

CURRICULUM VITAE

PERSONAL DETAILS

Name: Mamdouh El Haj Assad

Title: Associate professor

Nationality: Finnish

Address: University of Sharjah, Department of Sustainable and Renewable Energy Engineering, P. O. Box 27272, United Arab Emirates

EDUCATION

1990: B. Sc. in Mechanical Engineering

Middle East Technical University, Ankara, Turkey

1992: M. Sc. in Nuclear Engineering

Middle East Technical University, Ankara, Turkey

1998: Ph.D. in Mechanical Engineering

Helsinki University of Technology, Helsinki, Finland

Major subject: Thermal Engineering, minor subject: Power Plant Engineering

PUBLICATIONS

- 1- **M. Assad**, E Bani-Hani, Israa Al-Sawafta, A Sedaghat, Shek Rahman, thermal analysis of end pumped fiber lasers subjected to jacket fluid cooling, *Thermal science* (2020, in press)
- 2- **M. Assad**, K. Khanfer, E. Bani Hani, B. Yousef, Numerical Investigation of Heat Transfer Water-Cooled Roof in an Electric Arc Furnace, *Journal of Thermal Engineering* (2020, in press)
- 3- Akbar Maleki, Milad Elahi, **M. Assad**, Mohammad Alhuyi Nazari, Mostafa Shadloo, Narjes Nabipour, Thermal conductivity modeling of nanofluids with ZnO particles by using approaches based on artificial neural network and MARS, *Journal of Thermal Analysis and Calorimetry* (2020)
- 4- Mahyar Ghazvini, Mohammad Madvar, Mohammad Ahmadi, Mohammad Rezaei, **M. Assad**, Narjes Nabipour, Ravinder Kumar, Technological

Assessment and Modeling of Energy-Related CO₂ Emissions for G8 countries by Using Hybrid Invasive Weed Optimization (IWO), *Energy Science & Engineering* (2020)

- 5- A. Khosravi, M. Malekan, J.J.G. Pabon, X. Zhao, **M. Assad**, Design parameter modelling of solar power tower system using adaptive neuro-fuzzy inference system optimized with a combination of genetic algorithm and teaching learning-based optimization algorithm, *Journal of Cleaner Production* (2020)
- 6- Shek Rahman, Salah Issa, Zafar Said, **M. Assad**, Rashed Zadeh, Yazan Barani, *Case Studies in Thermal Engineering* (2019)
- 7- A Nikkhah, I Bagheri, C Psomopoulos, S Payman, H Zareiforoush, **M. Assad**, A Bakhshipour, S Ghnimi, Sustainable second generation biofuel production potential in a developing country case study, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* (2019)
- 8- A. Khosravi, H., Campos, M. Malekan, R.O. Nunes, **M. Assad**, L. Machado, J.J. Garcia Pabon, Performance improvement of a double pipe heat exchanger proposed in a small-scale CAES system: An innovative design, *Applied Thermal Engineering* (2019).
- 9- M.A.Ehyaiei, A.Ahmadi, **M. Assad**, Tariq Salameh, Optimization of parabolic through collector (PTC) with multi objective swarm optimization (MOPSO) and energy, exergy and economic analyses, *Journal of Cleaner Production* (2019)
- 10- M Shaygan, M.A.Ehyaiei, A.Ahmadi, **M. Assad**, José Luz Silveira, Energy, exergy, advanced exergy and economic analyses of hybrid polymer electrolyte membrane (PEM) fuel cell and photovoltaic cells to produce hydrogen and electricity, *Journal of Cleaner Production* (2019)
- 11- Zafar Said, **M. Assad**, A. Hachicha, E. Bellos, M. Abdulkareem, B. Yousef, Enhancing the performance of automotive radiators using nanofluids, Accepted for publication in *Renewable and Sustainable Energy Reviews* (2019)
- 12- A Nikkhah, S Firouzi, **M. Assad**, S Ghnimi, Application of analytic hierarchy process to develop a weighting scheme for life cycle assessment of agricultural production, *Science of The Total Environment* (2019)

