

**Name: Dr. Ahmad Sedaghat****Rank: Professor - Mechanical Engineering****Personal Information****Nationality:** British**AU Joining Date:** 17 Aug 2014**E-Mail Address:** a.sedaghat@au.edu.kw**Professional Information****Education:****Qualification:** Doctorate**Major:** Aerospace Engineering**College/University:** University of Manchester**Year:** 1994/1999**Qualification:** Masters**Major:** Applied Mathematics & Fluid Mechanics**College/University:** University of Manchester**Year:** 1992/1994**Qualification:** Bachelor**Major:** Mechanical Engineering**College/University:** Isfahan University of Technology**Year:** 1986/1990**Specialization:**

Buildings and Solar Energy

Wind Turbine Aerodynamics

Rheology of non-Newtonian Nanofluids

Machine Learning and Optimization

**Current Academic
Position:****(2023-present)** Professor, Mechanical Engineering, College of Engineering,
Australian University, Kuwait.**(2018-present)** Adjunct Professor in Research, CQU, Australia.

Current Professional Positions:

(2022) Within the top 2 percent of the most-cited scientists in the world:
<https://dx.doi.org/10.17632/btchxktzyw>

Web of Science:

<https://www.webofscience.com/wos/author/record/JFK-4961-2023>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=36730450600>

ORCID: <https://orcid.org/0000-0001-7039-1439>

Google scholar:

https://scholar.google.com/citations?user=sM_rHd8AAAAJ&hl=en

ResearchGate: https://www.researchgate.net/profile/Ahmad_Sedaghat

LinkedIn: <https://www.linkedin.com/in/drahmadsedaghat/>

(2018-present) Fellow Member of Engineers Australia

(2018-present) Chartered Engineers Australia in Aerospace and Mechanical Engineering

(2014-present) In Editorial board of:

- Guest Editor for MDPI Sustainability. Impact Factor: 3.9. Special Issue "Advances in Thermal Performance and Energy Efficiency of Buildings in Various Regions"

https://www.mdpi.com/journal/sustainability/special_issues/RXM29D64WX

- Associate Editor for Natural Resources Conservation and Research. Impact Factor: 0.28. <https://systems.enpress-publisher.com/index.php/NRCR/index>

- Editorial Board for Archives of Petroleum & Environmental Biotechnology. Impact Factor: 0.52.

https://www.gavinpublishers.com/journals/journals_details/archives-of-petroleum-environmental-biotechnology-issn-2574-7614

- Editorial Board for International Advance Journal of Engineering Research (IAJER) <https://www.iajer.com/>

- Editorial Board for American Journal of Multidisciplinary Research and Development, <https://www.ajmrd.com/>

- Editorial Board for SCIREA Journal of Energy <https://www.scirea.org/journal/Energy>

- Editorial Board for European Journal of Applied Science and Technology-Novus (EJAST) <https://ejast.novuspublishers.org/>

- Guest Editor for Advances in Fuzzy Systems. Impact Factor: 0.52. Special Issue "Applications of Fuzzy Systems in Renewable Energy Sources"

<https://www.hindawi.com/journals/afs/si/631471/>

- Guest Editor for MDPI Wind. Special Issue "Wind Energy Planning by considering Social, Environmental, and Economic Issues."

https://www.mdpi.com/journal/wind/special_issues/wind_issues

- Guest Editor for International Journal of Rotating Machinery. Impact Factor: 0.3. Special Issue "Rotating Machinery in Renewable Energy Systems"

<https://www.hindawi.com/journals/ijrm/si/276494/>

- Advisory Board for Journal of Renewable Energy and Environment (JREE). <https://www.jree.ir/>

- Reviewer Editor on the Editorial Board of Micro- and Nano-Scale Heat Transfer (specialty section of Frontiers in Thermal Engineering).

