

Publications

Engineering Requirement Unit

Year 2020

Journals

1. **AHMED, Waleed**; KHENATA, Rabah; SIRAJ, Sidra and AL-DOURI, Y., **Ionic Liquid Potential to Recycle Polymeric Waste: An Experimental Investigation**. Mat. Res. [online]. 2020, vol.23, n.6
2. Fares Radouane, Aissa Abderrahmane, Fateh Mebarek-Oudina, **Waleed Ahmed**, A.M. Rashad, M. Sahnoun & Hafiz Muhammad Ali (2020) **Magneto-Free Convective of Hybrid Nanofluid inside Non-Darcy Porous Enclosure Containing an Adiabatic Rotating Cylinder**, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects.
3. **Ahmed, W.**; Siraj, S.; Al-Marzouqi, A.H. **3D Printing PLA Waste to Produce Ceramic Based Particulate Reinforced Composite Using Abundant Silica-Sand: Mechanical Properties Characterization**. Polymers 2020, 12, 2579.
4. Merabet, N., Abdiche, A., Riane, R. , **Ahmed W.**, **The Implications of Pressure on Electronic, Magnetic, Mechanical, and Elastic Properties of Cobalt and Cobalt Hydride: DFT Calculation**. J Supercond Nov Magn 33, 3451–3461 (2020)
5. **Ahmed, W.**; Alnajjar, F.; Zanelidin, E.; Al-Marzouqi, A.H.; Gochoo, M.; Khalid, S. **Implementing FDM 3D Printing Strategies Using Natural Fibers to Produce Biomass Composite**. Materials 2020, 13, 4065.
6. **WALEED AHMED, WIND TURBINE COMPOSITE BLADE: FRACTURE MECHANICS ASSESSMENT**, Journal of Theoretical and Applied Mechanics, Sofia, Vol.50 (2020) pp. 238-258
7. Zanelidin, E., Al Khatib, O. & **Ahmed, W.** **Investigating the use of no-dig technologies for underground utilities in developing countries**. Innov. Infrastruct. Solut. 5, 17 (2020).

Conferences

1. **Waleed Ahmed** and Essam Zanelidin, **The Innovation of Using 3D Printing Technology in Mechanical and Manufacturing Engineering**, IOP Conference Series: Materials Science and Engineering, Volume 938, 2020 the 6th International Conference on Mechanics and Mechatronics Research (ICMMR 2020) 26-28 June 2020, Berkley, USA
2. H. Al Khawaja, H. Alabdouli, H. Alqaydi, A. Mansour, **W. Ahmed** and H. Al Jassmi, **"Investigating the Mechanical Properties of 3D Printed Components,"** 2020 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, United Arab Emirates, 2020, pp. 1-7, doi: 10.1109/ASET48392.2020.9118307.
3. N. H. Salem Al Nuaimi, A. K. Alameri and **W. Ahmed**, **"Drilling Systems for Space Mission,"** 2020 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, United Arab Emirates, 2020, pp. 1-5, doi: 10.1109/ASET48392.2020.9118250.
4. **Ahmed, W.**, Alabdouli, H., Alqaydi, H., Mansour, A., Al, K. H., Al, J. H., & 10th Annual International IEOM Conference, IEOM 2020 10th 2020 03 10 - 2020 03 12. (2020). **Open source 3d printer: a case study**. Proceedings of the International Conference on Industrial Engineering and Operations Management, March(March), 2995–3004.

Year 2020

5. N. Yumak, K. Aslantaş and **W. Ahmed**, "Effect of Aging Treatment on the Initiation and Propagation of Fatigue Cracks in the Ti-15V-3Al-3Sn-3Cr Metastable β Titanium Alloy," 2020 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, United Arab Emirates, 2020, pp. 1-5, doi: 10.1109/ASET48392.2020.9118214.
6. R. Hamza, **W. K. Ahmed**, E. Zanelidin and O. J. Alkhatib, "Integrating Interactive Learning in Teaching General Engineering Courses," 2020 Advances in Science and Engineering Technology International Conferences (ASET), Dubai, United Arab Emirates, 2020, pp. 1-6, doi: 10.1109/ASET48392.2020.9118190.
7. Aya Mansour, Haleimah Alabdouli, Hend Alqaydi, Huda Al Khawaja, **Waleed Ahmed**, **Evaluating the 3D Printing Capabilities**, Proceedings of the International Conference on Industrial Engineering and Operations Management Dubai, UAE, March 10-12, 2020
8. Latifa Al-Yabhouni, Maitha Al Shamsi, Mariam Al Nuaimi, Dhabya Alketbi, Mariam K Al Nuaimi, and **Waleed K. Ahmed**, **A Case Study in Topology Optimization for 3D Printing**, Proceedings of the 5th NA International Conference on Industrial Engineering and Operations Management Detroit, Michigan, USA, August 10 - 14, 2020
9. Mariam Alhammadi and **Waleed K. Ahmed**, **Simulation of Coronavirus spread: Concerns and Facts**, Proceedings of the 5th NA International Conference on Industrial Engineering and Operations Management, Detroit, Michigan, USA, August 10 - 14, 2020

Book Chapters

1. Wail N. Al-Rifaie, **Waleed K. Ahmed**, **CH 30 - Nano cement mortars for construction materials**, Micro and Nano Technologies, Smart Nanoconcretes and Cement-Based Materials, Elsevier, 2020, Pages 649-692.
2. **Waleed K. Ahmed**, Y. Al-Douri, **CH 17 - Three-dimensional printing of ceramic powder technology**, Metal Oxides, Metal Oxide Powder Technologies, Elsevier, 2020, Pages 351-383.
3. **Waleed Ahmed**, Wail Al-Rifaie, Essam Zanelidin, **Chapter 4 - Mathematical modeling and simulation of interfaces between fiber and its matrix**, Micro and Nano Technologies, Fiber-Reinforced Nanocomposites: Fundamentals and Applications, Elsevier, 2020, Pages 91-99,
4. El-Hassan, H., Alnajjar, F., Al, J. H., & **Ahmed, W.** (2020). **Fresh and hardened properties of 3d-printed concrete made with dune sand**. Rilem Bookseries, 28, 225–234.
https://doi.org/10.1007/978-3-030-49916-7_23

Patents

1. Fady Al Najjar, Nouf Fadel Nasser Alsaedi, **Waleed Khalil Ahmed**, Mostafa Al Kasabi, **Robotic gripping assist**, US10682250B1
2. **Waleed K. Ahmed** and Muthanna Aziz, **Educational system and method for teaching mechanical failure**, US10580322B1
3. Mariam Abdulrazzaq Abdullah Alhammadi and **Waleed Khalil Ahmed**, **Sustainable and integrated system for cooling vehicle tires externally**, US10759237B2