.



**Pr Seddik BACHA**

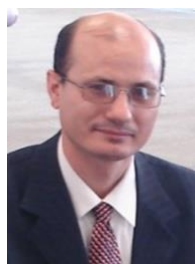
*G2ELab, Grenoble, FR*

Seddik Bacha received the Diplôme d'Ingénieur en Electrotechnique and, the Magister from the Ecole Nationale Polytechnique of Algiers (ENP), Algeria, respectively in 1982 and 1990. After 8 years of teaching activity at the ENP and Abderahmane Mira University, he joined the Laboratoire d'Electrotechnique de Grenoble in 1990 where he received the Doctorate Degree and Habilitation from Institut National Polytechnique de Grenoble in 1993 and 1998 respectively. He is currently full professor in Grenoble Alpes University where he teaches various courses in Electric Engineering, power Electronics, mathematics and control.

His main research interests are modeling, control and simulation of energy systems and Supergrids/microgrids. He has supervised more than 50 PhD theses, published one book on power electronics modeling and control and another one on Electric Vehicle to Grid management. He has published nearly 450 journals and conferences papers in his area of expertise. He has been the Power System Group Manager (around 70 people) inside the G2Elab Laboratory from 2000 to 2012 and Director Deputy of the National Group GDR SEEDS from 2012 to the end of 2017.

Currently he is Program Scientific Director within the SuperGrid Institute in Lyon.

Others : Associate Editor for IEEE Transactions on Industrial Electronics ; SM IEEE



**Pr Bekacem BARKAT**

*Laboratoire de Recherche en Productique (LRP)*

*Laboratoire des Etudes de Systèmes Energetiques Industriels (LESEI)*

*University Batna 2, Batna, DZ*

Belkacem Barkat was born in 1965 at Chemora W. Batna. He is professor at the Mechanical Engineering Department, University Batna 2. He holds a Bachelor in Mechanical Construction on INES, Batna in 1989, a DEUA in ME from UFR Poitiers, France (1990), and a Doctorat 3em cycle in Mechanical Engineering Génie Mécanique, UFR Poitiers France, 1994, and « Equivalence of Doctorat d'Etat, 1998 ». His field interest includes Industrial robots, design, fabrication, modeling, and optimisation. He works also on renewable energies: Photovoltaics (PV), CPV, CSP, wind, sun tracking systems and solar pumping. He leads the Robotics activity and is member of the team working on Renewable energies in the Laboratory of Industrial Energy Systems Studies (LESEI).



**Dr Mohamed BECHERIF**

*Associate Prof. Phd. Ing. (HDR), FCLab FR CNRS 3539, Femto-ST UMR CNRS 6174*

*Head of the Grid and Energy Conversion Division, Energy Department, Université de Technologie de Belfort-Montbéliard, Belfort-Montbéliard, FR*

Mohamed BECHERIF obtained his BSc in Automatic Control from the National Polytechnic School of Algeria, DEA (Diplôme des Etudes Approfondies) in Electrical Engineering from University of Paris Sud-Supélec (LSS & LGEP-CNRS), and the PhD in Automatic Control from University of Paris Sud-Supélec (LSS & LGEP-CNRS), France in 1999, 2001 and 2004 respectively. He joined the University of Technology of Belfort-Montbéliard, France since 2005 as an assistant Prof. and is an Associate Prof. (HDR) since 2011. Currently he is with the FCLab FR CNRS 3539 and with Femto-ST UMR 6174 CNRS, France.

His research interests are in the fields of modelling, nonlinear control and energy management of hybrid and renewable systems, with special emphasis on applications. He is the Head of the Grid & Electrical Energy Conversion division in the Energy Department of UTBM and the head of the application axis on Renewable Energies Coupling with the FR CNRS FCLab. He was/is a scientific co-responsible or partner in three European Projects FP7, French and international projects and several industrial projects. He was/is the General Chair of ICREGA16, ICREGA17, EMFC17, ICREGA18, ICREGA19. Guest and Managing Editor in different Elsevier journals, author of more than 90 journals, 250 conference papers and 7 books chapters. Supervisor of 18 PhD thesis. Invited professor in China, Canada, Algeria, Egypt and keynote speaker in 19 international conferences. He is the ambassador of the France region Nord Franche-Comté and international examiner on Energy for different countries.