- 13- A Khosravi, S Syri, X Zhao, **M. Assad** , An artificial intelligence approach for thermodynamic modeling of geothermal based-organic Rankine cycle equipped with solar system, *Geothermics* (2019)
- 14- Hanin Mohammed, Amani Al-Othman, Paul Nancarrow, Muhammad Tawalbeh, **M. Assad**, Direct Hydrocarbon Fuel Cells: A Promising Technology for Improving Energy Efficiency, *Energy* (2019)
- 15- A Khosravi, S Syri, **M. Assad**, M Malekan, Thermodynamic and Economic Analysis of a Hybrid Ocean Thermal Energy Conversion/Photovoltaic System with Hydrogen-Based Energy Storage System. *Energy* (2019)
- 16- A. Nikkhah, A. Rohani, K. A. Rosentrater, **M. Assad**, S. Ghnimi, Integration of principal component analysis and artificial neural networks to more effectively predict agricultural energy flows. *Environmental Progress & Sustainable Energy* (2019)
- 17- Ehab Bani-Hani, Muhammad Tawalbeh, Amani Al-Othman, **M. Assad** Rheological Study on Seawater Contaminated with Oil Components. *Polish Journal of Environmental Studies* (2019)
- 18- Noun Abdelwahab, Amani Al-Othman, Muhammad Tawalbeh, **M. Assad** and Khalil Khanafer, The Effect of the Membrane Thickness on the Performance of Direct Methanol Fuel Cell: Factorial Design. *J Porous Media* (2019, in press)
- 19- Z. Said, S. Rahman, **M. Assad**, A. Alami, Heat transfer enhancement and life cycle analysis of a Shell-and-Tube Heat Exchanger using stable CuO/water nanofluid. *Sustainable Energy Technologies and Assessments* (2019)
- 20- T. Salameh, Y. Zurigat, A. Badran, C. Ghenai, **M. Assad**, K. Khanafer, K. Vafai, Numerical Investigation of Two-Phase Flow Over Unglazed Plate Collector Covered with Porous Material of Wire Screen for Solar Water Heater Application. *ASME J Solar Engineering* (2019)
- 21- M. Abdelkareem, W. Tanveer, E. Sayed, **M. Assad**, A. Allagui, S.W. Cha, On the technical challenges affecting the performance of direct internal reforming biogas solid oxide fuel cells. *Renewable and Sustainable Energy Reviews* (2019)

- 22- A. Khosravi, M. Malekan, **M. Assad**, Numerical analysis of magnetic field effects on the heat transfer enhancement in ferrofluids for a parabolic trough solar collector. *Renewable Energy* (2019)
- 23- Mohammad Ali Abdelkareem, Anis Allagui, Enas Taha Sayed, **M. Assad**, Zafar Said, Khaled Elsaid, Comparative analysis of liquid versus vapor-feed passive direct methanol fuel cells. *Renewable Energy* (2019).
- 24- E. Bani Hani, M. Tawalbeh, A. Al-Othman, **M. Assad**, Effects of Environmental and Turbine Parameters on Energy Gains from Wind Farm System: Artificial Neural Network Simulations, *Wind Engineering* (2019)
- 25- Mohammad Malekan; Ali Khosravi; Hamid Reza Goshayeshi; **M. Assad**; Juan Jose Pabon, Thermal Resistance Modeling of Oscillating Heat Pipes for Nanofluids by Artificial Intelligence Approach, *ASME Journal of Heat Transfer* (2019)
- 26- Khalil Abdelwahab, Noun, Al-Othman, Amani, Tawalbeh, Muhammad, **M. Assad**, Khanafer, The Effect of the Membrane Thickness on the Performance of Direct Methanol Fuel Cell: Factorial Design, *Journal of Porous Media*, 2019 (in press)
- 27- Amani Al-Othman, Muhammad Tawalbeh, **M. Assad**, Tartela Alkayyali, Ahmed Eisa, Novel multi-stage flash (MSF) desalination plant driven by parabolic trough collectors and a solar pond: A simulation study in UAE. *Desalination* (2018)
- 28- A. Khosravi, R.O. Nunes, **M. Assad**, L. Machado, Comparison of artificial intelligence methods in estimation of daily global solar radiation. *Journal of Cleaner Production* (2018)
- 29- Khaoula Hidouri, Ali Benhmidene, **M. Assad**, Bechir Chouachi, Experimental evaluation of the effect of air velocity in hybrid solar distiller. *Desalination and Water Treatment* (2018)
- 30- **M. Assad**, Ehab Hussein Bani-Hani, Bashria Yousef, Ahmad Sedaghat and Mohammad Tawalbeh, Simplified model for thermos- and diffusiophoretic deposition in a heat exchanger. *JP Heat and Mass Transfer* (2018)
- 31- M. Abid, B. Yousef, **M. Assad**, A. Hepbasli, K. Saeed, An experimental study of solar thermal system with storage for domestic applications. *Journal of Mechanical Engineering and Sciences* (2018)

