

King Khalid University

College of Engineering/ / Mechanical Engineering Department

Publication Details

2018-2019

Journal Papers

1. Abhilash Edacherian, Ali Algahtani , and Vineet Tirth, Investigations of the Tribological Performance of A390 Alloy Hybrid Aluminum Matrix Composite, *Materials* 2018, 11(12), 2524; <https://doi.org/10.3390/ma11122524>
2. Vineet Tirth, Ali Algahtani1,, and Essam R. I. Mahmoud, Tribological characterization of stir cast 2218 alloy-5%-alumina-titania hybrid microcomposites developed by liquid forging, *Mater. Express*, Vol. 8, No. 6, 2018
3. Vineet Tirth, Ali Algahtani2, and Abhilash Edacherian, ,Tensile fracture characteristics of forged and aged Mg enriched-2218 alloy based hybrid metal matrix composites , *Mater. Express*, Vol. 8, No. 6, 2018
4. Vineet Tirth, Optimum aging process parameters for 6063/Al₂O₃p-SiCp Hybrid composites, “Metal Science and Heat Treatment”
5. A Sh. Zayed, BM Kamel, T Abdelsadek Osman, OA Elkady, S Ali, Experimental Study of Tribological and Mechanical Properties of Aluminum Matrix Reinforced by Al₂O₃/CNTs, Fullerenes, Nanotubes and Carbon Nanostructures, 1-10
6. A Mohamed, WS Nasser, BM Kamel, T Hashem, Photodegradation of phenol using composite nanofibers under visible light irradiation, *European Polymer Journal* 113, 192-196
7. S Javed, RU Baig, YVVS Murthy, Study on noise in a hydrogen dual-fuelled zinc-oxide nanoparticle blended biodiesel engine and the development of an artificial neural network model, *Energy* 160, 774-782
8. MH Gheith, MA Aziz, W Ghori, N Saba, M Asim, M Jawaaid, OY Alothman, Flexural, thermal and dynamic mechanical properties of date palm fibres reinforced epoxy composites, , *Journal of Materials Research and Technology*
9. Development of a Solar system to Produce Water and Electricity of Complex, Greenhouse for Hydroponic Cultivation and Solar Drying, *Current Science International*, Vol 7 (1) 2018, pp 10-22
10. Riheme Sarraj, Wissem Elkhail Letaief, Tarek Hassine & Fehmi Gamaoun , Modeling of rate dependency of mechanical behavior of superelastic NiTi alloy under cyclic loading, *The International Journal of Advanced Manufacturing Technology*
11. Hanen Jrad, Jamel Mars, Mondher Wali, and Fakhreddine Dammak, An extended finite element method for modeling elastoplastic FGM plate-shell type structures , *Structural Engineering and Mechanics*, Vol. 68, No. 3 (2018) 299-312

12. H.Melloulia,*,H.Jrada,M.Walib,a,F.Dammaka Meshless implementation of arbitrary 3D-shellstructures based on a modified first order shear deformation theory, *Computers and Mathematics with Applications*, 77(2019)34–49
13. H Mallek, H Jrad, A Algahtani, M Wali, F Dammak, Geometrically non-linear analysis of FG-CNTRC shell structures with surface-bonded piezoelectric layers, *Computer Methods in Applied Mechanics and Engineering* 347, 679-699
14. H Mallek, H Jrad, M Wali, F Dammak, Geometrically nonlinear finite element simulation of smart laminated shells using a modified first-order shear deformation theory, *Journal of Intelligent Material Systems and Structures* 30 (4), 517-535
15. Ghorbel, S Koubaa, J Mars, M Wali, F Dammak, Non associated-anisotropic plasticity model fully coupled with isotropic ductile damage for sheet metal forming applications, *International Journal of Solids and Structures*
16. H Mallek, H Jrad, M Wali, F Dammak, Piezoelastic response of smart functionally graded structure with integrated piezoelectric layers using discrete double directors shell element, *Composite Structures* 210, 354-366
17. H Mellouli, H Jrad, M Wali, F Dammak Mesh free implementation of the double director shell model for FGM shell structures analysis, *Engineering Analysis with Boundary Elements* 99, 111-121
18. A Bouhamed, H Jrad, LB Said, M Wali, F Dammak, A non-associated anisotropic plasticity model with mixed isotropic–kinematic hardening for finite element simulation of incremental sheet metal forming process, *The International Journal of Advanced Manufacturing Technology* 100 (1-4)
19. Ghorbel, J Mars, S Koubaa, M Wali, F Dammak ,Coupled anisotropic plasticity-ductile damage: Modeling, experimental verification, and application to sheet metal forming simulation ,*International Journal of Mechanical Sciences* 150, 548-560
20. H Jrad, H Mallek, M Wali, F Dammak, Finite element formulation for active functionally graded thin-walled structures, *Comptes Rendus Mecanique* 346 (12), 1159-1178
21. C Saleel, Irfan Anjum Badruddin . An immersed boundary method for simulations of flow and mixing in micro-channels with electro kinetic effects, *Progress in Computational Fluid Dynamics*, 2019; 19: 1-12
22. Irfan Anjum Badruddin. Heat and Mass Transfer with Soret/Dufour Effect in Irregular Porous Cavity, *Journal of Thermophysics and Heat Transfer*, 2019;33:1-16
23. Irfan Anjum Badruddin. Investigation of Heat Transfer in Irregular Porous Cavity Subjected to Various Boundary Conditions, *International Journal of Numerical Methods for Heat and Fluid Flow*, 2019; 29: :418-447
24. Hatem Ben Mâad, Faouzi Askri, Joseph Virgone, Sassi Ben Nasrallah. Numerical study of high temperature metal-hydrogen reactor (Mg₂Ni-H₂) with heat reaction recovery using phase-change material during desorption. *Applied Thermal Engineering*, 140 (2018), pp. 225–234.
25. Chaker Briki, Sihem Belkhiri, Mohamed Houcine Dhaou, Faouzi Askri, Abdelmajid Jemni, Dynamic study of a new design of a tanks based on metallic hydrides. *International Journal of Hydrogen Energy*, 43 (2018) 1566-1576.

