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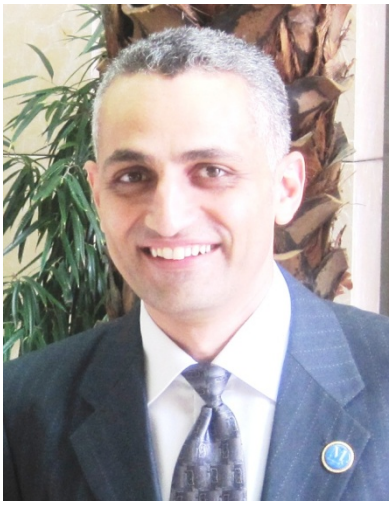

EDUCATION

***Ph.D.*, Mechanical Engineering Department, 2003**
University of Cincinnati, OH, USA
Major: Micro Fluid Flow and Heat Transfer
Minor: Micro Electro Mechanical System, MEMS, and Material Science

***M.S.*, Mechanical Engineering Department, 1999**
Jordan University of Science and Technology, Jordan
Major: Thermal, Computation Fluid Mechanics, CFD and Energy
Minor: Operation Research and Project Management

***B.Sc.*, Mechanical Engineering Department, 1997**
Jordan University of Science and Technology, Jordan
Major: Fluid Dynamics, Thermal Science, and, Energy Convergent
Minor: Solids, Strength of Material, Cutting Tool, and Dynamics

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MANAGERIAL QUALIFICATIONS

- ***ASME Student Advisor***: Advise and mentor students to lead and support students activities.
- ***Program Chair IRECGA'14***: Communicate and arrange for paper submissions and evaluation. Planning and scheduling conference program.

- ***Course Coordinator***: Communicate and arrange course material "Introduction to Ethics and Design". Including planning and scheduling course exams with multi-discipline course instructors.
- ***Forum Chair DGEF2013***: led, communicated and planned for Dubai Global Energy forum (DGEF2011) with supporting team from Dubai Supreme Council of Energy.
- ***Publicity Chair IRECGA'12***: Supported and publicized for the conference on multiple level including invitation of highly known scientists, College representatives, and authors from multiple institutes.
- ***Forum Associate Chair DGEF2011***: led, communicated and planned for Dubai Global Energy forum (DGEF2011) with Prof. Abdulla Al Amiri and supporting team from Dubai Municipality.
- ***Invited Sessions Chair IRECGA'10***: Arranged and planned for invited session for special topics.
- ***Lead Project Engineer***: Working with GE businesses I led, communicated and planned for six projects with total budget of $2 million. The projects were successful and meet timetables and expectations.

EMPLOYMENT HISTORY

Associate Professor **(June, 2013-Current)**
Assistant Professor **(September, 2007-June, 2013)**
United Arab Emirates University, AlAin, UAE
- Teach different thermal engineering courses for undergraduate and graduate level.
- Establish internally and externally funded research project.
- Serve in different department, college and university committees.
- Served in the following committees: Organizing Committee ICN 2008, ANSYS Short Course, UAE University, 2008, Reviewer for international journal papers, Reviewer for InterPack Conference 2007, Canada, UAE University Engineering Consulting Committee for purchasing A/C, 2008, Industrial Engineering Master Program, UAE University, 2007, Secretary, ME Department Council 2007-2008, Chairman, ME Thermal-Fluid Focus Group Committee 2007-2008, Member, Mid-Year Exam Committee, 2007-2008, Member, Senior Design Project Committee, 2007-2008, Member, Publicity and News Letter Committee, 2007-2008, Member, Graduating Students and Alumni Committee, 2007-2008, Member, Manufacturing BS program Committee, 2007-2008

Research Scientist - Lead Project Engineer (III) **(August, 2005-August, 2007)**
General Electric Research Center, Niskayuna, NY, USA
- Thermal Science Research Engineer, Energy Propulsion Technology, Thermal System Laboratory (TSL)
- Propulsion 21: Enhanced internal blade passive cooling including experimental testing of prototype GE leap56 blade for enhanced cooling circuit. Project required building of test setup and utilizing data acquisition, thermal liquid crystal, Thermography, thermocouples, pressure gages, digital camera, and MathCAD in crunching the collected results.
- Synthetic Jet measurements: Experimentally test the synthetic jet cooling capabilities.
- Thermal Management 2006: Project management for more than four engineers in India and two in the US. Proposed, executed, managed, and delivered 1-D physical tool to GE Aviation in Cincinnati, OH. The tools used for analysis includes FlowSim/SimuLink platform and it simulates different components in GEnx-1B and GEnx-2B engines namely; Air Intakes, Air Exhaust, and Heat Exchanger at subsonic engine conditions. The 1-D models were based on literature and physics based models. Lead the execution of CFD analysis and UG automated CAD manipulation by Indian team. The tools were tested with GEnx engine test data.
- Evaluated high speed generator principle and provide technical advice to GE energy business.