www.frontiersin.org

	(2010-present) Reviewer of Elsevier Journals: RSER (Renewable & Sustainable Energy Reviews), ECM (Energy Conversion and Management), Energy, Solar Energy, Applied Energy, Renewable Energy, Renewable Energy Focus, International Journal of Hydrogen Energy, Aerospace Science and Technology, Flow Measurement and Instrumentation, Sustainable Cities and Society, Sustainable Energy Technologies and Assessments, Tribology International, International Journal of Thermal Sciences, Powder Technology, Applied Ocean Research, Journal of Thermal Biology, and other International Journals.
Previous Administrative Position Held:	(2004-2014) Co-editor & head of publishing office of JAFM (Journal of Applied Fluid Mechanics) (2003-2014) Industrial Consultant for Power, Metal, Aerospace, and Marine industries (2010-2012) Organizing committee member of ISME2010 and ISME2012
Previous Academic Positions Held:	(2015-2023) Associate Professor, Mechanical Engineering, College of Engineering, Australian University of Kuwait, P.O. Box 1411, Safat 13015, Kuwait. (2014-2015) Assistant Professor, Mechanical Engineering, College of Engineering, Australian University, P.O. Box 1411, Safat 13015, Kuwait. (2013-2014) Associate Professor, Department of Mechanical Engineering, Isfahan University of Technology, Isfahan, Iran. (2008-2009) Lecturer & Research Fellow, School of Computing Engineering and Physical Sciences, University of Central Lancashire, Preston, UK. (2003-2013) Assistant Professor, Department of Mechanical Engineering, Isfahan University of Technology, Isfahan, Iran. (2001-2003) Postdoctoral research fellow, Department of Mechanical Engineering, Leeds University, Leeds, UK. (1998-2001) Postdoctoral research fellow, Department of Aerospace Engineering, The University of Manchester, Manchester, UK. (1997-1998) Free researcher, Department of Computing and Mathematics, Leuven University, Leuven, Belgium.
Fellowships And Honors:	(2022-2023) Nominated for the AU Teaching Excellence Award within the College of Engineering (2018-present) Fellow Member of Engineers Australia (2018-present) Chartered Engineers Australia in Aerospace and Mechanical Engineering (2022) Chair and technical committee at 2022 7th International Conference on Renewable Energy and Conservation, held in Paris, France. (2018-2019) Winner of ACK Research Achievement Award in School of Engineering. (2017) Best Paper award in the 266th International Conference on Science and Innovative Engineering (ICSIE), (ISERD-2017), Oxford, United Kingdom. (2001-2003) Fellow Member of British Combustion Institute (BCI). (2000) Member of American Institute of Aeronautics & Astronautics (AIAA). (1998-2001) Fellow Member of UK Royal Aeronautical Society (RAeS). (2003-2014) Associate member of Iranian Society of Mechanical Engineers (ISME).

	(2003-2014) Associate member of Iranian Aerospace Society (IAS). (2003-2014) Associate member of Iranian Physical Sciences (IPS). (2013-2014) Associate member of Iranian Wind Energy (IWE). (2013-2014) Associate member of Iranian Combustion Institute (ICI).
Teaching Experience:	(2014-present) Assistant, Associate, and Professor in Mechanical Engineering. <u>Taught courses for Diploma students:</u> Pumps and Valves, Fluid Mechanics, Apply Engineering Mechanic Principles, Interact with Computing Technology, Manage Project Quality, Use Basic Preventative Maintenance Technology, Workshop Practical Project S3, Workshop Arc-Welding S2, Basic Hydraulics & Pneumatic Circuits <u>Taught courses for Degree students:</u> Fluid Mechanics, Fluid & Electrical Drive Systems (2003-2014) Assistant and Associate Professor in Thermofluid subjects in Mechanical Engineering. <u>Taught courses for MSc and PhD students:</u> Advanced Hydro-Aerodynamics, Advanced Fluid Mechanics, Hydrodynamics, Hydrodynamics Stability, Wind Energy. <u>Taught courses for BSc students:</u> Energy Conversion, Fuel and Combustion, Thermodynamics I, Thermodynamics II, Fluid Mechanics I, Fluid Mechanics 2, Heat Transfer I, Turbomachines, Hydro-Aerodynamics. (2008-2009) Lecturer in Innovative wind turbines. <u>Taught courses for BSc students:</u> Experimental open jet wind tunnel, Computational Fluid Dynamics (CFD)
Industrial And Technical Experience:	(2013-2014) Consultant & Researcher for Ministry of Iranian Gas and Fuel and Energy Saving Co., Project: Iranian National Gas Heater Platform (received 250,000 KD fund) (2012-2014) Consultant & Researcher for Iranian National Marine Organization and Isfahan Subsea Research Institute, Project: Iranian Water Waves Assimilation and Forecasting (received 250,000 KD fund) (2008-2012) Consultant & Researcher for Isfahan County of Electrical Power Co., Project: The First National Helical Vertical Axis 7.5 kW Wind Turbine (received 50,000 KD fund) (2008-2009) Research Associate (& Lecturer) in School of Computing Engineering and Physical Sciences, University of Central Lancashire, Preston, UK. EPSRC Project: Development of Innovative Small Scale Wind Turbines. (2004-2008) Consultant & Researcher for Iranian Aerospace Society and Isfahan Subsea Research Institute, Project: Manufacturing and Renovation of Isfahan University of Technology 90 cm X 90 cm Wind Tunnel (received 30,000 KD fund) (2003-2004) Researcher for Folad Mobarake Steel Industries, Project: CFD Simulation & optimization of Argon gas injection into containers with 100 tons of liquid melt of steel (received 10,000 KD fund) (2003-2004) Consultant & Researcher for Shahed Helicopters, Project: Satisfying JAR standards on Aerodynamics & Aeroelasticity of Shahed Helicopters for Civil Applications (received 10,000 KD fund)

