



Chaouki Ghenai

Sustainable and Renewable Energy Engineering Department, College of Engineering, University of Sharjah, Sharjah, United Arab Emirates Ph.: (971)-6-5053971; E-mail: cghenai@sharjah@ac.ae

Professional Profile

- Academic leadership and administrative experience with the ability to advocate for excellence in teaching, scholarly activity, and service that meet ABET accreditation standards.
- Demonstrated effective commitment to the universities goal of quality instruction and contributed to the learning and intellectual growth of students:
- Experience in the creation and design of successful student programs with a track record of delivering positive results.
- Proven ability to build innovative programs and coursework that foster learning and meet the needs of a diverse group.
- Administered annual budget and managed credentialed staff members.
- Chaired different committee and built strong working relationship with the community.
- Proven record of multidisciplinary research in energy and thermal fluids; management of research groups and laboratories; and leadership role in collaborative, sponsored research projects (NSF, NASA, U.S Air Force, U.S. Army and DOE).
- More than 100 papers published in journals, conferences, books, and book chapters.

Education

PhD, Mechanical Engineering (Energy - Combustion), Orleans University, Orleans, France, 1995.

M.S., Mechanical Engineering (Energy Conversion), Orleans University, Orleans, France, 1991.

B.S., Mechanical Engineering, Constantine University, Constantine, Algeria, 1990.

Professional Experience

09/2016 – Present Chairman – Research Funding Department, Office of Vice Chancellor of Research and Graduate Studies

01/15 – Present Associate Professor, Sustainable and Renewable Energy Engineering Department, College of Engineering, University of Sharjah, Sharjah, United Arab Emirates.

09/14 – 12/14 Adjunct Professor, Mechanical and Aerospace Engineering Department, University of Miami, Miami, Florida

2007– 2014 Assistant Professor, Ocean and Mechanical Engineering Department, Florida Atlantic University, Boca Raton, Florida, USA

2001 – 2006 Combustion Manager, Applied Research Center, Florida International University, Miami, Florida, USA

1999 – 2001 Research Associate, University of California Los Angeles, Los Angeles, California, USA, “NASA Glenn Micro- Gravity Combustion Program”.

- 1998** Research Associate, Kansas State University, Physics Department, Manhattan, Kansas State, “NSF Complex Fluid Flow Program”.
- 1996 – 1997** Research Scientist (Postdoc), Cornell University, Mechanical and Aerospace Engineering Department, Ithaca, New York, “U.S. Army Combustion Research Program”.
- 1995 – 1996** Post Doc, CNPM, Milan, Italy, “European Micro Gravity Combustion Program”.

TEACHING ACTIVITIES:

COURSE TAUGHT

University of Sharjah (2015-present):

- Biomass Energy Systems
- Design for Energy Efficiency
- Introduction to Energy Sciences and Technologies
- Statics/Dynamics
- Fluid Mechanics
- Fluid Mechanics Lab
- Heat Transfer
- Thermodynamics

University of Miami (2014)

- Flight Dynamics (Aircraft Performance, Stability and Control)

Florida Atlantic University (2007 – 2014):

- Materials, Sustainability and Environment – Honor Program
- Sustainable Engineering and Eco Design
- Renewable Energy for Sustainable Global Future – Honor Program
- Advanced Computational Fluid Dynamics
- Heat Transfer
- Fluid Mechanics
- Mechanical Engineering Laboratory
- Dynamics
- Machine Design II
- Computer Application in ME 1 (Matlab)
- Internal Combustion Engine
- Applied Combustion
- Modeling of Manufacturing Systems
- Numerical Methods in Fluid Mechanics
- Fundamental of Engineering.

NEW COURSES

- **Proposed two new courses at University of Sharjah:** (1) Sustainable Engineering and Eco Design, and (2) Advanced Energy and Efficiency Analysis
- **Developed seven new courses in the Ocean and Mechanical Engineering department and FAU Honor Program:** (1) Materials, Sustainability and Environment; (2) Sustainable Engineering and Eco Design; (3) Renewable Energy for Sustainable Global Future; (4) Advanced Computational Fluid Dynamics; (5) Internal Combustion Engine; (6) Applied Combustion; and (7) Numerical Methods in Fluid Mechanics.