Structure Analyst Engineer (III) **(December, 2003-August, 2005)**
HONEYWELL Int., Torrance, CA, USA
- Structural Integrity Analyst Engineer, Heat Exchanger Department, Air Frame Systems, ES&S (Engines Systems & Services)
- Utilize ANSYS to perform stress analysis, Structure Optimization, Random Vibration, Thermal Fatigue, LCF-Low Cycle Fatigue, and Life Analysis.

- Responsible for model, design, and test different components including Heat Exchanger, Frame Ballet, Ozone converter, valves, and many different engineering components.
- Meet the customer requirements CTQ's, Utilize and support IPDS activity. Attend and present work and result for external customer such as Boeing, Northrop Grumman, and Internal customer such as design group, Project engineer, and manufacturing.
- Responsibilities included investigating design geometry, drawing, material, and design requirements by customer.
- Projects: (1) Analyze and build FE model for BOING 747 NGS-Nitrogen Generating System ballet and the main Heat Exchanger in the system (B747 NGS ballet and HX). (2) F7X primary and secondary heat exchanger design for vibration and pressure. (3) E-2D Hawkeye Engine/Generator Oil Cooler and Ejector Assembly. Master the ability to utilize ANSYS Finite Element software.

Adjunct Instructor **(September, 2001- December, 2003)**
University of Cincinnati, Cincinnati, OH, USA
Part-time instructor in the College of Applied Science; took full responsibility to teach Fluid Mechanics, Heat Transfer lab, Mechanics of Material II, and Strength of Material & vibration laboratory. Responsibilities included designing the course from a recommended course outline, course instruction, writing exams and homework.

Research Assistant /Doctoral Student **(September, 1999- June, 2003)**
University of Cincinnati, Cincinnati, OH, USA
- Pursued a NASA-Glenn sponsored research project of closely interrelated experimental and theoretical investigations of Electronic Cooling utilizing the micro Loop Heat Pipe device. Established mathematical models for various physical phenomena and used experimental MEMS techniques to fabricate a micro LHP device. A coherent porous silicon wick is fabricated, which acts as a pump, taking advantage of the very high capillary pressure generated because of the small sized pores. Both thermal modeling and measurements are done to test the feasibility of the thermal and cooling applications.
- Analyze the laminar and turbulent flow in a 2-D Duct, the project models airflow in a two-dimensional duct with different loading conditions. Temperature dependent viscosity variation is studied. The governing equations were solved using commercial package FLUENT.
Design a water-to-air heating coil of continuous plate-fin-tube type, which is used in a HVAC system. The heating coil has multiple rows of tubes and is circuited to approach counter flow. The classic NTU method is applied to determine the overall coefficient, fluid capacity rates, dimensions and configurations of the heating coil.

- Study, test and optimize the performance of the vibro-separators, which are used to dry pharmaceutical slurries by purging dry air and vacuum. The effective factors of the drying cycles, such as airflow rate, humidity, vacuum level and temperature, have been investigated and a theoretical model has been set up to formulate the drying process. A computer program is written to calculate the drying period of a sample product based on the assumptions defined in the theoretical model. The project is funded by SWECO Inc.

Course Instructor (Summer 2000)
University of Cincinnati, Cincinnati, OH, USA
Took full responsibility to teach Fluid Mechanics; responsibilities included designing the course from a recommended course outline, course instruction, writing exams and homework.

Graduate Teacher Assistant **(1999-2003)**
University of Cincinnati, Cincinnati, OH, USA
Assigned as teaching assistant for undergraduate and graduate level courses including Heat Transfer, Fluid Mechanics, Thermodynamic, and Heat Transfer lab; duties included grading exams and homework and being available for discussion sessions with the students.

Research Assistant / Teacher Assistant / Master Students **(September 1997- June 1999)**
Jordan University of Science and Technology, JORDAN
- Developed CFD FORTRAN code under UNIX machine and MATLAB codes under Windows to model transient forced convection flow inside a duct partially filled with porous media. I used finite difference scheme with forward and center difference. Utilize CFD to model transient force convection in porous media.
- Assigned as teaching assistant for undergraduate and graduate level courses including Heat Transfer, Fluid Mechanics, Thermodynamics, Instrument Lab, Hydraulic Lab, Strength of Materials, Engineering Drawing, Vibration and Heat Transfer Labs. Duties included grading exams and homework and being available for discussion sessions with the students.
- Took full responsibility to teach ANSYS CAD lab. Responsibilities included designing the course from a recommended course outline, course instruction, preparing exams and homework.