	(2001-2003) Post-doctoral (Research Fellow) in School of Mechanical Engineering, Leeds University, Leeds, UK. Project: EPSRC project in combustion instabilities. (1998-2001) Postdoctoral in School of Engineering, The University of Manchester, Manchester, UK. EPSRC Project: Aeroelasticity instabilities with nonlinear aerodynamics. (1997-1998) Free Researcher, Department of Computer Sciences, University of Leuven, Belgium. MMARIE Project: The European project on Application of Sparse Iterative Solvers in Sediment Turbulent Flows.
Research Interest:	Building Energy/Renewable Energy Rheology/Nanotechnology Hydrodynamics/Aerodynamics Applied Mathematics/Mathematical Modelling
Research Grants:	(2025-2026) Co-PI on AU Research Grant (1,500 KWD) on the Research Project no: IRC-2024/2025-SRC-PR011 entitled "Developing an AI-Powered PMV System for Comfort-Optimized Bus Stops in Kuwait" (Ongoing) (2024-2025) Co-PI on KFAS Research Grant (4,050 KWD) on the Research Project no: CN24-18TT-2286 entitled "A Holistic Framework for Academic Performance Monitoring and Advising Using Deep Learning" (Ongoing) (2024-2025) PI on AU Research Grant (1,500 KWD) on the Research Project no: IRC-2023/2024-SRC-PR03 entitled "Development of a Wi-Fi-Enabled DC Power Meter for an AI-Controlled Off-Grid Completely Direct Current Solar Air Conditioning System" (Completed 2025) (2021-2023) PI on KFAS Research Grant (14,700 KWD) jointly AU-CQU Research project on "Energy-smart materials and technologies for buildings: Development of a novel low-energy building" (Completed 2024) (2020-2021) Co-PI on KFAS Research Grant (4700 KWD) on "Developing a Taylor-Couette Stand-Alone Viscometer for Testing Drilling Fluids with turbulent Nano fluid flow and Testing Stability of Different Shale Materials" (Completed 2021) (2019-2020) Co-PI on KFAS Research Grant (7000 KWD) on "Autonomous and Portable Measuring System for Rheological Properties of Newtonian and Non-Newtonian Fluids" (2018-2019) PI on KFAS Research Grant (7000 KWD) on "Office Building Energy Savings by Solar Window Films for Reducing Cooling Loads in Summer of Kuwait" (Completed 2019) (2018-2019) PI on ACK research fund (1200 KWD) "Design and manufacturing a miniature Reynolds apparatus for measuring skin friction reduction of nanofluids and testing and modelling precipitation and deposition of nanoparticles on pipe surfaces" (completed 2019) (2017-2018) PI on ACK-CQU Research Grant (5000 KWD) on "Review and Simulation of Crack Detection Methodologies for Industrial Applications" (2017-2018) Co-PI on ACK-CQU Research Grant (5000 KWD) on "Energy-smart materials and technologies for buildings: Development of a novel low-energy building" (completed 2018)