NEW TEACHING APPROACHES

Used new teaching approaches and technologies for high quality instructions:

- **Technology Enhanced Learning:** (1) FEEDS (Florida Engineering Education Delivery System was used for delivering graduate and undergraduate courses to student over the internet - distance learning); (2) Web-based simulation and visualization or interactive modules were used to complement student learning achieved through physical laboratories and conventional class room (dynamics, fluid mechanics, CFD); and (3) Citrix System, blackboard and digital writing pad were used for delivering information technology (IT) solutions that enhance and expand the educational experience for engineering students.
- **Assessment Techniques and Technologies:** used new web-based assignment and assessment platform (Mastering Engineering and Connect Engineering) for face to face, hybrid and fully online courses.
- **Infusing Sustainability in the Engineering Curriculum:** incorporate sustainability concepts in engineering courses (Heat Transfer, and Sustainable Engineering and Eco Design Courses).
- **Academic Service Learning:** Incorporated Academic Service Learning in engineering courses.
- **Writing Across Curriculum:** student learning trough writing across the Engineering Curriculum

PROFESSIONAL DEVELOPMENT – TEACHING

- E-Learning Designer/Facilitator Certification Course
- Summer Writing Across Curricula (WAC) training program
- Faculty Learning Communities (Sustainable Pedagogy, Technology Enhanced Learning, Assessment Techniques and Technologies, Assessment of Online courses)

TEACHING AWARDS

Received several teaching awards

- Award for Excellence and Innovation in Undergraduate Teaching, Florida Atlantic University, 2010
- Faculty Honor Fellows Award, 2010 and 2011
- Faculty Assessment Grant Award, 2010
- Academic Service Learning (ASL) Science Technology Engineering and Math (STEM) Award, 2011
- Faculty Enhancement Award, 2010
- Certificate of Recognition: Commitment and contributions toward helping to build capacity for STEM Academic Service-Learning at FAU, 2011
- Certificate of Recognition: Commitment to student learning trough writing across the Curriculum, 2011

STUDENTS SUPERVISION

- PhD dissertation
 - Chair and direct Advisor – 4 PhD students (3 students from FAU and one student from FIU)
 - Member of Dissertation Committee – 6 PhD students (FAU)
 - Co-Advisor: 2 PhD students (Algeria)
- Master Thesis
 - Chair and direct supervisor – 7 Master students (FAU)
 - Member of Thesis Committee – 8 Master Students (FAU)
- Undergraduate Research Program – Direct supervisor: senior design projects at University of Sharjah (9 senior design projects)
- Independent Studies – Directed/Supervised more than 13 independent studies for Ocean and Mechanical Engineering students (FAU)

RESEARCH ACTIVITIES:

RESEARCH INTERESTS

- Renewable Energy: Wind Energy (shrouded wind turbine, modeling performance of wind turbine), Solar Energy (Cooling of Solar PV, solar PV, CSP project analysis and Solar Air Conditioning System), Ocean Energy – Current Turbines (modeling the performance of underwater turbine), Combined Wind/Ocean Power (floating wind and wave generator hybrid system), Bio-energy (Biomass and Coal/Biomass power plant performance analysis), Waste to Energy (Gasification, Pyrolysis, Anaerobic Digestion, and Transesterification), and Hybrid Power System (Solar/wind; Solar/Generator/Battery).
- Energy Efficiency: Transportation, Industry, and Building.
- Alternative Fuels: Biodiesel, Biogas, Syngas and Bio-oil.
- Combustion: Clean Combustion Technologies, Coal combustion, Oxygen Coal Combustion, Coal-Biomass Co-Firing, Biofuels Combustion in Gas Turbines, Hydrogen Combustion, Syngas Fuel Combustion; Emissions: Engine Performance and Emission Testing/
- Energy system Modeling: Clean Energy Project Analysis (Modeling); and Energy Planning and Climate Change Mitigation Assessment.
- Sustainability - Eco design; Life Cycle Analysis; Sustainable Engineering; Energy/Water Nexus

RESEARCH MANAGEMENT

- Sustainable Energy Development Research Group Coordinator – University of Sharjah, Sharjah, UAE
- Renewable Energy Laboratory Coordinator, University of Sharjah, Sharjah, UAE
- Research Laboratory Management: (1) Renewable Energy Development Facility (RISE-UOS), (2) Set up the Combustion Laboratory at FAU, (3) Acquisition of new equipment (Biodiesel Processor, engine dynamometer, gasoline and Diesel engines, FTIR System, gas analyzer, laser diagnostic systems, Ethanol processor, Steam Turbine Engine) at FAU, and (4) development of new experiments (Fuel cell, wind energy, floating wind turbine in wave tank, combined wave/wind power) for research and Mechanical Engineering laboratory courses (FAU).