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27. KW Yong, PB Ganesan, MSN Kazi, S Ramesh, Irfan Anjum Badruddin. NM Mubarak , Sliding behavior of droplet on a hydrophobic surface with hydrophilic cavities: A simulation study, Physics of Fluids 2018; 30 (12), 122006
28. Irfan Anjum Badruddin. Salman Ahmed N.J, Ali E. Anqi, Sarfaraz Kamangar, Conjugate Heat and Mass Transfer in a Vertical Porous Cylinder Journal of Thermophysics and Heat Transfer, 2018
29. Gulam Mohammed Sayeed Ahmed, Ali Algahtani, Essam R. I. Mahmoud and Irfan Anjum Badruddin. Experimental Evaluation of Interfacial Surface Cracks in Friction Welded Dissimilar Metals through Image Segmentation Technique, Materials 2018; 11(12), 2460
30. Azeem, Irfan Anjum Badruddin. N. Nik-Ghazali, Mohd Yamani Idna Idris, Ali E. Anqi, Salman Ahmed N.J , Sarfaraz Kamangar , Abdullah A.A.A. Al-Rashed. Effect of Size and Location of Solid on Conjugate Heat Transfer in Porous Cavity, Indian Journal of pure & Applied Physics 2018; 56(10): 792-801
31. S Bazri, IA Badruddin, MS Naghavi, OK Seng, S Wongwises, An analytical and comparative study of the charging and discharging processes in a latent heat thermal storage tank for solar water heater system, Solar Energy 2019; 185, 424-438
32. Soudagar, M.E.M., Nik-Ghazali, N.-N., Abul Kalam, M., Badruddin, I.A., Banapurmath, N.R., Akram, N, The effect of nano-additives in diesel-biodiesel fuel blends: A comprehensive review on stability, engine performance and emission characteristics, Energy Conversion and Management, 2018; 178, 15 : 146-177
33. A Kessentini, G Mohammed Sayeed Ahmed, J Madiouli, Design Optimization and FE Analysis of 3D Printed Carbon PEEK Based Mono Leaf Spring Micromachines 10 (5), 279
34. R Sarraj, A Kessentini, T Hassine, A Algahtani, F Gamaoun, Hydrogen Effect on the Cyclic Behavior of a Superelastic NiTi Archwire, Metals 9 (3), 316
35. S Saleel, C. A, Mujeebu, M. A., & Algarni, Coconut oil as phase change material to maintain thermal comfort in passenger vehicles, Journal of Thermal Analysis and Calorimetry 136 (2), 629-636.
36. CASGMF S A Khan, M. Mohiuddin, Investigation of the Effects of Nozzle Exit Mach Number and Nozzle Pressure Ratio on Axisymmetric Flow through Suddenly Expanded Nozzles ,International Journal of Engineering and Advanced Technology 8 (3), 570-578.
37. CAS Khan, Sher Afghan, Abdul Aabid , CFD Simulation with Analytical and Theoretical Validation of Different Flow Parameters for the Wedge at Supersonic Mach Number, International Journal of Mechanical & Mechatronics Engineering 19 (1), 170-177.
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40. SAK C A Saleel, M. A. Ali Baig ,Experimental Investigation of the Base Flow and Base Pressure of Sudden Expansion Nozzle ,*IOP Conf. Series: Materials Science and Engineering* 370 (1), 012052
41. ERIMIAB Gulam Mohammed Sayeed Ahmed , Ali Algahtani, Experimental Evaluation of Interfacial Surface Cracks in Friction Welded Dissimilar Metals through Image Segmentation Technique (IST) ,*MATERIALS* 11 (12), <https://doi.org/10.3390/ma11122460>
42. G Sayeed Ahmed, S Algarni, Design, Development and FE Thermal Analysis of a Radially Grooved Brake Disc Developed through Direct Metal Laser Sintering, *Materials* 11 (7), 1211
43. A Algahtani, E Mahmoud, S Khan, V Tirth ,Experimental Studies on Corrosion Behavior of Ceramic Surface Coating using Different Deposition Techniques on 6082-T6 Aluminum Alloy, *Processes* 6 (12), 240.
44. K Irshad, S Algarni, B Jamil, MT Ahmad, MA Khan, Effect of gender difference on sleeping comfort and building energy utilization: Field study on test chamber with thermoelectric air-cooling system, *Building and Environment* 152, 214-227
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46. S Algarni, Potential for cooling load reduction in residential buildings using cool roofs in the harsh climate of Saudi Arabia, *Energy & Environment*, 0958305X18787340
47. S Mellouli, F Askri, A Edacherian, T Alqahtani, S Algarni, J Abdelmajid, Performance analysis of a thermal energy storage system based on paired metal hydrides for concentrating solar power plants, *Applied Thermal Engineering* 144, 1017-1029.
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49. S Algarni, Assessment of fog collection as a sustainable water resource in the southwest of the Kingdom of Saudi Arabia, *Water and environment journal* 32 (2), 301-309
50. MAH Abdelmohimen, SA Algarni, Numerical investigation of solar chimney power plants performance for Saudi Arabia weather conditions, *Sustainable Cities and Society* 38, 1-8
51. M Usta, M Morabito, A Anqi, M Alrehili, A Hakim, A Oztekin, Twisted hollow fiber membrane modules for reverse osmosis-driven desalination , *Desalination* 441, 21-34