	(2017-2018) Co-PI on ACK research fund (1200 KWD) “Development of novel compostable polymeric composites with GraphAne nanofillers using nanoIndentation-3D-Printing (i3D) method for smart biomedical devices and water treatment networks.” (2017-2018) Co-PI on ACK research fund (1200 KWD) “Design and assembly of an automated marsh funnel for rapid measurement of apparent viscosity, plastic viscosity, and yield point of fluid” (completed 2018) (2017-2018) Co-PI on ACK research fund (1200 KWD) “Design and development of an aeroelastic energy harvester by simulation and wind tunnel testing” (2017-2018) Co-PI on ACK research fund (1200 KWD) “Developing a testing apparatus for wheelchair falls”
Research and Publications including Journal and Books:	❖ Books 1. Ahmad Sedaghat, A Finite-Volume TVD Approach to Transonic Flow Computations, PhD thesis, The University of Manchester, UK, 1999. 2. Ahmad Sedaghat, Comparative Study of High-Resolutions Shock Capturing TVD Schemes, MSc thesis, The University of Manchester, UK, 1994. ❖ Book Chapters 1. Ahmad Sedaghat, Innovative Application of Thin Films in Energy Saving and Renewable Energy Systems, Reference Module in Earth Systems and Environmental Sciences, Elsevier, ISBN 9780124095489, https://doi.org/10.1016/B978-0-323-93940-9.00234-6, 2024. 2. Ahmad Sedaghat, Application of Nanoparticles in Energy Saving and Friction Reduction of Well Drilling Fluids in the Petroleum Industry, Reference Module in Earth Systems and Environmental Sciences, Elsevier, ISBN 9780124095489, https://doi.org/10.1016/B978-0-323-93940-9.00218-8, 2024. 3. Ahmad Sedaghat, Progress in Magnus Type Wind Turbine Theories, Energy Vol. 8: Wind Energy, Chapter 808, Studium Press LLC, 2014. ❖ PATENTS 1. Ahmad Sedaghat, Iman Samani (2013), Circulating Aerofoils as Propulsion System in Wind Engineering Application, Iranian Patent Centre, Tehran, Iran. 2. Ahmad Sedaghat et al. (2006), DNA Stream Type Hydro Turbines, Iranian Patent Centre, Tehran, Iran. ❖ JOURNALS ○ 2025 1. A. Sedaghat, B. Djedi, M. H. Farhat, M. I. Al-khiami, and M. El Badawy, “A novel origami inspired single rotor horizontal axis wind turbine,” Journal of Energy Systems, vol. 9, no. 3, pp. 273–293, 2025. 2. A. A. Al Anazi, N. Ghareeb, and A. Sedaghat, “Decarbonization and sustainability of solar PV panel-integrated greenhouses in challenging climates,” International Journal for Housing Science & Its Applications, vol. 46, no. 1, 2025.