- 32- Mady Elbahri, Moh eb Abdelaziz, Shahin Homaeigohar, Abdou Elsharawy, Mehdi Keshavarz Hedayati, Christian Röder, **M. Assad**, Ramzy Abdelaziz, Plasmonic Metaparticles on a Blackbody Create Vivid Reflective Colors for Naked-Eye Environmental and Clinical Biodetection. *Advanced Materials* (2018)
- 33- Mohammad Ali Abdelkareem, **M. Assad**, Enas Taha Sayed, Bassel Soudan, Recent progress in the use of renewable energy sources to power water desalination plants. *Desalination* (2018)
- 34- Ahmad Sedaghat, Ammar Al Shalabi, Armin Eilaghi, **M. Assad**, Laptop Riser, a Useful PBL Project for Diploma Students in Engineering Design. *Journal of Problem Based Learning in Higher Education* (2018)
- 35- E. Bani-Hani, **M. Assad**, Boundary-Layer Theory of Fluid Flow past a Flat-Plate: Numerical Solution using MATLAB. *International Journal of Computer Applications* (2018)
- 36- Ehab Bani Hani, **M. Assad**, The Application of Nanotechnology in Biomechanical Systems: Recent Developments. *MOJ Applied Bionics and Biomechanics* (2018)
- 37- **M. Assad**, E Bani-Hani, M Khalil, Performance of geothermal power plants (single, dual, and binary) to compensate for LHC-CERN power consumption: comparative study. *Geothermal Energy* (2017)
- 38- **M. Assad**, Ehab Bani-Hani, Khalil Khanafer and Bashria Yousef, Characteristics of osmotic flow with cavitation in porous media. *JP Heat and Mass Transfer* (2017)
- 39- M. Albuzaudi, T. Eerikäinen, O. Turunen, M. Ghelawi, **M. Assad**, M. Tawalbeh, D. Bedade, S. Shamekh, Effect of gamma irradiation and heat treatment on the artificial contamination of maize grains by *Aspergillus flavus* Link NRRL 5906. *Journal of Stored Products Research* (2017)
- 40- Mozidi Bouzadi, Tine Grebenc, Ossi Turunen, Hojka Kraigher, Hassan Taib, Abdulhafied Alafai, Imed Sbissi, **M. Assad**, Dattatray Bedade, Salem Shamekh, Characterization of natural habitats and diversity of Libyan desert truffles. *3 Biotech* (2017)

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- 42- Ahmad Sedaghat, Mohammad AlJundub, Armin Eilaghi, Ehab Bani-Hani, Farhad Sabri, Raouf Mbarki, **M. Assad**, Application of pbl in the course fluid and electrical drive systems, case study: Manufacturing an automated punch machine. *Journal of Problem Based Learning in Higher Education* (2017)
- 43- EH Bani-Hani, **M. Assad**, Halogenated Wastes Safe Disposal: Polychlorinated biphenyls. *International Journal of Petrochemistry and Research* (2017)
- 44- EH Bani-hani, **M. Assad**, Recent Technologies in Mitigating Oil Spill Accidents. *Petroleum & Petrochemical Engineering Journal* (2017)
- 45- Sedaghat A, Waked R, **M. Assad**, Khanafer K, Salim MNAB (2017) Analysis of Accelerating Devices for Enclosure Wind Turbines. *International Journal of Astronautics and Aeronautical Engineering* (2017)
- 46- **M. Assad**, M. AlSarheed, A. Sedaghat and K. Khanafer, Performance evaluation of MHD power plant at optimal operating conditions. *Int. J. Energy, Environment and Economics* (2016)
- 47- M. Nadim, N. Saidi, I. Hasani, Y. El Banna, O. Samir, **M. Assad** and S. Shamekh, Effects of some environmental parameters on Mycelia growth of Finnish truffle Tuber Maculatum. *Int. J Eng. & Applied Sciences* (2016)
- 48- **M. Assad**, Ehab Bani-Hani, Ahmad Sedaghat, Ali Al-Muhaiteeb, Khalil Khanafer, Malathe Khalil, New Pneumatic System for Tidal Energy Conversion. *J. Power and Energy Engineering* (2016)
- 49- B. Youseh and **M. Assad**, Performance and Cost Aspect of Double Pass V-Groove Absorber with and without Porous Media. *Int. J. Engineering Research and Technology* (2016)
- 50- M. Gaith, **M. Assad**, A. Sedaghat, M. Hiyasat and S. Alkhatib, Structural Crack detection in composite materials using neural networks. *Int. J. Comp. Civil and Structural Engineering* (2015)