PUBLICATIONS

Refereed Journals

Idowu Adeyemi, Chaouki Ghenai, Isam Janajreh, Simulation of the Co-Gasification of Kentucky Coal and Biomass in an Entrained Flow Gasifier, Journal of Solid Waste Technology and Management, Accepted, 2017.

Adel Merabet ; Labib Labib ; Amer M. Y. M. Ghias ; Chaouki Ghenai ; Tareq Salameh, Robust Feedback Linearizing Control With Sliding Mode Compensation for a Grid-Connected Photovoltaic Inverter System Under Unbalanced Grid Voltages, IEEE Journal of Photovoltaics, 7(3), 2017.

C Ghenai, AA Hachicha, Thermal Performance of Biomass-Fired Steam Power Plant, Journal of Thermal Science and Engineering Applications, 9 (3), 2017.

E Al-Sarairah, C Ghenai, A Hachicha, Multiplicity of premixed flames under the effect of heat loss, Journal of Thermal Science and Engineering Applications, 9 (3), 2017.

Idowu Adeyemi, Isam Janajreh, Thomas Arink, and Chaouki Ghenai, Gasification behavior of coal and woody biomass: validation and parametric study, Applied Energy, vol. 185, pp 1007-1018, 2017.

- I. Abrar, C. Ghenai, M. Naqvi, M. Ammar, M. Ayoub, and M.N.B. Hussin, Parametric Study for Production of Dimethyl Ether (DME) As a Fuel from Palm Wastes, *Energy Procedia*, 105:1242-1249, 2017
- C. Ghenai, Design of Solar Biomass Hybrid Micro-grid System in Sharjah, *Energy Procedia*, Volume 103, pp. 357-362, 2016.
- M. Noorul Hussain, I. Janajreh, C. Ghenai, Multiple source sustainable hybrid micro-grid for urban communities: A case study in UAE, *Energy Procedia*, volume 103, pp 419-424, 2016.
- C. Ghenai, T. Salameh, I. Janajreh, Computational Modeling of the Performance of Shrouded Wind Turbine, *Jordan Journal of Mechanical and Industrial Engineering (JJMIE)*, under review, 2016.
- C. Ghenai, T. Slameh, and I. Janjreh, Numerical Modeling of Biomass and Solid Waste-Based Syngas Fuels Combustion, *International Journal of Thermal and Environmental Engineering*, Volume 11, No 1, pp. 117-123, 2016.
- C. Ghenai and I. Janajreh, Combustion of Renewable Biogas Fuels, *Journal of Energy and Power Engineering*, Vol. 9, pp. 831-843, 2015.
- C. Ghenai, Emissions Performance of Syngas Fuels Derived from Palm Kernel Shell and Polyethylene (PE) waste via catalytic steam gasification, *International Journal of Mechanical, Aerospace, Industrial, Mechatronics, and Manufacturing Engineering*, Vol. 9, No 6, 2015.
- A. Hachicha, C. Ghenai, and A. K. Hamid, Enhancing the Performance of a Photovoltaic Module Using Different Cooling Methods, *International Journal of Environmental, Chemical, Ecological, Geological and Geophysical Engineering* Vol:9, No:9, 2015.
- K. Thakar, C. Ghenai and A. Hachicha, Integrated Modeling Approach for Energy Planning and Climate Change Mitigation Assessment in the State of Florida, *International Journal of Environmental, Chemical, Ecological, Geological and Geophysical Engineering* Vol:9, No:9, 2015.
- C. Ghenai, Energy-Water-Carbon interconnection: challenges and sustainable solution methods and strategies, *International Journal of Thermal & Environmental Engineering* Volume 7, Issue No. 2, pp. 57-64, 2014.
- S.S. Razan, I. Janajrah, and C. Ghenai, Sustainable index approach as a section criteria for energy storage system of intermittent renewable energy source, *Applied Energy*, 136, pp 909-920, 2014.
- K. Zbeeb and C. Ghenai, Syngas Fuel Combustion in Re-circulating Vortex Combustor, *Journal of Energy and Power Engineering* 7, pp. 1852 – 1864, 2013.
- C. Ghenai and I. Janajreh, Comparison of Resource Intensities and Operational Parameters of Renewable, Fossil Fuel, and Nuclear Power Systems, *Int. J. of Thermal & Environmental Engineering* Volume 5, No. 2, pp. 95-104, 2013.
- C. Ghenai, K. Zbeeb and I. Janajreh, Combustion of Alternative Fuels in Vortex Trapped Combustor, *Energy Conversion and Management*, Volume 65, January 2013, pp. 819-828
- C. Ghenai, Life Cycle Assessment of Packaging Materials for Milk and Dairy Products, *International Journal of Thermal & Environmental Engineering*, Volume 4, No2, pp. 117 – 128, 2012.
- R. AbdRabu, I. Janajreh, and C. Ghenai, Transesterification of Biodiesel: Process Optimization and Combustion Performance, *International Journal of Thermal & Environmental Engineering*, Volume 4, No2, pp. 129 – 136, 2012
- S. Syed, I. Janajreh, and C. Ghenai, Thermodynamics equilibrium analysis for an entrained flow gasifier, *International Journal of Thermal and Environmental Engineering*, Volume 4, No1, pp. 47-54, 2012
- C. Ghenai, Corrosion and Material Selection for Desalination Plant Heat Exchangers, *Research Bulletin on Global Fresh Water, Australian Institute of High Energetic Materials*, Volume 2, pp. 99 – 103, 2011
- C. Ghenai, Combustion of syngas fuel in gas turbine can combustor, *Advances in Mechanical Engineering*, 2010, Vol.2, 342357
- C. Ghenai and I. Janajreh, CFD Analysis of the effects of co-firing biomass with coal, *Energy Conversion and Management*, Volume 51, Issue 8, pp. 1694-1701, 2010
- I. Janajreh, R. Qudaih, I. Talab and C. Ghenai, Aerodynamic flow simulation of wind turbine: downwind versus upwind configuration turbine, *Energy Conversion and Management*, Volume 51, Issue 8, pp. 1656-1663, 2010
- C. Ghenai, H. Sapmaz, and C.X. Lin, Penetration height correlations for non-aerated and aerated transverse liquid jets in supersonic cross flow, *Experiments in Fluids*, Volume 46, pp. 121-129, 2009