### **Pr Maamar BETTAYEB**

*Vice Chancellor for Research and Graduate Studies at University of Sharjah, Sharjah, UAE*

Prof. M. Bettayeb received the B.S., M.S., and Ph.D. degrees in Electrical Engineering from University of Southern California, Los Angeles, in 1976, 1978 and 1981, respectively. He worked as a Research Scientist at the Bellaire Research Center at Shell Oil Development Company, Houston, Texas, USA., in the development of seismic signal processing deconvolution algorithms for the purpose of Gas and Oil exploration during 1981/1982. From 1982 to 1988, he directed the Instrumentation and Control Laboratory of High Commission for Research in Algeria, where he led various research and development projects in the field of modeling, simulation, and control design of large scale energy systems, specifically, model reduction, identification and control of computer-controlled systems with applications to nuclear, solar and electric power systems. In 1988, He joined the Electrical Engineering Department at King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. He has been Professor at University of Sharjah UAE since August 2000. He also held the position of Advisor to the Chancellor for Graduate Studies and Scientific research for the Years 2004/2006 and Director of Research and Studies Center for the Year 2005/2006 at University of Sharjah.

He is the Vice Chancellor for Research and Graduate Studies at University of Sharjah, starting September 2014. He was the Conference Chair of ISSPA 2007. He was Associate Editor of the International Journal of Modeling, Identification and Control. He was the leader of intelligent systems research group at University of Sharjah. He has published over 350 journal and conference papers in the fields of control and signal processing. He has also supervised over 50 M. Sc. and Ph. D. students.

Prof. Bettayeb received the Best Distinguished Research Award in 1993-94 and 1998-99, and the Outstanding Advisor Award in 1996-97 at KFUPM. He also received the Best Researcher Award at University of Sharjah in 2001-2002, 2006-2007, 2007-2008 and 2010-2011, the Best Research Paper Bank of Sharjah Award in 2003-2004, the Best Research Project Award in 2006-2007.

His recent research interest is in  $H_\infty$  optimal control, rational approximation, signal and image processing, process control, networked control systems, fractional dynamics and control, nonlinear estimation and filtering, soft computing, wavelets, renewable energies and engineering education.



### **Dr Mebarek BOUKABA**

*Founder and Manager of Vorax Technologies, Algiers, DZ*

Mébarek BOUKABA was born in Arris, Batna. He got a Bachelor in Electric Engineering and telecommunications in 1975, Oran university, Algeria. His expertise includes technical and economic studies of projects and programs with technological content, Social and economic analysis for commercial projects or/and public interest, Consultations for the studies, design and implementation of information systems and data bases.

His activity covers the field of telecommunications, computer science, information systems, network Internet and Internet telephony, LED lighting industry, Wind and Solar energy.

### **Dr Ahmed BOULAL**

*CDER, Adrar, DZ*

Ahmed BOULAL was born in 1973 in Adrar, Algeria, graduated as a State Engineer in Food Technology at the University Mostafa Stambouli de Mascara (Algiers) in 1998, Master's degree in Microbiology and Food Security in 2009, and then doctorate in biology option Sciences, Fundamental and Applied Microbiology at the university Oran1 Ahmed Benbella in 2017. He was researcher at the unit of research on renewable energies in the Saharan medium - Adrar (URER- MS), attached to the Center for the Development of Renewable Energies (CDER), in Algeria from 2003 to 2018, where he has developed several projects in the field of renewable energies (bioconversion). He is the author of many publications and three patents in renewable energies (bioconversion) and biotechnology. Now he is teacher researcher at the Ahmed Draïa - Adrar University in Algeria and is a member of the Laboratory of Sahara Natural Resources Research team at the same university. His research interests include Biofuel production (Bioethanol and Biodiesel) based on dates waste, waste oil and crude vegetable