3. M. Ramezani, Y. Himri, **A. Sedaghat**, P. Mishra, F. Goodarzian, and A. Mostafaeipour, "Prioritizing locations for renewable hydrogen production in Algeria," *International Journal of Hydrogen Energy*, vol. 130, pp. 480–502, 2025.
 4. M. H. Farhat, A. Mehdizadeh, **A. Sedaghat**, M. El Badawy, B. Djedi, M. I. Al-Khiami, A. Mostafaeipour, and M. Nazififard, "Origami-inspired urban wind turbines: Scalable bladeless designs for decentralized renewable energy," *Green Technologies and Sustainability*, p. 100253, 2025.
 5. A. Al-Masri, K. Khanafer, and **A. Sedaghat**, "Passive thermal management of PV solar panels using carbon fiber-enhanced phase change materials: A numerical and optimization study," *International Communications in Heat and Mass Transfer*, vol. 167, p. 109278, 2025.
 6. N. Ghareeb, A. Alanazi, **A. Sedaghat**, M. H. Farhat, A. Mehdizadeh, H. Salem, et al., "Integrating experimental and theoretical approaches for enhanced machine learning modeling of solar radiation," *Engineering Science and Technology, an International Journal*, vol. 70, p. 102156, 2025.
- **2024**
7. **A. Sedaghat**, R. Kalbasi, R. Narayanan, A. Mehdizadeh, S. M. Soleimani, M. A. Malayer, M. I. Al-Khiami, H. Salem, W. K. Hussam, M. Sabati, M. Rasul, and M. M. K. Khan, "Integrating solar PV systems for energy efficiency in portable cabins: A case study in Kuwait," *Solar Energy*, vol. 277, p. 112715, 2024.
 8. **A. Sedaghat**, K. Khanafer, R. Kalbasi, and A. Al-Masri, "A new approach for selecting and implementing phase change materials in Kuwaiti Buildings: Practical considerations," *Journal of Energy Storage*, vol. 88, p. 111477, 2024.
 9. **A. Sedaghat**, S. M. Soleimani, M. I. Al-Khiami, M. Sabati, W. K. Hussam, H. J. Salem, M. Rasul, R. Narayanan, M. M. K. Khan, M. A. Malayer, and A. Mehdizadeh, "Case studies on energy performance of walling materials in various regions," *International Journal of Environmental Science and Technology*, pp. 1-28, 2024.
 10. M. Al Sarheed, **A. Sedaghat**, M. A. Malayer, H. Salem, S. A. A. Oloomi, W. K. Hussam, and A. A. Al Anazi, "Experimental and computational study on thermal performance of wood-plastic composites in building envelope," *Special Topics & Reviews in Porous Media - An International Journal*, vol. 15, no. 1, pp. 1-24, 2024.
- **2023**
11. **Sedaghat, A.**; Mahdizadeh, A.; Narayanan, R.; Salem, H.; Hussam, W.K.; Al-Khiami, M.I.; Malayer, M.A.; Soleimani, S.M.; Sabati, M.; Rasul, M.; et al. Implementing Cool Roof and Bio-PCM in Portable Cabins to Create Low-Energy Buildings Suitable for Different Climates. *Sustainability* 2023, 15, 14700. <https://doi.org/10.3390/su152014700>.
 12. **Sedaghat, Ahmad**, Hayder Salem, Wisam K. Hussam, Arash Mahdizadeh, Mohamad Iyad Al-Khiami, Mahdi Ashtian Malayer, Sayed M. Soleimani et al. "Exploring energy-efficient building solutions in hot

regions: A study on bio-phase change materials and cool roof coatings." *Journal of Building Engineering* 76 (2023): 107258.

13. **Sedaghat, Ahmad**, Sayed Mohamad Soleimani, Mohamad Iyad Al-Khiami, Mohammad Sabati, Mohammad Rasul, Ramadas Narayanan, and Masud MK Khan. "Development of a Novel Low-Energy Building: Effects of Room Orientation and Wall Materials." *Key Engineering Materials* 945 (2023): 101-108.
14. Misbah, Biltayib, **Ahmad Sedaghat**, Saad Balhasan, Rida Elgaddafi, Mahdi Ashtian Malayer, Rana N. Malhas, Mohammed Omar, and Manal Benomran. "Enhancing thermal stability and filtration control for water-based drilling fluid using viscosifier polymers and potassium chloride additives." *Geoenergy Science and Engineering* 230 (2023): 212235.
15. Minaeian, Ali, and **Ahmad Sedaghat**. "Wind Energy Potential in the Province of Sistan and Baluchestan and Economical Analysis for Installing Wind Turbines." *Energy Engineering & Management* 3, no. 3 (2023): 34-41.