Co-op Material & Safety Engineer **– Visiting Scholar (Summer 1997)*:***
BAM-Bundesanstalt fur Materialschung und-prufung, Berlin, GERMANY
Work as Material Science Research Engineer with the Chemical Research Center. Duties include testing safety procedure in manufacturing, transportation and storage for different industry such as automotive and chemical industry. Conduct different safety tests to check flammability hazard and toxic effect. Responsible to build a database that describes material and chemical properties.

AFFILIATIONS

- *ASME - American Society of Mechanical Engineers (Member and UAEU Student Advisor).*
- *ASES - American Solar Energy Society.*
- *Design For Six Sigma (DFSS) - Green Belt Certified, 2004, 2006.*
- *QBQ - Question Behind the Question.*
- *AIAA - American Institute of Aeronautics and Astronautics.*

TRAINING WORKSHOPS

- *Workshop: An Integrated System Approach to Energy and Sustainability. UAE University ICRE2010, Al-Ain, UAE (March 2010), Instructor: Dr. Said Al-Hallaj: Chairman/CEO, All Cell Technologies LLC, Chicago, IL.*
- *Workshop: Wind Power Systems - A Short Course on Generating Electrical Energy from Wind Power Plants. UAE University ICRE2010, Al-Ain, UAE (March 2010), Instructor: Prof. Chem Nayar from Electrical and Renewable Energy Engineering, Curtin University of Technology, Perth, Australia*
- *Extensive course and workshop on Micro Scale Heat Transfer Physics course and workshop, General Electric Research Center, Niskayuna, NY, USA (June 2006). Course Instructor: Prof. Massoud Kaviany from Michigan Ann Arbor.*
- *Extensive course and workshop on Design For Six Sigma (DFSS-Green Belt) course and workshop, General Electric Research Center, Niskayuna, NY, USA (November 2005)*
- *Extensive course and workshop on Design For Six Sigma (DFSS-Green Belt) course and workshop, Honeywell, Torrance, CA, USA (2004)*
- *Extensive workshop on PRO-E CAD design, PADT Inc, Honeywell, Torrance, CA, USA (2004)*
- *Short course & workshop on Pre-& Post-Processing using I-DEAS, SDRC, Milford, OH, USA (2001)*
- *Short course and workshop on Linear Solvers using I-DEAS, SDRC, Milford, OH, USA (2001)*