Conference Papers

1. Aroua FATHALLAH, Tarek HASSINE, and Fehmi GAMAOUN , 3D Orthodontic Movement Using a Superelastic Ni-Ti Arch-Wire, Hammamet, 18-20 March 2019, Tunisia
2. A Hamrouni, MA Mergheni, SB Nasrallah, Contribution à l'étude et à l'utilisation des moyens de mesures dans le sillage éolien, 16ème Congrès Francophone de Techniques Laser pour la mécanique des fluides
3. T.M.Y.Khan, M.A.A.Baig, Azeem, N.A,Ahamad and Irfan Anjum Badruddin, Heat and mass transfer with viscous dissipation in porous medium: FEM based methodology, AIP Conference Proceedings 2104, 030058 (2019); <https://doi.org/10.1063/1.5100485> Published Online: 07 May 2019
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5. M Usta, RM Krysko, AE Anqi, AM Alshwairekh, A Oztekin ,The Effect of PTFE Membrane Properties on Vacuum Membrane Distillation Module Performance, ASME 2018 International Mechanical Engineering Congress and Exposition
6. S Ibrahim E. EL-Seesy olar Disinfection of Water with Nano-Titanium Dioxide, International Conference on Materi, als Science and Graphene Technology April 09-11, 2018 Dubai, United Arab Emirates.

Book Chapters

1. Askri F., Jemni A., de Rango P., Marty P., Ben Nasrallah S. Heat and mass transfer during hydriding. Green Energy and Technology, Part F7, pp.489-50.
2. F. Bouzgarrou, F. Askri, H. Belhaj Ali, S. Ben Nasrallah. Prediction of heat and mass transfer within a metal-hydrogen reactor using the Lattice Boltzmann method. Green Energy and Technology, Part F7, pp.371-381.
3. Ben Mâad H, Miled A, Askri F, Ben Nasrallah S. Effect of thermal conductivity of the phase change material (PCM) on the absorption process of a metal-hydrogen reactor (LaNi₅-H₂), Green Energy and Technology, Part F7, pp.767-778.
4. Miled A, Ben Mâad H, Askri F, Ben Nasrallah S. Dynamic study of a metal hydride pump. Green Energy and Technology, Part F7, pp.3-15.