- H. Sapmaz, C.X. Lin, and C. Ghenai, Measurements of soot volume fraction in pulsed diffusion flame by laser induced incandescence, *Experiments in Fluids*, Volume 44, pp. 137-144, 2008
- C. Ghenai, and C.X.Lin, Verification and Validation of NASA LEWICE 2.2 Icing Software Code, *Journal of Aircraft*, Volume 43, Number 5, pp. 1253- 1258, 2006.
- C. Ghenai, and C.X. Lin, Dispersion modeling of PM10 released during decontamination activities, *Journal of Hazardous Materials*, Volume 132, Issue 1, pp. 58-67, 2006.
- R.K. Duggirala, C.X. Lin and C. Ghenai, Investigation of double diffusive convection during the solidification of binary mixture (NH₄Cl-H₂O) in trapezoidal cavity, *Experiments in Fluids*, Volume 40, Number 6, pp. 918-927, 2006.
- C. Ghenai, M. Aravind, C.X. Lin, and M.A. Ebadian, Double-Diffusive Convection During Solidification of Metal Analog System (NH₄Cl-H₂O) in Differentially Heated Cavity, *Experimental Thermal and Fluid Science Journal*, Vol.28, pp. 23-35, 2003.
- G.M. Wang, C. Ghenai, and C. Sorensen, Aggregation kinetics in a Turbulent Jet, *Journal of Aerosol Science*, Volume 31, Supplement 1, pp. 825- 26, 2000.
- M. Ulitsky, C. Ghenai, I. Gokalp, L. Ping Wang, and L.R. Collins, A comparison of a spectral model for premixed turbulent flame, Propagation to DNS and Experiments. *Combustion Theory and Modeling*, Vol. 4, No. 3, pp. 241-264, September 2000.
- C. Ghenai and I. Gokalp, Correlation coefficients of the fluctuating density in turbulent premixed flames. *Experiments in Fluids*, Vol. 24, No. 4, pp. 347-353, 1998.
- C. Ghenai, F.C. Gouldin, and I. Gokalp, Mass flux measurements for burning rate determination of premixed turbulent flames. *The Combustion Institute*, Vol. 27, pp. 979-987, 1998.
- C. Ghenai, C. Chauveau, and I. Gokalp, Spatial and temporal dynamics of flamelets in turbulent premixed flames, *The Combustion Institute*, Vol.26, pp. 331-337, 1996.

