

Publications

Engineering Department

Year 2020

Journals

1. Mousa I. Hussein¹, Syed S. Jehangir¹, I. J. Rajmohan¹, Y. Haik², Tahir Abdelrehman³, Q. Clément⁴ and N. Vukadinovic⁴, "Microwave Absorbing Properties of Metal Functionalized-CNT-Polymer Composite for Stealth Applications," Springer Nature, Scientific Reports, Sept., 2020. DOI : 10.1038/s41598-020-72928-1. (IF 3.998)
2. Elham A. Serria and Mousa I. Hussein, "Implications of Metamaterial on Ultra-Wide Band Microstrip Antenna Performance," Crystals 2020, 10(8), 677; - 06 Aug 2020 <https://doi.org/10.3390/cryst10080677>- 06 Aug 2020. (IF 2.404)
3. Marwan Alakhras, Mourad Oussalah, Mousa Hussein, "A survey of fuzzy logic in wireless localization," *J Wireless Com Network* 2020, 89, May 2020. RG Journal Impact: 1.20 <https://doi.org/10.1186/s13638-020-01703-7>.
4. JS Kasim, MSM Isa, Z Zakaria, MI Hussein, MK Mohsen, "Radiation beam scanning for leaky wave antenna by using slots," TELKOMNIKA, Vol. 18, No. 3, June 2020, pp. 1237-1242. DOI: 10.12928/TELKOMNIKA.v18i3.15720. (IF 1.7)
5. Marwan Alakhras *, Mousa Hussein *, Mourad Oussalah, "Location Fixing and Fingerprint Matching Fingerprint Map Construction for Indoor Localization," Hindawi, Journal of Sensors, Volume 2020, Article ID 7801752, 14 pages. <https://doi.org/10.1155/2020/7801752>. (IF 1.59)
6. Rifaqat Hussain, M I Hussein, Syed Jehangir, Mohammad Sharawi, "A Frequency Reconfigurable Yagi-Like MIMO Antenna System with a Wideband Reflector," *IET Microwaves Antennas & Propagation*, February 2020. doi: 10.1049/iet-map.2019.0630. (IF 2.036)
7. Khalid, Faiq, Syed Rafay Hasan, Sara Zia, Osman Hasan, Falah Awwad, and Muhammad Shafique. "MacLeR: Machine Learning-Based Runtime Hardware Trojan Detection in Resource-Constrained IoT Edge Devices." *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* 39, no. 11 (2020): 3748-3761.
8. Asma Wasfi, Falah Awwad, and Ahmad I. Ayes. "DNA sequencing via z-shaped graphene nanoribbon field effect transistor decorated with nanoparticles using first-principle transport simulations". *New Physics Journal*; Volume 22, June 2020.
9. Muhammad Ali, Saba Khan, Falah Awwad, and Nacir Tit. "High Gas-sensing Selectivity of Bilaterally-Edge-doped Graphene Nano-ribbons towards Detecting NO₂, O₂ and SO₃ Gas Molecules: Ab-initio Investigation." *Applied Surface Science (APSUSC) - Journal (Elsevier)*, Volume 514, 1 June 2020, 145866.
10. HAWZHIN MOHAMMED, SYED RAFAY HASAN, AND FALAH AWWAD. "Fuslon: On-Field Security and Privacy Preservation for IoT Edge Devices; Concurrent Defence Against Multiple types of Hardware Trojan Attacks." *IEEE Access Journal*, Volume 8, (2020): 36847-36862.
11. Asad Ahmed, Osman Hasan, Falah Awwad, and Nabil Bastaki. "Formalization of Cost and Utility in Microeconomics." *Energies (MDPI)* 2020, 13, 712; published on February 6, 2020; doi:10.3390/en13030712
12. Waqar Ahmad, Osman Hasan, Falah Awwad, Nabil Bastaki, and Syed Rafay Hasan. "Formal Reliability Analysis of an Integrated Power Generation System using Theorem Proving." *IEEE Systems Journal*, Manuscript ID: ISJ-RE-19-08208, accepted, January 11, 2020.
13. Fajr Ali, Falah Awwad, Yaser Greish, Ayah Abu Hani, and Saleh Thaker. "Fabrication of Low Temperature and Fast Response H₂S Gas Sensor-Based on Organic-Metal Oxide Hybrid Nanocomposite Membrane." *Organic Electronics - Elsevier*, 76 (2020): 105486.