JOURNAL PAPERS AND PUBLICATIONS

1. Elnajjar, E., **Hamdan, M. O.**, Haik, Y., "Comparison Study of Central and Side Confined Jet Discharging on Uniformly Heated Curved Surface", *Submitted to* Experimental Thermal and Fluid Science Journal (June 2011).
2. Hamdan, M. O., Selim M., Al-Omari S.A., Elnajjar E., " Hydrogen Supplement Co-combustion with Diesel in Compression Ignition Engine", Submitted to Renewable Energy Journal (May 2014).
3. Elnajjar, E., **Hamdan, M. O.**, Haik, Y., (2013), "Experimental Investigation of Internal Channel Cooling Via Jet Impingement", Fluid Dynamics and Materials Processing Journal, vol.9, no.1, pp.77-89, Tech Science Press. download
4. Elnajjar, E., Haik, Y., **Hamdan, M. O.**, Khashan, S., (2013), "Heat Transfer Characteristics of Multi-walled Carbon Nanotubes Suspension in a Channel Flow", Journal of Heat and Mass Transfer, DOI 10.1007/s00231-013-1212-1.Link
5. Elnajjar, E., Selim, M., **Hamdan, M. O.**, (2013), "Experimental Study of Dual Fuel Engine Performance Using Variable LPG Composition and Engine Parameters", Energy Conversion and Management 76, pp. 32–42. Link
6. **Hamdan, M. O.**, (2013), "An Empirical Correlation for Isothermal Parallel Plate Channel Completely Filled with Porous Media", Thermal Science Journal. download
7. Saraiji, R., **Hamdan, M. O.**, Harb, A., (2013), "Illuminance Degradation of LED Streetlighting Luminaires in a Hot Environment", Accepted for publications in LEUKOS. Link
8. **Hamdan, M. O.**, Alsayyed, B., Elnajjar, E., (2012), "Nozzle Parameters Affecting Vortex Tube Energy Separation Performance", Journal of Heat and Mass Transfer - Springer, doi:10.1007/s00231-012-1099-2. download
9. Elnajjar, E., **Hamdan, M. O.**, Selim, M., (2012) "Experimental Investigation of Dual Engine Performance Using Variable LPG Composition Fuel", Renewable Energy Journal, http://dx.doi.org/10.1016/j.renene.2012.09.048.download
10. **Hamdan, M. O.**, (2012), "Analysis of Solar Chimney Power Plant Utilizing Chimney Discrete Model", Renewable Energy Journal, http://dx.doi.org/10.1016/j.renene.2012.09.047. download
11. **Hamdan, M. O.**, Elnajjar, E., Haik, Y., (2011), "Measurement and Modeling of Confined Jet Discharged Tangentially on a Concave Semicylindrical Hot Surface", ASME Journal of Heat Transfer 133(11), pp (7pages).download
12. **Hamdan, M. O.**, Alawar, A., Elnajjar, E., Siddique, W., (2011), "Experimental Analysis on Vortex Tube Energy Separation Performance", Journal of Heat and Mass Transfer, doi 10.1007/s00231-011-0824-6. download
13. **Hamdan, M. O.**, (2011), "Analysis of a solar chimney power plant in the Arabian Gulf region", Renewable Energy 36, doi:10.1016/j.renene.2010.05.002. download
14. **Hamdan, M. O.,** Al-Nimr, M.A., (2010), "The use of porous fins for heat transfer augmentation in parallel-plate channels", Journal of Transport in Porous Media 84, pp. 409-420, DOI 10.1007/s11242-009-9510-2. download
15. **Hamdan, M. O.**, Elnajjar, E., (2009), "Thermodynamic Analytical Model of a Loop Heat Pipe", Journal of Heat and Mass Transfer 46, pp. 167-173, DOI 10.1007/s00231-009-0555-0. download
16. **Hamdan, M. O.,** Al-Nimr, M.A., (2009), "Critical Coating Radius of Spherical Particle in Thermal Radiation Environment", technical note, Journal of Thermophysics and Heat Transfer 23(3), pp.634-638. download
17. Alkam, M., Al-Nimr, M.A., **Hamdan, M.**, (2002), "On forced convection in channels partially filled with porous substrates", (38) Issue 4-5, pp 337-342, Heat and Mass Transfer. download
18. Alkam, M., Al-Nimr, M.A., **Hamdan, M.**, (2001), "Enhancing heat transfer in parallel-plate channels by using porous inserts", Int. J. Heat and Mass Transfer, 44(5), pp. 931-938. download
19. **Hamdan, M.**, Al-Nimr, M.A., Alkam, M., (2000), "Enhancing forced convection by inserting porous substrate in the core of a parallel-plate channel", Int. J. Numerical Methods for Heat and Fluid Flow, 10(5), pp. 502-517.download