Books

Sustainable Air Conditioning Systems, Book edited by Chaouki Ghenai and Tareq Salameh, University of Sharjah, Publisher: Intech, June 2017, in progress.

Publications - Books: Edited three books on Sustainable Development

1. C. Ghenai, Sustainable Development - Energy, Engineering and Technologies, Manufacturing and Environment, Book edited by Chaouki Ghenai, ISBN 978-953-51-0165-9, Hard Cover 264 pages, Publisher: Intech, Feb. 2012.
2. C. Ghenai, Sustainable Development – Policy and Urban Development, Tourism, Life Science, Management and Environment, Book Edited by Chaouki Ghenai, ISBN 978-953-51-0100-0, Hard cover, 478 pages, Publisher: Intech, Feb. 2012.
3. C. Ghenai, Sustainable Development – Education, Business and Management, Architecture and Building Construction, Agriculture and Food Security, Edited by Chaouki Ghenai, ISBN 978-953-51-0116-1, Hard Cover, 342 pages, Publisher: INTECH, Mar. 2012

Book Chapters

1. C. Ghenai, Combustion and Emissions Characteristics of Biodiesel Fuels, *Renewable Energy - Trends and Applications*, ISBN 978-953-307-939-4, published by INTECH International Offices, pp. 151 – 164, 2011
2. K. Zbeeb and C. Ghenai, Simulation of low-BTU syngas combustion in vortex trapped combustor, *Engineering Applications of Computational Fluid Dynamics*, pp. 319 -350, 2011
3. C. Ghenai, and A. Sargsyan, Three Dimensional Modeling of Flow Field around a Horizontal Axis wind Turbine (HAWT), *Computational Fluid Dynamics Modeling in Development of Renewable Energy Applications*, Volume 1, pp. 179 - 194, 2011
4. C. Ghenai, Simulation and Modeling of Oxygen Coal Combustion with Flue Gas Recirculation, *CFD Applications in Energy and Environment Sectors*, Volume 1, pp. 1-28, 2011
5. C. Ghenai and A. Sargsyan, Wind Energy, *Path of Sustainable Energy*, INTECH International Offices, Edited by: Jatin Nathwani and Artie Ng, December, 2010