### **Dr Khalida BOUSDIRA**

*Ghardaïa, DZ*

Khalida BOUSDIRA got a bachelor in food processing from the National Institute of the Food Industry at Boumerdès (former. INIA), a PhD and Habilitation (2015) in process engineering. She held a research assistant position at the International Institute of Plants and Genetic Resources (IPGRI) in the framework of a UNDP / GEF project (RAB 98 / G31), Ghardaïa. From October 2003 to July 2007 she worked as Research Officer at the Renewable Energy Applied Research Unit URAER – Ghardaïa, as member of the “Biomass and Hydrogen Technologies” team and contributed to the development of a biomass energy laboratory. From July 2007 to November 2015, she worked as Research Associate at the Renewable Energy Applied Research Unit URAER – Ghardaïa. Dr. Khalida Bousdira has several publications and communications on arid and semi-arid biomass energy recovery field especially the aspect related to the biomass deposit in these fragile areas.

### **Dr Amor GAMA**

*Senior Researcher, Applied Research Unit on Renewable Energies, Ghardaïa, DZ*

Amor Gama was born on February 9th, 1975 in BATNA region of Algeria. In 1993 he got a baccalaureate degree in Technics mathematics, and a bachelor degree in engineering in 1999 from BATNA university. In 2008 he got a master degree in solar electricity from Polytechnic National School of Algeria and PhD degree in electronics. He obtained the Habilitation from Batna university in 2018. He has worked for more than 15 years in Renewable Energies field, especially on solar concentration systems. His research & development tasks relate to sun tracking systems, optical and mechanical engineering development in thermal solar power plants. He has more than thirty-four publications, and more than sixty communications.

### **Dr Chaouki GHENAI**

*Sharjah, UAE*

Dr. Chaouki Ghenai is an Associate Professor at the Sustainable and Renewable Energy Engineering Department (SREE), College of Engineering; Coordinator of the Sustainable Energy Development Research Group at the Research Institute for Sciences and Engineering (RISE), and the Chairman of the Research Funding Department at the University of Sharjah. He received his PhD and Master in Mechanical Engineering from Orleans University, Orleans, France. Before Joining the University of Sharjah, Dr. Ghenai was an Assistant Professor at Florida Atlantic University and Project Manager at the Applied Research Centre, Miami. He worked also as a post doc at Cornell University (Ithaca, NY), Kansas State University (Manhattan, KS), and University of California Los Angeles (Los Angeles, CA). Dr. Ghenai has published more than 100 research papers in technical journals, book chapters, and books. His research interests are renewable energy (bioenergy, solar, wind, and fuel cell), energy efficiency (building, transportation, industry), combustion (solid, liquid and gas fuels), biofuels, alternative fuels (biogas, syngas, bio-oil, biodiesel, hydrogen), clean combustion technologies, waste to energy (pyrolysis, gasification, anaerobic digestion), sustainability, eco-design, energy-water nexus, energy planning and climate change mitigation assessment, modeling and simulation of micro grid power systems and air pollution.

### **Dr Nacer GREFFOU**

*Batna, DZ*

Mr Nacer GREFFOU, is the founder of Algeria Smart Grid an ESCO Co. He introduced the Smart Grid concept to Sonelgaz in 2011, and installed the first Smart Electric Meters in Algeria with SDA and CREDEG in 2012. In 2013, along with CDER-USTHB and German Space Agency DLR, he initiated the first "Algerian Consortium for Renewable Energy". He is a Founding member of the "Renewable Energy Professional Association". He participated in the conception of a Hybrid Micro-Power Plant in Hassi - Messaoud, and Co-Chaired the first Algero-German forum on Renewable Energy in 2011. He played a Key Role in the technical/ feasibility study of a 480 MW Hybrid Solar/Gas Combined Cycle plant, and installed the First Real Time Remote Sun Tracker(2010) in Djemaa (Oued Righ). He carried out production line Automation Industrial projects and is currently implementing in Algeria and neighbouring countries Smart technologies with Online and wireless monitoring, Online pipeline inspections and leakage detection, Real Time Energy quality measurement and analysis (USTHB,CDER,CDTA, UDES). Mr Nacer GREFFOU firstly graduated in Economics and Finance from the University of Alger in 1975, and post-