- 51- K. Khanafer and **M. Assad**, A numerical investigation of mixed convection in a lid driven cavity with two cylinders. *Applied Mechanics and Materials*, volume: Manufacturing Science and Technology VI (2015)
- 52- Voitto Kotiaho, Markku Lampinen, and **M. Assad**, Effect of heat exchangers connection on effectiveness. *J. Robotics and Mech. Eng. Research* (2015)
- 53- **M. Assad**, Thermodynamic analysis of MHD Power Cycle. *J. Robotics and Mech. Eng. Research*, (2015)
- 54- A. Sedaghat, Iman Samani, M. Ahmadi-Baloutaki, **M. Assad** and M. Gaith, Computational Study on Novel Magnus Type Aerofoils for use in Wind Turbine Blades. *Energy* (2015)
- 55- A. Sedaghat, **M. Assad** and M. Gaith, Aerodynamics performance of continuously variable speed horizontal axis wind turbine with optimal blades. *Energy* (2014)
- 56- **M. Assad**, Thermodynamic analysis of MHD power plant running at constant velocity. *Int. J. Energy, Environment and Economics*, 22 (2014)
- 57- M. Kuosa, M. Aalto, **M. Assad**, T. Mäkila, M. Lamppinen and R. Lahdelma, Study of a district heating system with the ring network technology and plate heat exchangers in a consumer substation. *Energy and Buildings*, (2014)
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- 59- **M. Assad** and David C. Brown, Thermodynamic analysis of end-pumped fiber lasers subjected to surface cooling. *IEEE Journal of Quantum Electronics*, 49 (2013)
- 60- **M. Assad**, Cooling load optimization for an irreversible refrigerator with combined heat transfer. *Int. J. Energy & Environment*, 4 (2013)
- 61- Christer Nylund and **M. Assad**, Energy optimization of heat engine with infinite heat capacity reservoirs. *Int. J. Thermal & Environmental Engineering*, 6 (2013)
- 62- **M. Assad** and Hakan F. Oztop, Parametric study of entropy generation in a fluid with internal heat generation between two rotating cylinders subjected to convective cooling at the surface. *ISRN Chemical Engineering*, Volume 2012 (2012), Article ID 941587

- 63- **M. Assad**, Entropy generation analysis in a slab with non-uniform heat generation subjected to convection cooling. *Int. J. Exergy*, 9 (2011)
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- 67- Ralf Wiksten and **M. Assad**, Heat and mass transfer characteristics of a wavy fin-and-tube heat exchanger under fully and partially wet surface conditions. *Int. J. Thermal Sciences*, 49 (2010)
- 68- **M. Assad** and Chih Wu, Thermodynamic performance of an irreversible MHD power cycle running at constant Mach number. *Int. J. Ambient Energy*, 29, 1 (2008)
- 69- Ari Seppälä and **M. Assad**, Optimal structure for heat and cold protection under transient heat conduction. *Structural and Multidisciplinary Optimization*, 36 (2008)
- 70- Ralf Wiksten and **M. Assad**, Heat and mass transfer characteristics in a spray chamber. *Int. J. Refrigeration*, 30, 7 (2007).
- 71- **M. Assad**, Optimum performance of an irreversible MHD power plant. *International Journal of Exergy*, 4, 1 (2007)
- 72- Markku Lampinen, Voitto Kotiaho, and **M. Assad**, Application of axial fan theory to horizontal-axis wind turbine. *Int. J. Energy Research*, 30 (2006)
- 73- **M. Assad** and Chih Wu, Performance of a regenerative MHD power plant. *Int. J. Energy and Power Systems*, 24, 2 (2004)
- 74- Ari Seppälä and **M. Assad**. The effect of solute leakage on the thermodynamical performance of an osmotic membrane. *J. Non-equilibrium Thermodynamics*, 28 (2003)
- 75- Ari Seppälä, M. J. Lampinen and **M. Assad**, A study on the zero flux approximation in convection-diffusion mass transfer problems. *Int. Comm. Heat Mass Transfer*, 30, 2 (2003)