Conferences

- C. Ghenai, T. Salameh, A. Merabet and A. Hamid, Modeling and optimization of hybrid solar-Diesel battery power system, **International Conference on Modeling, Simulation and Applied Optimization**, April, 2017.
- A Inayat, C Ghenai, M Ayoub, E Eisa, Simulation for the production of synthetic natural gas for vehicles (SNGV) from palm waste via gasification with in-situ CO₂ capture, 7th Modeling, Simulation, and Applied Optimization (ICMSAO), April, 2017.
- C. Ghenai, E. Pigem, T. Salameh and F.M. Ali , Simulation and Optimization of Hybrid Renewable Energy System for Desalination Plant, **International Conference on Water, Energy and Environment**, American University of Sharjah, Sharjah, Feb. 28 – March 2, 2017.
- C. Ghenai, T. Slameh, and I. Janajreh, Numerical Modeling of the performance of Shrouded Horizontal Wind Turbine, **GCREEDER 2016**, Amman, Jordan, 2016.
- C. Ghenai and T. Salameh, Modeling water consumption fort thermal power plants, **13th International Conference of the Arab Academy of Sciences**, Amman, Jordan, December 5-6, 2015
- C. Ghenai, Flame Visualization in Trapped Vortex Combustor using Conventional and Renewable/Alternative Fuels, **13th International Conference on Fluid Control Measurements and Visualization**, Doha, Qatar, November 15-18, 2015
- C. Ghenai, Combustion and Emissions Performance of Syngas Fuels Derived from Palm Kernel Shell and Polyethylene (PE) Waste via Catalytic Steam Gasification, Paper # WW3124, **International Conference on Energy, Environmental and Chemical Engineering**, Dubai, June 18-19, 2015.
- C. Ghenai and I. Janajreh, Combustion of Biomass and Waste-Based Syngas Fuels, **International Conference on Industrial Waste & Wastewater Treatment & Valorization**, Athens, Greece, 21-23 May, 2015.
- C. Ghenai and I. Janajreh, Comparison of Energy Storage Options and Determination of Suitable Technique for Solar Power Systems, **Third Southern African Solar Energy Conference**, Kruger National Park, South Africa, 11 – 13 May 2015
- I. Janajreh, and C. Ghenai, Hydrogen production from coal gasification using solar energy: thermodynamic equilibrium modeling and exergy analysis, **Third Southern African Solar Energy Conference**, Kruger National Park, South Africa, 11 – 13 May 2015
- C. Ghenai, Energy, Water, Carbon Nexus and Statistical Data for the Middle East and North Africa (MENA) countries, **3rd International Conference on Water, Energy and Environment**, American University of Sharjah, March 24-26, 2015.
- C. Ghenai and T. Salameh, Incorporation of academic service learning in Science, Technology, Engineering, and Math (STEM) courses, **Seventh International Forum on Engineering Education**, Sharjah, United Arab Emirates, March 17-19, 2015.
- T. Salameh and C. Ghenai, Technology Enhanced Learning for the Sustainable and Renewable Engineering Department at the University of **Seventh International Forum on Engineering Education**, Sharjah, United Arab Emirates, March 17-19, 2015.
- C. Ghenai, M. Madani, and I. Janajreh, New correlation for the average Nusselt number in squealer in turbine blade, **10th International Conference on Heat Transfer, Fluid Mechanic and Thermodynamics**, Orlando, Florida, 14-16 July, 2014.
- F. Obaid, I. Janajreh, and C. Ghenai, Numerical Modeling of Demister in Multi Stage Flash (MSF) Desalination, **10th International Conference on Heat Transfer, Fluid Mechanic and Thermodynamics**, Orlando, Florida, 14-16 July, 2014.
- I. Janajreh, and C. Ghenai, Numerical Simulation of Internal Channel Cooling by Jet Impingement, **10th International Conference on Heat Transfer, Fluid Mechanic and Thermodynamics**, pp. 1012-1019, Orlando, Florida, 14-16 July, 2014.
- I. Janajreh, M. Almusharekh, and C. Ghenai, Transesterification process of waste cooking oil: catalyst synthesis, kinetic study, and modeling sensitivity, **2nd International Conference on Sustainable Solid Waste Management**, Athens, June 12-14, 2014.

- C. Ghenai, Energy-Water-Carbon Interconnections: Challenges and Sustainable Solution Methods and Strategies for the MENA Countries, Water-Energy Nexus and Waste Treatments for Sustainable Arab World, Beirut, Lebanon, December 6-7, 2013
- C. Ghenai, Comparison of Resource Intensity and Operational Parameters of Renewable, Fossil and Nuclear Power Systems; Energy and Water Sustainability Conference, Beirut, Lebanon, December 7-8, 2012
- C. Ghenai, K. Zbeeb and I. Janajreh, Combustion of Alternative Fuels in Vortex Trapped Combustor, *Global Conference on Renewable and Energy Efficiency for Desert Regions*, Amman-Jordan, April 26th – 28th, 2011
- S. Syed, I. Janajreh, and C. Ghenai, Thermodynamics equilibrium analysis for an entrained flow gasifier, *Global Conference on Renewable and Energy Efficiency for Desert Regions*, Amman-Jordan, April 26th – 28th, 2011
- C. Ghenai, Eco Audits and Selection Strategies for Eco Design, Ninth LACCEI Latin American and Caribbean Conference (LACCEI'2011), Engineering for a Smart Planet, Innovation, Information Technology and Computational Tools for Sustainable Development, August 3-5, 2011, Medellín, Colombia.
- C. Ghenai, Technology Enhanced Learning for Delivering Mechanical Engineering Course at Florida Atlantic University, Ninth LACCEI Latin American and Caribbean Conference (LACCEI'2011), Engineering for a Smart Planet, Innovation, Information Technology and Computational Tools for Sustainable Development, August 3-5, 2011, Medellín, Colombia.
- C. Ghenai, Web-based assignment and assessment platform for face to face, hybrid and fully online courses, *International Conference on Education, Research and Innovation*, Madrid, 15-17 November, 2010.
- K. Zbeeb and C. Ghenai, Numerical Simulation of the Dispersion of Fire Extinguishing Agents in Turbulent Flow in the Presence of Clutter Elements of Aircraft Engine Nacelles, *FEDSM2009- 78431, ASME Fluids Engineering Division Summer Conference*, Vail, Colorado, Aug. 2-6, 2009
- C. Ghenai and I. Janajreh, Biomass-Coal Co-Combustion Analysis, USA-EU-China *Thermophysics Conference, Renewable Energy*, Beijing, China, May 2009
- S. Bastiani and C. Ghenai, Performance and emissions testing of Diesel engine using biodiesel fuel blends, *Renewable Energy World Conference and Exposition*, March 10-12, 2009, Las Vegas, Nevada
- C. Ghenai, Prediction of the effects of turbulence on the dispersion of liquid droplets in the presence of cluttered aircraft engine nacelles, *International Aerospace CFD Conference*, 18-19 June 2007, Paris France
- I. Janajreh and C. Ghenai, Turbine blade analysis, *International Aerospace CFD Conference*, 18- 19 June 2007, Paris France