CONFERENCE PAPERS AND MANUSCRIPTS

1. **Hamdan M.O.**, Martin P., Ateeq A., Sayedna A., Shehhi A., AlAwbathani M., " Enriching Diesel Engine Air-Intake with Hydrogen-Oxygen Mixture ", will appear in the proceedings of the 7th International Conference on Thermal Engineering Theory and Applications, Marrakesh, Morocco, May 6-8, 2014. ICTEA2014.
2. Al Omari S., **Hamdan M. O.**, Selim M. Y. E., Elnajjar E., "The potential of using raw jojoba oil as fuel in furnaces", Proceedings of the 3rd International Conference on Renewable Energy: Generation and Applications, AlAin, UAE, March 2-5, 2014. ICREGA2014.
3. **Hamdan M. O.**, Martin P., Elnajjar E., Selim M. Y. E., Al Omari S., "Diesel Engine Performance and Emission Under Hydrogen Supplement", Proceedings of the 3rd International Conference on Renewable Energy: Generation and Applications, AlAin, UAE, March 2-5, 2014. ICREGA2014.
4. **Hamdan M. O.**, Khashan S., "Numerical Investigation of Solar Chimney Power Plant in UAE", Proceedings of the 3rd International Conference on Renewable Energy: Generation and Applications, AlAin, UAE, March 2-5, 2014. ICREGA2014.
5. Ateeq A., Sayedna A., Shehhi A., Al Awbathani M., **Hamdan M. O.**, "Experimentally Assessing Hydrogen-Oxygen Production Using Alkaline Fuel Cell", Proceedings of the 3rd International Conference on Renewable Energy: Generation and Applications, AlAin, UAE, March 2-5, 2014. ICREGA2014.
6. **Hamdan, M. O.**, Selim M., Al-Omari S.A., Elnajjar E., Ghannam M., "Effect of Stabilized Water-Diesel Emulsions on External Combustion Characteristics", will be presented in the ASME 2013 Summer Heat Transfer Conference, ASME 2013, July 14-19, 2013, Minneapolis, Minnesota, USA.
7. **Hamdan, M. O.**, Hayek A., "Effect of Stabilized Water-Diesel Emulsions on External Combustion Characteristics", will be presented in the ASME 2013 Summer Heat Transfer Conference, ASME 2013, July 14-19, 2013, Minneapolis, Minnesota, USA.
8. Alsayyed B., **Hamdan M.O.**, Aldajah S., "Votex Tube impact on cooling CNC machining", Proceeding of the annual ASME International Mechanical Engineering Congress and Exposition, Denver, Colorado, November 11-17 2012. IMECE2012. Paper No 89885
9. Elnajjar E., **Hamdan, M. O.,** Haik Y., "Experimental Investigation of Impinging Jet Flow on a Heated Curved Surface", 6th International Conference on Thermal Engineering, Istanbul, Turkey, May 22-25, 2012. ICTEA2012.
10. **Hamdan, M. O.,** "Experimental Solar Chimney Data with Analytical Model Prediction", Will be presented in World Renewable Energy Forum, May 13-18, 2012. WREF2012.
11. **Hamdan, M. O.,** "Mathematical Thermal Modeling of Solar Chimney Power Plant", Proceedings of the 2nd International Conference on Renewable Energy, March 4-7, 2012. ICRE2012.
12. Elnajjar, E., **Hamdan, M. O.**, Selim, M., "Experimental Investigation of Dual Engine Performance under Using Variable LPG Composition Fuel, Proceedings of the 2nd International Conference on Renewable Energy, March 4-7, 2012. ICRE2012.
13. Elnajjar E., Haik Y., **Hamdan M. O.**, Khashan S. A., Experimental Study of Convective Heat Transfer of MWCNT in Aqueous Fluid Flow inside Micro-circular Tube, 3rd International conference of Nanotechnology, UAE-AlAin, 27-30 November, 2011.
14. Alsayyed, B., **Hamdan, M. O.**, Elnajjar, E., "Optimal Parametric Model for Vortex Using DOE", accepted for The annual ASME International Mechanical Engineering Congress and Exposition, IMECE2011, Denver, Colorado, 11-17 November 2011.
15. Elnajjar, E., Selim, M., **Hamdan, M. O.**, "Effect of Variable LPG Composition Fuel on Dual Fuel Engine Performance", 11th Conference on Energy for a Clean Environment, Lisbon, Portugal, 5-8 July 2011.
16. Saraiji, R., Harb, A., **Hamdan, M. O.**, "Performance of LED Street Light in Hot Environment", Proceedings of Light 2011, Poznan, Poland, 17-19 May 2011.
17. **Hamdan, M. O.**, Alawar A., Elnajjar E., Siddique W., "Feasibility of Vortex Tube Air-Conditioning System", Proceeding of to the 8th ASME/JSME Thermal Engineering Joint Conference, Honolulu, Hawaii, AJTEC 13-17 March 2011.
18. **Hamdan, M. O.**, Altaher A. A., "Engineer's View of Lectures: PowerPoint versus Chalk and Talk", Proceeding of IAT Technological Education Conference (IAT TEC 2011), Abu Dhabi, UAE, 30-31 March 2011.