- 76- H. Sulamäki, **M. Assad**, M. Lampinen and Esko Tähti, Analysis of water hammer: basic equations and applications. *Talotekniikka*, 5, 2002 (in Finnish)
- 77- **M. Assad** and M. J. Lampinen, Mathematical modelling of liquid film evaporation process. *Int. J. Refrigeration*, 25, 7 (2002)
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- 80- R. Wiksten, **M. Assad** and Håkon Skistad, Heating of industrial Premises. Industrial Ventilation Design Guidebook, Eds. H. Goodfellow and E. Tähti, Academic Press (2001)
- 81- R. Wiksten and **M. Assad**, Plate fin-and-tube heat exchangers. Industrial Ventilation Design Guidebook, Eds. H. Goodfellow and E. Tähti, Academic Press (2001)
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- 84- **M. Assad**, Thermodynamic analysis of an irreversible MHD power plant. *Int. J. Energy Research*, 24, 10 (2000)
- 85- **M. Assad** and Chih Wu, Performance characteristics of a MHD power plant. Recent Advances in Finite-Time Thermodynamics, Chih Wu *et al.* (Editors), Nova Science (1999)
- 86- **M. Assad**, Performance characteristics of an irreversible refrigerator. Recent Advances in Finite-Time Thermodynamics, Chih Wu *et al.* (Editors), Nova Science (1999)
- 87- **M. Assad**, Well mixed model analysis in indoor air quality. *Int. J. Mechanical Engineering Education*, 27, 2 (1999)
- 88- **M. Assad**, Performance Characteristics of Thermal cycles and Energy Conversion Systems, Ph.D. Thesis, *Acta Polytechnica Scandinavica*,

Mechanical Engineering Series No. 130, Helsinki University of Technology, (1998)

89- **M. Assad**, Thermodynamic analysis of thermoelectric coolers. *Int. J. Mechanical Engineering Education*, 26, 3 (1998)

90- **M. Assad**, Finite-time thermodynamic analysis of combined heat engines. *Int. J. Mechanical Engineering Education*, 25, 4 (1997)

91- **M. Assad**, Thermodynamic analysis of waste-heat thermoelectric generators. *Int. J. Mechanical Engineering Education*, 25, 3 (1997)

92- **M. Assad**, Effect of feedwater temperature rise in heaters on regenerative Rankine cycle performance. *Int. J. Mechanical Engineering Education*, 25, 2 (1997).

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93- **M. Assad** et al., Multi-objective optimization of air conditioning system with the low GWP refrigerant R1234yf using genetic algorithm, 2019 International Conference on Renewable and Sustainable Energy - 2019 Advances in Science and Engineering Technology (ASET)

94- **M. Assad** et al., Parametric study of geothermal parallel flow double-effect water-LiBr absorption chiller, 2019 International Conference on Renewable and Sustainable Energy - 2019 Advances in Science and Engineering Technology (ASET)

95- **M. Assad** et al., Thermodynamic analysis of geothermal series flow double-effect water/LiBr absorption chiller, 2019 International Conference on Renewable and Sustainable Energy - 2019 Advances in Science and Engineering Technology (ASET)

96- **M. Assad** et al., Nano-enhanced PCM for energy storage, 2019 International Conference on Renewable and Sustainable Energy - 2019 Advances in Science and Engineering Technology (ASET)

97- T. Salameh, M. Tawalbeh, M. Albawab, A. Alami, A. Othamn, **M. Assad**, Simulation of a residential space cooling system by geothermal energy in the UAE. The International Conference on Energy, Water & Environmental Sciences (ICEWES 2018) Ras Al Khaimah-UAE, November 13-15, 2018.