Year 2020

14. Ahmed Atef, **Mohamed Atef**, Elsayed Esam M. Khaled, Mohamed Abbas, CMOS Transimpedance Amplifiers for Biomedical Applications: A Comparative Study, IEEE Circuits and Systems Magazine (CASM), vol.20, no.1, pp.12-31, Feb.2020.
15. Chao Wang, Xianliang Luo, **Mohamed Atef**, Pan Tang, A 32GHz 68dBΩ Low-Noise and Balance Operation Transimpedance Amplifier in 130 nm SiGe BiCMOS for Optical Receivers, IEICE Transaction, vol.E103-A, no.12, Dec. 2020.
16. R. Errouissi, and A. Al-Durra "Extended High-Gain Observer-Based DC-link Voltage Regulation in Dual-Stage Grid-Tied PV System Under Normal and Abnormal Conditions," IET Renewable Power Generation, vol. 14, no. 12, pp. 2037 – 2046, 2020.
17. R. A. Diab, N. Bastaki and A. Abdrabou, "A Survey on Routing Protocols for Delay and Energy-Constrained Cognitive Radio Networks," in IEEE Access, vol. 8, pp. 198779-198800, 2020, doi: 10.1109/ACCESS.2020.3035325.
18. R. Ramzan, M. Omar, O. Siddiqui, T. Ksiksi, N. Bastaki. "Internet of Trees (IoTr) Implemented by Highly Dispersive Electromagnetic Sensors." IEEE Sensors Journal, 2020.
19. Asad Ahmed, Osman Hasan, Falah Awwad, and Nabil Bastaki. "Formalization of Cost and Utility in Microeconomics." Energies (MDPI) 2020, 13, 712; published on February 6, 2020; doi:10.3390/en13030712 (IF = 2.707)
20. Abu Diab, R.A., Abdrabou, A. & Bastaki, N. "An efficient routing protocol for cognitive radio networks of energy-limited devices." Telecommunication Systems, 73(4), 577–594 (2020). DOI: 10.1007/s11235-019-00628-x.
21. Simultaneous and Rapid Quantification of Microalga Biomolecule Content using Electrochemical Impedance Spectroscopy: **M Al Ahmad**, S Raji, F Mustafa, TA Rizvi, S Al-Zuhair, Biotechnology Progress, 2020. (IF 2019: **2.334**)
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23. Cells electrical characterization: dielectric properties, mixture, and modeling theories: N Nasir, **M Al Ahmad**, Journal of Engineering, 2020. (IF 2019: **not yet**)
24. Label-Free Normal and Cancer Cells Classification Combining Prony’s Method and Optical Techniques: AF Abdulgani, **M Al Ahmad**, IEEE Access 8, 32882-32890, 2020. (IF 2019: **3.745**)
25. Simultaneous piezoelectric noninvasive detection of multiple vital signs: A Allataifeh, **M Al Ahmad**, Scientific Reports 10 (1), 1-13, 2020. (IF 2019: **3.998**)
26. Electrical detection of blood cells in urine: N Nasir, S Raji, F Mustafa, TA Rizvi, Z Al Natour, A Hilal-Alnaqbi, Heliyon 6 (1), 2020. (IF 2019: **1.650**)
27. A. Wahyudie, T. Susilo, F. Al Aryani, C. Nandar, M. Jama, and A. Daher, "Wave Power Assessment in the Middle Part of Southern Cosat of Java Island", Energies, Vol. 13. No. 10, 2633, 2020.
28. M. Jama and A. Wahyudie, "Wave Excitaitaion Force Estimation Using and Electrical-based Extended Kalman Filter for Point Absorber Wave Energy Converters", IEEE Access, Vol. 8. No. 1, pp. 49823-49836. 2020.
29. S.S. Khan, H. Shareef, A. A. Ibrahim, Improved Semi-empirical Model of Proton Exchange Membrane Fuel Cell Incorporating Fault Diagnostic Feature, International Journal of Modern Power Systems and Clean Enaegy, 13(xxx), : pp,1–8. DOI: 10.35833/MPCE.2019.000179 Abs./Ind.: ISI. impact factor: 2.217, Q1 (2019 JCR). Pages:8, <https://ieeexplore.ieee.org/document/9186384>.
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Year 2020