o 2022

16. Misbah, B., **Sedaghat, A.**, Rashidi, M., Sabati, M., Vaidyan, K., Ali, N., Omar, M.A.A. and Dehshiri, S.S.H., 2022. Friction reduction of Al₂O₃, SiO₂, and TiO₂ nanoparticles added to non-Newtonian water-based mud in a rotating medium. *Journal of Petroleum Science and Engineering*, 217, p.110927.
17. Zakani, B., Salem, H., Entezami, S., **Sedaghat, A.**, & Grecov, D. (2022). Effect of particle concentration on lubrication performance of cellulose nanocrystalline (CNC) water-based lubricants: mixed lubrication regime. *Cellulose*, 29(7), 3963-3984.
18. Zakani, B., Entezami, S., Grecov, D., Salem, H., & **Sedaghat, A.** (2022). Effect of ultrasonication on lubrication performance of cellulose nanocrystalline (CNC) suspensions as green lubricants. *Carbohydrate Polymers*, 119084.

o 2021

19. Najafi F, **Sedaghat A**, Mostafaeipour A, Issakhov A. Location assessment for producing biodiesel fuel from *Jatropha Curcas* in Iran. *Energy*. 2021 Dec 1; 236:121446.
20. Rashidi M, **Sedaghat A**, Misbah B, Sabati M, Vaidyan K, Mostafaeipour A, Dehshiri SS, Almutairi K, Issakhov A. Introducing a Rheology Model for Non-Newtonian Drilling Fluids. *Geofluids*. 2021 Aug 26;2021.
21. Mostafaeipour A, Goudarzi H, Khanmohammadi M, Jahangiri M, **Sedaghat A**, Norouzianpour H, Chowdhury S, Techato K, Issakhov A, Almutairi K, Hosseini Dehshiri SJ. Techno-economic analysis and energy performance of a geothermal earth-to-air heat exchanger (EAHE) system in residential buildings: A case study. *Energy Science & Engineering*. 2021 Aug 5.
22. Rashidi M, **Sedaghat A**, Misbah B, Sabati M, Vaidyan K, Mostafaeipour A, Dehshiri SS, Almutairi K, Issakhov A, Oloomi SA, Malayer MA. Simulation of Wellbore Drilling Energy Saving of Nanofluids Using an Experimental Taylor–Couette Flow System. *Journal of Petroleum Exploration and Production Technology*. 2021 Jul 8:1-7.

23. **Sedaghat A**, Abbas Oloomi SA, Malayer MA, Alkhatib F, Sabri F, Sabati M, Salem H, Zafar WJ, Mostafaeipour A, Issakhov A, Jahangiri M. Effects of Window Films in Thermo-Solar Properties of Office Buildings in Hot-Arid Climates. *Frontiers in Energy Research*. 2021 May 20;9:173.
24. **Sedaghat A**, Sabati M, Alkhatib F, Oloomi SA, Sabri F, Salem H, Zafar WJ, Malayer MA. Climate change and thermo-solar patterns of office buildings with/without window films in extreme hot-arid climate of Kuwait. *Solar Energy*. 2021 Mar 15; 217:354-74.
25. Rashidi M, **Sedaghat A**, Misbah B, Sabati M, Vaidyan K. Use of SiO₂ Nanoparticles in Water-Based Drilling Fluids for Improved Energy Consumption and Rheology: A Laboratory Study. *SPE Journal*. 2021 Mar 1:1-5.
26. Rashidi M, **Sedaghat A**, Misbah B, Sabati M, Vaidyan K. Experimental study on energy saving and friction reduction of Al₂O₃-WBM nanofluids in a high-speed Taylor-Couette flow system. *Tribology International*. 2021 Feb 1; 154:106728.
27. El HA, Bani HE, Al-Sawafta I, **Sedaghat A**, Alshabi M, Rahman S. Thermal analysis of end pumped fiber lasers subjected to jacket fluid cooling. *Thermal Science*. 2021;25(2 Part A):1023-31.
- **2020**
28. **Ahmad Sedaghat**, Ali Mostafaeipour, Mostafa Rezaei, Mehdi Jahangiri, Amirreza Mehrabi, A new semi-empirical wind turbine capacity factor for maximizing annual electricity and hydrogen production, *International Journal of Hydrogen Energy*, 2020.
29. **Ahmad Sedaghat**, Fadi Alkhatib, Seyed Amir Abbas Oloomi, Farhad Sabri, Hayder Salem, Mohammad Sabati, Waqar Jan Zafar, Mahdi Ashtian Malayer, Amirhossein Negahi, Experimental study on the performance of solar window films in office buildings in Kuwait, *Journal of Nanoparticle Research* 22 (4), 2020.
30. **Ahmad Sedaghat**, Fadi Alkhatib, Armin Eilaghi, Arash Mehdizadeh, Leila Borvayeh, Ali Mostafaeipour, Arash Hassanzadeh, Mehdi Jahangiri, Optimization of capacity factors based on rated wind speeds of wind turbines, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2020.
31. Ali Mostafaeipour, **Ahmad Sedaghat**, Mohammad Hedayatpour, Mehdi Jahangiri, Location planning for production of bioethanol fuel from agricultural residues in the south of Caspian Sea, *Environmental Development*, 100500, 2020.
32. Ma, MA Fazilati, **A Sedaghat**, D Toghraie, P Talebizadehsardari, Natural convection energy recovery loop analysis, part I: energy and exergy studies by varying inlet air flow rate, *Heat and Mass Transfer*, 1-11, 2020.
33. Mostafa Rezaei, Ali Mostafaeipour, Mohammad Saidi-Mehrabad, Mojtaba Qolipour, **Ahmad Sedaghat**, Hamid Reza Arabnia, Mozhgan Momeni, Sensitivity analysis of criteria to optimize wind farm localizing: a case study, *Wind Engineering* 44 (3), 2020, 294-312.
34. **Sedaghat A**, Alkhatib F, Mostafaeipour N, Abbas Oloomi SA. Prediction of COVID-19 Dynamics in Kuwait using SIRD Model. *Integr J Med Sci*