98- M. Tawalbeh, T. Salameh, M. Albawab, A. Othamn, **M. Assad**, A. Alami, Parametric study of a single effect lithium bromide-water absorption chiller

powered by a geothermal heat source. The International Conference on Energy, Water & Environmental Sciences (ICEWES 2018) Ras Al Khaimah-UAE, November 13-15, 2018.

- 99- T. Salameh, M. Tawalbeh, **M. Assad**, Experimental and numerical study on heat transfer enhancement of concentric tube heat exchanger using water based nanofluids. 5th INTERNATIONAL CONFERENCE ON RENEWABLE ENERGY GENERATION AND APPLICATIONS, 2018 February 26-28, 2018 UAEU Al Ain, UAE.
- 100- **M. Assad**, Muhammad Tawalbeh, Tareq Salameh, Amani Al-Othman, Thermodynamic Analysis of Lithium Bromide Absorption Chiller Driven by Geothermal Energy, 5th INTERNATIONAL CONFERENCE ON RENEWABLE ENERGY GENERATION AND APPLICATIONS, 2018 February 26-28, 2018 UAEU Al Ain, UAE.
- 101- Muhammad Tawalbeh, Amani Al-Othman, **M. Assad**, Graphene Oxide - Nafion composite membrane for effective methanol crossover reduction in passive direct methanol fuel cells. 5th INTERNATIONAL CONFERENCE ON RENEWABLE ENERGY GENERATION AND APPLICATIONS, 2018 February 26-28, 2018 UAEU Al Ain, UAE.
- 102- Mohamed Gaith, **M. Assad**, Ahmad Sedaghat, Heat Losses from Human Body in Weather Condition of Amman City, Proceedings of the 2015 International Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates (UAE), March 3 – 5, 2015.
- 103- Ahmad Sedaghat, **M. Assad**, Mohamed Gaith, M.T. Esfidani, Exergy Analysis of Reactive Combustion Processes in Gas Heaters, Proceedings of the 2015 International Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates (UAE), March 3 – 5, 2015.
- 104- Mohamed Gaith, **M. Assad**, Ahmad Sedaghat, Neural Network Usage in Structural Crack Detection, Proceedings of the 2015 International Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates (UAE), March 3 – 5, 2015.
- 105- K. Khalil, **M. Assad**, A Numerical Investigation of Laminar Mixed Convection Flow and Heat Transfer in a Lid Driven Cavity with Two Cylinders. ICFD 2015, April 6-7, 2015, Orlando, USA.

- 106- A. Sedaghat, **M. Assad**, M. Gaith, K. Khanafer, R. Al-Wakid and M. Bani-Hani, Open pipe and nozzle external flows in drifted wind turbines. International Conference on Green Energy & Expo, September 21-23, 2015, Orlando, USA.
- 107- Mohamed Gaith, **M. Assad**, Ahmad Sedaghat, Structural Crack Detection in Composite Materials using Neural Networks, Second International Conference on Advances in Civil, Structural and Mechanical Engineering - CSM 2014, University of Birmingham, UK, 16-17 November, 2014.
- 108- **M. Assad** and Voitto Kotiaho , Analysis of a counterflow heat exchanger with a heat source. ICEGES 2009, 10-12 November 2009, Amman, Jordan.
- 109- **M. Assad**, Analysis of MHD power plant operating at maximum power and maximum power density. Fourth International Conference on Energy Research & Development (ICERD-4), 17-19 November 2008, Kuwait.
- 110- **M. Assad**, Performance characteristics of a solar driven heat engine with internal irreversibilities. Global Conference on Renewable Energy Approaches for Desert Regions, 18-22 September 2006, Amman, Jordan.
- 111- Voitto W. Kotiaho, Markku J. Lampinen and **M. Assad**, Effectiveness of heat exchangers connected in series. Global Conference on Renewable Energy Approaches for Desert Regions, 18-22 September 2006, Amman, Jordan.
- 112- **M. Assad**, Optimum performance of an irreversible MHD power plant. Third International Conference on Energy Research & Development (ICERD-3), 21-23 November 2005, Kuwait.
- 113- **M. Assad**, Optimum performance of a pin fin. 4th Int. Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2005), 19-22 September 2005, Cairo, Egypt.
- 114- **M. Assad**, Optimum pin fin geometrical parameters. CMES-04, Proceedings of the First Cappadocia Int. Mechanical Engineering Symposium, 14-16 July 2004, Cappadocia, Turkey.