graduated in 1983. He attended several Industrial Qualification Upgrade trainings in Europe and Asia (Computer manufacturing, Industrial Project Planning, Data management, Workflow Analysis etc..). He also attended Industrial Internship in Japan / Hamamatsu Yamaha Factory about Hardware Computers Chips sizing and assembly line steering. He trained the first Computer team at ENIE Sidi Bel Abbes (1987). Mr Nacer GREFFOU is member of the Algerian-Japanese Business Club - Since September 2012. He delivered many keynote speeches on renewable energies in Algeria and abroad.



**Dr. Belgacem HABA**  
*San Francisco, USA*

Belgacem Haba was born in 1957 in El-Meghaier wilaya d'El-Oued. Dr. Haba joined Google Data Center Platform in 2013. Prior He was Vice President and Senior Fellow at Tessera/Invensas since 1996. His latest activities while heading the Mobile R&D division include developing 3D technologies for mobiles and servers.

Dr. Haba also co-founded SiliconPipe Inc. in 2002, a high-speed interconnect Start-up Company based in Silicon Valley that got acquired by Samsung. Prior to that, he managed the advanced packaging R&D division at Rambus. From 1991 to 1996, he worked for the NEC Central Research Laboratories in Tokyo Japan and, before that, for IBM Watson Research Center in New York working on the applications of lasers in microelectronics.

Dr. Haba holds a Ph.D. in materials science and engineering in 1988 from Stanford University, California in the field of solar energy. He obtained also two master's degrees in applied physics and materials science and both from Stanford University. He received his bachelor's degree in physics from the University of Bab-Ezzouar, Algeria in 1980.

Dr. Haba holds 200+ U.S. patents, and 250+ worldwide patents. In 2012 he was listed among the top 100 inventors worldwide. He has authored numerous technical publications, has also participated in many conferences worldwide and was recognized in many occasions. To name a few; Arab scientist of the year by Techwadi in 2007, recipient of the R&D 100 in 2003 and Frost Sullivan Award in 2013, and the opening of the Nasdaq in 2007.



**Pr. Leïla MOKHNACHE**  
*Batna2 University, Batna, DZ*

**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.



**Dr Serhat SEKER**  
*Istanbul, TR*

Serhat Seker started his education at Mathematics Engineering Department of Istanbul Technical University (ITU) and graduated from Electrical and Electronic Engineering Faculty where he started his career as a research assistant at Electrical Power Engineering Department in 1985. He got his master degree at ITU's Nuclear Energy Institute and his PhD at Electrical Engineering Division of the same university's Science and Technology Institute. His research was on "Stochastic Signal Processing with Neural Network in Power Plant Monitoring". Dr. Seker completed his PhD thesis at the Energy Research Centre of the Netherlands (ECN). He worked as Assistant Professor and Associate Professor at ITU in 1995 and 1996 respectively. He also worked on industrial signal processing at Nuclear Engineering Department and Maintenance and Reliability Centre of the University of

Tennessee, Knoxville-USA thanks to a scholarship from the Scientific and Technological Research Council of Turkey (NATOTUBITAK B1) in 1997. He served in many administrative positions at ITU including Vice Dean of Electrical and Electronic Engineering Faculty, 2001 – 2004, head of the Department of Electrical engineering, 2004-2007, Dean of Technology Faculty and Vice Rector as well as the founding Dean of Engineering Faculty at Kırklareli University between 2011 and 2013. Dr. Seker is still the Dean of the Electrical and Electronics Engineering Faculty at ITU since 2013.