19. **Hamdan, M. O.,** "Analytical Thermal Analysis of Solar Chimney Power Plant", Proceedings of the 4th ASME International Conference on Sustainable Energy (ES2010), Phoenix, Arizona, USA, from 17 to 22 May 2010.
20. **Hamdan, M. O.,** "Analysis of a Solar Chimney Power Plant in the Arabian Gulf Region", Proceedings of the International Conference on Renewable Energy, March 8-10, 2010. ICRE2010.
21. **Hamdan, M. O.** and Al-Nimr, M.A., "Thermal Augmentation in Internal Cooling Passage by Converting Impingement Jet to Induced Swirl Flow", 6th International Conference on Computational Heat and Mass Transfer, Proceedings of 6th ICCHMT, May 18–21, 2009, Guangzhou, CHINA, pp. 257-262.
22. **Hamdan, M. O.** and Elnajjar, E., "Loop Heat Pipe: Simple Thermodynamic Model", Proceedings of World Academy of Science, Engineering and Technology, Vol. 40, April 2009, ISSN: 2070-3740, pp. 161-167.
23. **Hamdan, M. O.**, Khashan, S., Elnajjar, E., "Numerical Investigation of Dimpled Surfaces to Enhance Energy Recovery and Heat Transfer", Proceedings of the Tenth Annual Research Conference, Al-Ain, UAE, April (2009), pp. 883-888.
24. Elnajjar, E., Khashan, S., **Hamdan, M. O.**, "Acoustic Excitation of instability waves in free Shear Layer of an Axi-Symmetric Cylinder", Proceedings of the Tenth Annual Research Conference, Al-Ain, UAE, April (2009), pp. 841-849.
25. **M. Hamdan**, Frank M. Gerner and H. T. Henderson, "Steady State Model of a Loop Heat Pipe (LHP) with Coherent Porous Silicon (CPS) Wick in the Evaporator, Proceedings of the 19th Annual IEEE Semiconductor Thermal Measurement and Management Symposium (SEMI-THERM), March 11-13, 2003, San Jose, California.
26. D. Cytrynowicz, **M. Hamdan**, P. Medis, H. T. Henderson, F.Gerner, and E. Golliher, "Test Cell for a Novel Planar MEMS Loop Heat Pipe Based on Coherent Porous Silicon," Space Technology & Applications International Forum, February 2-6, 2003, Albuquerque, New Mexico.
27. D. Cytrynowicz, **M. Hamdan**, P. Medis, A. Shuja, T. Henderson, F. Gerner, and E. Golliher, MEMS Loop Heat Pipe Based on Coherent Porous Silicon Technology, Space Technology and Applications International Form-STAIF, pp 220-232, November 17-22, 2002, New Orleans.
28. Eric Golliher, Ken Mellott, **M. Hamdan**, Frank M. Gerner, Thurman Henderson, Jake Kim, Ryoji Oinuma, Cable Kurwitz and Fred Best, "Status of the Micro Loop Heat Pipe in Silicon Project," International Two-Phase Thermal Control Technologies Workshop at NASA Goddard Space flight Center, September 24-26, 2002.
29. **M. Hamdan**, Debra Cytrynowicz, Praveen Medis, Ahmed Shuja, Frank M. Gerner and H.T. Henderson, Eric Golliher, Ken Mellot and Chris Moore, "Loop Heat Pipe (LHP) Development by Utilizing Coherent Porous Silicon (CPS) Wicks,", Proceedings of the ITHERM International Conference on Thermal Phenomena in Electronic Systems, pp. 457-465, May 29-June 1, 2002, San Diego, California.

BOOKS AND MONOGRAPHS

1. **Hamdan M. O.**, Hejase H. A.N., Noura H. M., Fardoun A. A., ICREGA'14 - Renewable Energy: Generation and Applications, ISBN-13: 978-3319057071 ISBN-10: 3319057073 Edition: 2014th, Springer Proceedings in Energy.
2. Fardoun, A. A., **Hamdan, M. O.**, Obaidat, I., Hejase, H. Guest Editor: Elsevier Journal of Renewable Energy for special edition of ICREGA'12, 2013.
3. Al-Omari, S.A.**, Hamdan, M. O.**, Book of Abstract Editor: 2nd International Conference on Renewable Energy: Generation & Applications 2012, ICREGA'12.
4. **Hamdan, M. O.**, Book of Abstract Editor: 3rd International Conference on Nanotechnology, 2011.
5. **Hamdan, M. O.**, Editor of Speaker's Book: Dubai Global Energy Forum 2011.
6. **Hamdan, M. O.**, Editor of Abstract's Book: Dubai Global Energy Forum 2011.
7. **Hamdan, M. O.**, Guest Editor: Elsevier Journal of Renewable Energy for special edition of ICREGA'10.
8. Fardoun, A, Al-Zuhair, S., **Hamdan, M. O.**, Guest Editor: Elsevier Journal of Renewable Energy for special edition of ICREGA'10, 2011.
9. **Hamdan, M. O.**, Book of Paper Editor: Symposium on Engineering Education 2009.
10. **Hamdan, M. O.**, Book of Abstract Editor: 2nd International Conference on Nanotechnology, 2009.