[Internet]. 2020Aug.3 [cited 2020Aug.23];7. Available from: <https://www.mbmj.org/index.php/ijms/article/view/170>.

35. Bani-Hani, F Alkhatib, **A Sedaghat**, A Alkhazzam, F Al-Dousari, O Al-Saad, An Experimental Study on Producing a Sustainable Diesel-like Fuel from Waste Engine Oil, *Renewable Energy Research and Application* 1 (2), 2020, 143-150.

○ 2019

36. M. Hassanaliana, V. Pelleritoa, **A. Sedaghat**, F. Sabri, L. Borvayeh, S. Sadeghi, Aerodynamics loads variations of wings with novel heating of top surface: Bioinspiration and experimental study, *Experimental Thermal and Fluid Science*, Volume 109, December 2019, 109884.
37. N. Ali, J.A. Teixeira, A. Addali, M. Saeed, F. Al-Zubi, **A. Sedaghat**, H. Bahzad, Deposition of Stainless-Steel Thin Films: An Electron Beam Physical Vapour Deposition Approach, *Materials* 12 (4), 571, 2019.
38. M. Rezaei, A. Mostafaeipour, M. Saidi-Mehrabad, M. Qolipour, **A. Sedaghat**, H.R. Arabnia, M. Momeni, Sensitivity analysis of criteria to optimize wind farm localizing: A case study, *Wind Engineering*, 0309524X19849848, 2019.
39. O. Nematollahi, P. Alamdari, M. Jahangiri, **A. Sedaghat**, A.A. Alemrajabi, A techno-economical assessment of solar/wind resources and hydrogen production: A case study with GIS maps, *Energy*, 2019.
40. **A. Sedaghat**, F. Alkhatib, A. Eilaghi, M. Sabati, L. Borvayeh, A. Mostafaeipour, A New Strategy for Wind Turbine Selection Using Optimization Based on Rated Wind Speed, *Energy Procedia* (60), 582-589, 2019.
41. A. Mostafaeipour, H. Goudarzi, **A. Sedaghat**, M. Jahangiri, H. Hadian, M. Rezaei, A.M. Golmohammadi, P. Karimi, Energy efficiency for cooling buildings in hot and dry regions using sol-air temperature and ground temperature effects, *Journal of Engineering, Design and Technology*, 2019.
42. O. Nematollahi, P. Alamdari, A.A. Alemrajabi, and **A. Sedaghat**, New Modelling of Solar Clearness Index and GIS Mapping of Iran, *International Journal of Energy Management*, Volume 1, Number 2, 2019.
43. E. Bani-Hani, **A. Sedaghat**, A. Saleh, A. Ghulom, H. Al-Rahmani, S. Al-Zamel, J. Lopez, Evaluating Performance of Horizontal Axis Double Rotor Wind Turbines, *Energy Engineering* 78 (1), 3, 2019.
44. E. Bani-Hani, ME HajAssad, M Tawalbeh, B Yousef, **A Sedaghat**, Enhancing Cooling System of a Combustion Engine by Integrating with a Stirling Cycle, *Energy Engineering* 116 (3), 41-53, 2019.
45. E. Bani-Hani, **A Sedaghat**, ZN Ashrafi, Heat Recovery from the Incineration of Polychlorinated Biphenyls Waste in Rotary Kilns, *Energy Engineering* 116 (2), 22-40, 2019.