**Pr Arezki SMAILI**

*Mechanical Engineering Department, Ecole Nationale Polytechnique (ENP), El Harrach, Alger, DZ*

Arezki Smaili is a full professor of Mechanical Engineering and Director of Research Laboratory of Mechanical Engineering (Laboratoire de Génie Mécanique et Développement, LGMD), at Ecole Nationale Polytechnique (ENP), Algiers. He received his engineer diploma in Mechanical Engineering from Université des Sciences et de la Technologie Houari Boumediène (USTHB), Algiers in 1988, M.S. in Mechanical Engineering from Laval University, Québec (Canada) in 1991, and his PhD in Energy Sciences from Université du Québec (Canada) in 1998. He joined the ENP in 2006. He was formerly research scientist in the Wind Energy Laboratory at Ecole de Technologie Supérieure, Montreal (Canada). He has been involved with wide range of energy conversion applications, particularly in the area of thermal analysis of renewable energy systems and aerodynamics of wind turbines since the 1992. He has supervised more than 10 PhD theses and his research has produced more than 100 technical papers published in international journals and proceedings.



**Dr Linda SERAIRI**

*Toulouse, FR*

Dr. Linda SERAIRI was born in September 1989. After a Master 2 Research in electrical energy systems at l'Ecole Normale Supérieure de Cachan (ENS) and Centrale Supélec de Paris. She obtained a doctorate in Engineering Science from the University Paris Est.

She is currently a faculty member and researcher at the National Polytechnic Institute of Toulouse.

Her research activities research focus on energy conversion and recovery including piezoelectricity at scale nano and micro metric



**Pr Nouar TABET**

*Physics Department, University of Sharjah, Sharjah, UAE*

Nouar Tabet received his PhD in Materials Sciences from University of Orsay Paris XI, France.

He is Professor at Physics Department of University of Sharjah. He was Chief Scientist at Qatar Environment and Energy Research Institute (QEERI), Professor at King Fahd University of Petroleum and Minerals (KFUPM), leader of the Surface Science Group, member of Scientific Council of KFUPM University, member of the Board of Directors of the Center of Research Excellence in Nanotechnology (CENT) at KFUPM, and in many academic positions including Rector of the university of Constantine, Algeria. He is recipient of Al-Marai Prize for Innovation in Physics, 2004, the "Research Excellence Award" of KFUPM. He published more than 110 journals papers, 3 US patents and authored a book on "Nanotechnology and its applications" (Arabic, 2013). He co-chaired the "11th Beam Injection Assessment of Microstructure in Semiconductors (BIAMS) International Workshop 2012 and the "First Sharjah International Conference on Nanotechnology and its Applications", Sharjah, 2007. He was visiting scientist at various research institutions including Advanced Light Source (ALS), Berkeley National Laboratory, USA, Massachusetts Institute of Technology, Boston, USA and Institut de Science et Génie des Matériaux, Odeillo, CNRS / IMP Font Romeu, France.



**Dr Fatiha YETTOU**

*Permanent researcher at Applied Research Unit on Renewable Energies, Ghardaïa, DZ*

Fatiha Yettou was born in 1980 in Algiers, Algeria. She is a permanent researcher at Applied Research Unit on Renewable Energies of Ghardaïa (Algeria) since January 2006. She obtained a Bachelor degree in Electronics Control from Blida University in 2005. In 2009, she got a Master Degree in Solar Electricity from Polytechnic National School of Algeria. She was awarded a PhD Degree from Batna University on 2015 and got a Habilitation from Ourgla University. Her areas of interest include teaching and research on solar energy aspects especially solar cooking designs and solar concentration systems. She has co-authored more than 40 communications and 27 published papers in national and international journals on different renewable energy aspects. She supervised more than 20 projects related to clean energy production. She has been a recipient of awards and certificates of merit from several Algerian organisations for her contribution on development of alternative energy resources projects.