RESEARCH GRANTS

University of Sharjah

- Seed Grant - UoS: Solar assisted pyrolysis process to convert plastic waste to bio-oil, 20,000 AED
- Research Group – UOS: Sustainable Energy Development, 250,000 AED
- Research Group - UOS : 100,000 AED (Operational Grant), 2015-2016
- Research Group - UOS : 120,000 AED (Operational Grant), 2016-2016
- Renewable Energy Laboratory (RISE-UOS): 999,000 AED

Applied Research Centre (Florida International University)

- Icing software code validation: LEWICE 2.2, NASA, Glenn Research Centre, 2002, \$50,000
- Advanced diagnostic system for three dimensional micro and macro flow field measurements, United States Air Force, 2002, \$178,000
- Active Control Strategies to Optimize Supersonic Fuel/Air Mixing for Combustion Associated with Fully Modulated Transverse Jet in Cross Flow, United States Air Force, Office of Scientific Research, 2003, \$600,000

GRANTS AND AWARDS (Florida Atlantic University)

- Performance of Smart Silicon PV Solar Technology: Hybrid Crystalline Silicon and Innovative Thin Film, Florida Power and Light, \$41,000, 2014.
- Evaluation of single Axis PV solar tracker in Florida - Performance, foundation concept and long term cost; Florida Power and Light, \$50,487, 2013
- Integrated Modeling Methodology for Energy Resource Planning and Climate Change Mitigation Assessment, Climate Change Research Program, 2012, \$3,300
- Mathematical Modeling and Aero-Hydro-Elastic Response of Hybrid Floating Platform for Combined Wind and Wave/Current Energy Conservation, 2012, FAU, \$20,000
- (1) Solar Water Pumping and (2) Heat Sink using PCM/Foam materials, Undergraduate Research Program, 2011, \$1,200
- CFD Simulations of Cycloidal Wave Energy Converter, FAU Faculty Research Mentoring Program, , 2011, \$2000
- Numerical Simulation of Flow Past Underwater Turbine, State of Florida, 2009, \$ 39,998
- Testing Diesel Engine under Controlled Laboratory Conditions, Vapster Inc., 2009, \$998.00
- CES EduPack 2010 to support Sustainability related Courses, 2010, \$22,482
- Renewable Energy for Sustainable Global Future, Honor Program, 2010, \$7,000
- Materials, Sustainability and Environment, Honor Program, 2011, \$ 7,000
- New Web-Based Assignment and Assessment Platform, Assessment Grant, 2009, \$2,500
- Undergraduate Teaching Award, 2009, \$2,000
- Summer Curriculum Development Grant, 2011, \$1200

Funding for Research Equipment – Internal Funding (Florida Atlantic University)

Biodiesel Processor: \$3,797; Engines, Engine dynamometer and Gas Analyzer ~ \$18,000; Hot Wire System: \$8,000; FTIR System for Biodiesel Fuel Analysis (Joint equipment between Mechanical and Civil Engineering Departments): \$18,000

ACADEMIC AWARDS

- Honorary Fellow of the Australian Institute of High Energetic Material
- Member of the Editorial Board of the Research Bulletin of the Australian Institute of High Energetic Material
- Member of the Editorial Board – Energy and Science Technology Journal
- FAU Faculty Honor Fellow: 2010-2011 and 2011- 2012
- Excellence and Innovation in Undergraduate Teaching, FAU, April 2010
- Academic Service Learning (ASL) STEM Award, 2011
- HCET-FIU Exceptional Performance Award, Oct. 2002
- Scholarship (Postdoc), CNRS, Orleans, France, 1996 – 1997
- Scholarship (Master and PhD): French/Algerian Governments, 1990 - 1995