○ 2018

46. Omid Alavi, Ali Mostafaeipour, **Ahmad Sedaghat**, Mojtaba Qolipour, Feasibility of a Wind-Hydrogen Energy System Based on Wind Characteristics for Chabahar, Iran, *Energy Harvesting and Systems* 4 (4), 143-163, 2018.

47. ZN Ashrafi, M Ghasemian, MI Shahrestani, E Khodabandeh, **A Sedaghat**, Evaluation of hydrogen production from harvesting wind energy at high altitudes in Iran by three extrapolating Weibull methods, *International Journal of Hydrogen Energy*, 2018.
 48. GHR Faghani, ZN Ashrafi, **A Sedaghat**, Extrapolating wind data at high altitudes with high precision methods for accurate evaluation of wind power density, case study: Center of Iran, *Energy Conversion and Management* 157, (2018) 317-338.
 49. Ehab Hussein Bani-Hani, **Ahmad Sedaghat**, Mashael AL-Shemmary, Adelah Hussain, Abdulmalek Alshaieb, Hamad Kakoli, Feasibility of Highway Energy Harvesting Using a Vertical Axis Wind Turbine, *Energy Engineering*, 115 (2), 61-74, 2018.
 50. Mohammad Ali Fazilati, Ali Akbar Alemrajabi, **Ahmad Sedaghat**, Natural convection liquid desiccant loop as an auxiliary air conditioning system: investigating the operational parameters, *Heat and Mass Transfer* 54(3), 903-913, 2018.
 51. **Ahmad Sedaghat**, Ehab Hussein Bani Hani, Salim Ali, Fahad Ali, Areaj Al-Mesbah, Manal Malallah, Experimental and Theoretical Analysis of a Solar Desalination System Improved by Thermoelectric Cooler and Applying Sun Tracking System, *Energy Engineering* 115 (6), 62-76, 2018.
 52. Ehab Hussein Bani-Hani, **Ahmad Sedaghat**, Abdulrahman Faisal, Abdullatif Al-Methen, Ahmad Al-Bannaw, Reyadh Al-Mosabeeh, Hamad Al-Otaibi, Photovoltaic System as Source of Power In Residential Buildings: Technical and Economical Study, *Energy Engineering* 115 (3), 6-22, 2018.
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College Service including committee Membership:	(2014-present) Member of Research committee in Mechanical Engineering Member of Promotion committee in Mechanical Engineering Member of Curriculum committee in Mechanical Engineering Member of Course coordinators in Mechanical Engineering Member of Validation committee in Mechanical Engineering Member of Project Based Learning (PBL) committee in Mechanical Engineering (2014) Member of ACK Smoking Campaign and Competition
National Service:	(2014-present) Collaborations with KFAS, KISR, and AUM (2022) A weather station was installed at AU. (2022) Two portable cabins were installed at AU to provide a low-energy building platform for research on energy saving. (2021) Designed a solar swimming pool system for Australian Ambassador House in Kuwait with a group of AU students.

	(2019) Summer training for high school students at AU
College Committees:	AU Research Council