FUNDED PROJECTS, TEACHING AND RESEARCH GRANTS

1. AbuAli N., Bouktif S., Hayajneh M., **Hamdan M. O.**, "A smartphone and OBDII road & traffic safety system utilizing passenger vehicles", funded by ***UAEU Roadway, Transportation, and Traffic Safety Research Center***, **AED 371,500**, started 2014.
2. **Hamdan M. O.**, Abdulla M. Shehhi, Mohammed M. Al Awbathani, Abdulla M. Ateeq, Abdulla Sayedna, "Designing and Manufacturing a Hydrogen Generation System", funded by: ***ADWEA***, **AED 40,000,** started 2013.
3. Elnaas M., Abdel-Mohsen M., AlGamal M.; AlMarzouqi A., **Hamdan M. O.**, "Effect of Fluidization Hydrodynamics on Tthe Carbonation of Industrial Alkaline Wastes", funded by: UAE University, **AED 160,000** ,Started 2013.
4. **Hamdan M. O.**, "Implementing Loop Heat Pipe for Thermal Management", funded by: UAE University, **AED 30,000**, Started 2013.
5. **Hamdan M. O.**, Ammar A. Al Hilali, Ashraf M. Al Okkeh, Awad A. Alzubaidi, Ibrahim O. Al Attas, "Design, Build and Analyze Water Jet Cutter", funded by: ***ADASI***, **AED 22,600**, 2012.
6. Elnajjar E., Aldajah S., Haik Y., Ayesh A., **Hamdan M. O.**," Investigation of Formation Mechanism of Carbon Nanotube from Diesel exhaust.", funded by: UAE University, **AED 120,000**, 2011.
7. **Hamdan M. O.**, Elnajjar E. "Utilizing Solar Concentrator to Enhance Solar Chimney Efficiency", funded by: UAE University, **AED 30,000**, 2011.
8. **Hamdan M. O.**, Sultan Hawasin, Saeed Suwaidi, Khaled Abdulla, "Solar Chimney for Harvesting Fresh Water and Power Generation", funded by: ***ASCON***, **AED 20,000,** 2011.
9. Internal fund: AED 15,000 (PI), Title: Analysis and Feasibility of Vortex Tube Air-Conditioning Device, 2010, Duration: 1 years, Funding Agent: United Arab Emirates University.
10. Internal fund: **AED 20,000** (PI), Title: Thermal augmentation in internal cooling passage utilizing impingement jet to induce swirl flow, 2009, Duration: 1 years, Funding Agent: United Arab Emirates University.
11. Internal fund: **AED 20,000** (Co-PI), Title: Single Phase Heat Transfer in Micro-tube heat sink for Microelectronics Cooling., 2009, Duration: 1 years, Funding Agent: United Arab Emirates University.
12. Internal fund: **AED 20,000** (PI), Title: Experimental Investigation Utilizing Dimpled Surfaces to Enhance Energy Recovery and Heat Transfer 2008, Duration: 1 years, Funding Agent: United Arab Emirates University.
13. External fund: **$6,000,000** (Co-PI), Title: Engineered Nanostructures for High Thermal Conductivity Substrates, 2008, Duration: 3 years, Funding Agent: DARPA & GE research Center NY.
14. Internal fund: **$3,200** (PI), Title: Summer Fellowship - Two phase cooling technology with micro loop heat pipe (LHP), 2001 & 2002, Duration: 2 months, Funding Agent: University of Cincinnati grants.
15. External fund: **$100,000** (Co-PI), Title: Develop high efficient cooling device utilizing CPS wick, 2001, Duration: 1 years, Funding Agent: NSF grant.
16. External fund: **$100,000** (Co-PI), Title: Loop Heat Pipe Development - Passive cooling technology, 1999, Duration: 4 years, Funding Agent: NASA (GRC), NASA (LaRC) & University of Cincinnati.

PRESENTATIONS

- *Research development and collaboration titled: "Creative Thermal Solutions Addressing Multiple Energy Demands", University of Sharjah, May 2013.*
- *Seminar for UAEU graduate students titled: Thermodynamics Process Modeling and CFD Simulation, UAE University, November 2012.*
- *Research development and collaboration titled: "Research Areas Related to Aerospace Applications", University of Washington, October 2009. Representing College of Engineering in UAE University.*

- *CDR and PDR Presentation for E2-Hawkeye Engine/Generator Oil Cooler and Ejector Structure Integrity Analysis.* Honeywell Int., Torrance, CA (2005)
- *CDR and PDR Presentation for Boeing 747 NGS Project, Structure and thermal fatigue analysis.* Honeywell Int., Torrance, CA (2004)
- *Loop Heat Pipe (LHP) Modeling and Development utilizing a Coherent Porous Silicon (CPS) Wick in the Evaporator*, 19th Annual meeting of SEMI-THERM, San Jose, CA, (March 2003)
- *Modeling and Optimizing Loop Heat Pipe (LHP) with Coherent Porous Silicon (CPS) wick,* 12th Annual Meeting of ITHERM, San Diego, CA, (May 2002).
- *Actual LHP device and test protocol*, Cincinnati, OH (April, 2002) NASA 3rd meeting)
- *Global Loop Heat Pipe (LHP) Model*, Cincinnati, OH (June, 2001, NASA 2nd meeting)
- *Loop Heat Pipe Modeling and Experimentally Testing with Coherent Porous Silicon Wick*, Cleveland, OH, NASA Glenn, (July, 2000, NASA 1st meeting)