BOOKS

- 115- **M. Assad**, Performance Characteristics of Thermal Cycles and Energy Conversion Systems. *Acta Polytechnica Scandinavica*, Mechanical Engineering Series No. 130, 1998.
- 116- Markku Lampinen, **M. Assad** and V. Kotiaho. Heat Transfer, Helsinki University of Technology, No. 155, 2008 (in Finnish).
- 117- Markku Lampinen, **M. Assad**, V. Kotiaho, Kari Saari and Ralf Wiksten. Technical Thermodynamics, Helsinki University of Technology, No. 158, 2009 (in Finnish).
- 118- **M. Assad**, Marc A. Rosen, Design and performance optimization of renewable energy systems, Elsevier (in progress, August 2020)

TECHNICAL REPORTS

- 119- **M. Assad** and T. Noponen, Performance characteristics of porous air electrodes, Helsinki University of Technology, No. 82 (1995).
- 120- M. Hongisto, M. J. Lampinen and **M. Assad**, Evaporation of Isopropyl alcohol from a Printing unit, Helsinki University of Technology, No.103 (1997).
- 121- **M. Assad**, M. J. Lampinen and R. Tielinen, Thermodynamic Analysis of Nitric Acid Production Plant, Helsinki University of Technology (1998).
- 122- **M. Assad** and M. J. Lampinen, Mathematical modelling of liquid film evaporation process. Helsinki University of Technology (1999).
- 123- **M. Assad** and M. J. Lampinen, Film condensation between two parallel plates. Helsinki University of Technology (2000).
- 124- **M. Assad**, Markku J. Lampinen and R. Wiksten, On the development of absorption heat cycle: heat pump and heat transformer, Helsinki University of Technology (2000).
- 125- **M. Assad** and Markku J. Lampinen, Analysis of water hammer: basic equations and applications, Helsinki University of Technology, No. 134 (2002).
- 126- **M. Assad** and Ari Seppälä, Equations and preliminary results for optimization of a hollow fiber osmosis power plant. Salinity Power Project, European Union, 2003.

EXPERIENCE

Jan 1994- Jan 2014: working as research scientist at Aalto University (Finland)

Apr 2004- Jan 2014: working as docent at Aalto University (Finland)

Feb 2014- Aug 2015: Associate professor (Chairman), Mechanical Engineering Department at Australian College of Kuwait

AWARDS

Aalto University: Teacher of the year 2011 prize

http://eng.aalto.fi/en/current/current_archive/news/2012-04-04/

COURSES TAUGHT

- 1- Classical thermodynamics
- 2- Chemical thermodynamics
- 3- Technical thermodynamics
- 4- Irreversible thermodynamics
- 5- Heat transfer
- 6- Mass transfer
- 7- Fluid mechanics
- 8- Geothermal energy systems
- 9- Solar energy systems
- 10- Statics and dynamics
- 11- Engineering management
- 12- Maintenance
- 13- Wind energy Lab
- 14- Heat transfer Lab
- 15- Energy storage Lab
- 16- Workshop for mechanical engineers

PRESENT RESEARCH

Geothermal energy, applications of renewable energy in industry, absorption chillers, heat exchangers , artificial neural network analysis of renewable energy systems.

RESEARCH INTERESTS

Renewable energy systems, energy efficiency, energy and exergy analysis, evaporative cooling, energy conversion systems and industrial ventilation.

COMPUTER SKILLS

Microsoft Office, Origin, COMSOL, Maple and Matlab.

EDIROTIAL BORAD MEMBERSHIP

- 1- International Journal of Petrochemistry and Research, USA
- 2- Journal of Robotics and Mechanical Engineering Research, USA
- 3- International Journal of Rotating Machinery, Guest Editor, 2017, Egypt
- 4- International Journal of Petroleum and Petrochemical Engineering, USA
- 5- Petroleum & Petrochemical Engineering Journal, USA
- 6- WASET world academy membership, USA
- 7- World Renewable Energy Conference scientific committee member, June 25-27, 2018 Stockholm, Sweden
- 8- International Journal of Mechanical Systems Engineering, USA
- 9- SDBE 2018: Sustainable Design of the Built Environment: Research and Practice, The Crystal, London, UK, September 12-13, 2018