PROFESIONAL DEVELOPMENT

- Faculty Learning Community: (1) Technology Enhanced Learning, 2008 – 2009; (2) Sustainable Pedagogy, 2009 -2010; (3) Assessment Technologies and Strategies, 2010 – 2011; (4) Online Course Assessment, 2011 – 2012.
- Writing Across Curriculum – WAC Summer Curriculum Development Seminar, 2011
- ELearning Designer and Facilitator Certification Course, Spring, 2012
- Energy Audit Certifications (Residential and Commercial Buildings), 2013

COMMUNITY SERVICES

SERVICES ACTIVITIES – UNIVERSITY

Served in University, College and Department Committees

- **University of Sharjah:** Chairman – Research Funding Department, Office of Vice Chancellor of Research and Graduate Study
- **University of Sharjah:** Chair – Energy Committee, University Campus Sustainability Committee
- **University of Sharjah** – College of Engineering: ABET Committee member, and Member of the College Council
- **University of Sharjah** – College of Engineering: Master of Science in Aerospace Engineering Committee - Member
- **University of Sharjah** – SREE – Chair – ABET Committee, and member of the Faculty Search Committee.
- **University of Sharjah** - Member – Sharjah Centre Science and Technology (SCST)
- **University of Sharjah, College of Engineering** – Member, College of Engineering Council
- **University of Sharjah** – Member: Committee to prepare the 11th Research Forum – Task Force at the University level
- **University of Sharjah** – Member, University Research Board
- **University of Sharjah** -SREE Department, Faculty Search Committee Member.
- **University of Sharjah** - SREE Local Accreditation Committee (MOHESR).
- **University of Sharjah**, Member of the Graduate Program Committee.
- **FAU University** Member of the University Research Committee 2008 -2009; Member of the Technology Enhanced learning Committee 2008 -2009; Member of the Sustainability Pedagogy Committee 2009 -2010; Leader of the Assessment Technologies and Strategies 2010 – 2011.
- **College of Engineering and Computer Science - FAU:** Chair – Research Committee COECS 2008 -2009; and Member of the College Sustainability Task Force 2010 (Infusing Sustainability in the Engineering Curriculum).
- **Ocean and Mechanical Engineering Department - FAU:** Member – ME ABET Review Committee 2007 – Present; Member – ME Academic Affair committee 2008 – Present; Member – ME Undergraduate Committee 2009 -2010; Member – OME Chair search committee 2010

SERVICES ACTIVITIES – ACADEMIC AND PROFESSIONAL ORGANIZATIONS

- Editor – Sustainable Air Conditioning Systems Book – Intech.
- Speaker - Ministry of Energy and Emirates Scientists Council, Emirates Research and Development Conference in Energy and Water – Dubai
- Member - Saudi Section of the Combustion Institute
- Judge - 2017 Think Science Competition.
- Reviewer – Journal paper, Energy Exploration and Exploitation
- Participation - Conference Sustainable Universities in Abu Dhabi
- Speaker – Middle East Energy Storage Forum, Dubai, May 24, 2017
- Member – Association of Arabic Universities, Arab League, 2016
- Participant to the German-UAE workshop on Energy and water in the Gulf Cooperation Council countries (EWGCC), 2016
- AdHoc ABET Committee – University of Sharjah, 2015-2016 and 2016-2017.
- Judge – Think Science competition, Dubai, UAE
- Judge for the UAE undergraduate Research Competition, May 2015
- Reviewer for the ASME Journal, Combustion and Flame, Combustion Theory and Modeling, Combustion Science and Technology and Experimental Thermal & Fluid Science Journals
- Book Reviewer: Reviewed engineering books

- Introduction to Combustion, S. Turns, MacGraw Hill
- Introduction to Computational Fluid Dynamics using Matlab, Cengage Learning
- Introduction to Technical Problem Solving Using Matlab, Oxford University Press
- Fundamental Engineering Review - review Thermodynamics, Dynamics, and Fluid Mechanics for ME students - Fundamental Engineering Exam
- Served as a judge for the State Science and Engineering Fair of Florida
- Served as a judge for Broward County Science Fair, Fort Lauderdale
- Co-Chair – Renewable Energy Session, Algerian Summer University, July 2012
- Organizer - Algerian Winter University, December 2011
- COMSOL Multi-physics Workshop Organizer – FAU, 2009 and 2011.