AWARDS

- ASME-UAEU male chapter Award for the Best Professor Award for the Fall 2010.
- GE "Dinner in the Town" for extraordinary effort in supporting high speed motor design project, (2006).
- Bronze Award from Aerospace Honeywell Int. extra ordinary to complete E-2 AHE Engine/Generator Oil Cooler and Generator (2004).
- Bronze Award from Aerospace Honeywell Int. excellent support for Boeing 747 NGS Project (2004)
- University Graduate Scholarship, University of Cincinnati (1999-2003)
- University Graduate Assistantship, University of Cincinnati (1999-2003)
- University Summer Fellowship, University of Cincinnati (2000-2002)
- UGS-University Graduate Scholarship, J.U.S.T., Jordan. (1997-1999)
- UGA-University Graduate Assistantship, J.U.S.T., Jordan. (1997-1999)
- J.U.S.T. University Awards for exceptional course performance, Jordan. (1996)

PROJECTS

- CFD modeling electronic board cooling and Turbulent Flow utilizing FLUNET CFD package
- Computer simulation for flow over flat plate using MATLAB
- Utilizing MS Project management for planning hospital planning time table
- Case Hardening/Carbonizing Process for low-carbon steel with microstructure analysis
- Analysis and designing of HVAC- Heat Ventilation & Air Conditioning system for a villa
- Modeling different thermal and dynamic problem with ANSYS
- Programming software for designing springs, gears, bearing, pulley and shaft using FORTRAN
- BOING 747 NGS-Nitrogen Generating System
- F7X primary and secondary heat exchanger design for vibration and pressure
- E-2 Hawkeye Engine/Generator Oil Cooler and Ejector Assembly
- GEnx Engine Thermal Management Project for Nacelle components including ACOC – Air Cooling Oil Cooled Heat Exchanger.
- Propulsion 21 for paper engine Leap56 for internal blade cooling.

INSTITUTIONAL AND PROFESSIONAL SERVICES

- Many of UAEU University/College/Department Committee, 2007-2012
- Organizing Committee ICN 2008 and 2011
- ANSYS Short Course, UAE University, 2008
- Reviewer for international journal papers
- Reviewer for InterPack Conference 2007, Canada
- UAE University Engineering Consulting Committee for purchasing A/C, 2008
- Industrial Engineering Master Program, UAE University, 2007
- Secretary, ME Department Council 2007-2008
- Chairman, ME Thermal-Fluid Focus Group Committee 2007-2008
- Member, Mid-Year Exam Committee, 2007-2008
- Member, Senior Design Project Committee, 2007-2008
- Member, Publicity and News Letter Committee, 2007-2008
- Member, Graduating Students and Alumni Committee, 2007-2008
- Member, Manufacturing BS program Committee, 2007-2008

LIST OF COURSES TAUGHT AT UAE UNIVERSITY

No	Course No	Course Title	Semester Offered
1	GENG 220	Engineering Thermodynamics	FS07, SS07, FS08, SS09, FS10, SS10, FS12.
2	GENG 215	Introduction to Engineering Design & Ethics	FS07.
3	GENG 215	Introduction to Ethics & Design	FS11, SS12, FS12.
4	MECH 384	Mechanical Engineering Analysis	Summer 2009
5	MECH 311	Applied Thermodynamics	FS08.
6	MECH 340	Fluid Mechanics	FS07, SS08, SS08, FS09, SS09.
7	MECH 348	Fluid Mechanics Laboratory	FS07, SS08, FS10, SS11, SS12.
6	MECH 411	Heat Transfer	FS13
9	MECH 426	Thermofluid System Design & Analysis	SS09.
10	MECH 514	Heat Engines	Summer 2009, SS11.
11	MECH 650	Advanced Fluid Mechanics	FS09, FS10.
12	MECH 650	Intermediate Fluid Mechanics	FS11.
13	MTSE 604	Thermodynamics of Material	SS10.
14	MECH 585	Graduation Project I	FS08, SS10, FS11.
15	MECH 595	Graduation Project II	SS09, FS10, SS12.
16		GP Coordination	SS11 and FS11.

GOOGLE SCHOLAR

http://scholar.google.ae/citations?user=fLvKmOgAAAAJ&hl=en