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32. K. Ibrahim, R. Sirjani, H. Shareef, Performance Assessment of Pareto and Non-Pareto Approaches for the Optimal Allocation of DG and DSTATCOM in the Distribution System, *Journal Tehnički vjesnik/Technical Gazette*, 2020, 27(5), pp. 1-8, DOI: <https://doi.org/10.17559/TV-20181214103448>, Abs./Ind.: ISI. impact factor: 0.644, Q4 (2018 JCR). Pages:8
33. As a corresponding author: G. Tiouitchi, M. Ait Ali, A. Benyoussef, M. Hamedoun, A. Lachgar, A. Kara, A. Ennaoui, A. Mahmoud, F. Boschini, H. Oughaddou, **A. El Moutaouakil***, A. El Kenz and O. Mounkachi, "Efficient production of few-layer black phosphorus by liquid-phase exfoliation," *Royal Society Open Science*, 7201210, <https://doi.org/10.1098/rsos.201210>
34. As a co-author: J. Abed, N. S. Rajput, **A. El Moutaouakil** and M. Jouiad, "Recent Advances in the Design of Plasmonic Au/TiO₂ Nanostructures for Enhanced Photocatalytic Water Splitting," *Nanomaterials* 2020, 10(11), 2260; <https://doi.org/10.3390/nano10112260>
35. R. A. Diab, N. Bastaki, and A. Abdrabou, "A Survey on Routing Protocols for Delay and Energy-Constrained Cognitive Radio Networks," *IEEE Access* 8, 198779-198800, 2020.
36. A. Abdrabou, M. Darwish, A. Dalao, M. Alkaabi, and M. Abutaqiya, "Energy-Aware WiFi Network Selection via Forecasting Energy Consumption," *International Journal of Electronics and Telecommunications*, vol. 66, no. 2, 339-345, 2020.
37. R. A. Diab, A. Abdrabou, N. Bastaki, "An efficient routing protocol for cognitive radio networks of energy-limited devices," *Telecommunication Systems*, vol. 73, no. 4, 577-594, 2020.
38. H. Hittini, A. Abdrabou, L. Zhang, "FDIPP: False Data Injection Prevention Protocol for Smart Grid Distribution Systems," *Sensors*, vol. 20, no. 3, 2020.
39. M. S. Laghari, A. Hassan, & M. Noman, "*Wear Debris Shape Classification*", *Lecture Notes in Electrical Engineering*, Vol. 659, pp. 209-217, 2020..
40. **Ali Hassan Shah, Ahmed Hassan, Mohammad Shakeel Laghari, & Abulrahman Alraeesi, "Determination of Optimal Cleaning Frequency of Photovoltaic Modules Based on Power Losses in the UAE Climate", accepted for Sustainability, 2020.**
41. M. S. Laghari, A. Dirir, & M. Noman, "*Smart Academic Guidance for Institutional Students*", accepted for *Advances in Intelligent Systems and Computing (AISC)*, Springer, 2020.
42. M. S. Laghari, A. Hassan, & M. Noman, "*Wear Particle Classification using Shape Features*", accepted for *Advances in Intelligent Systems and Computing (AISC)*, Springer, 2020.

Conferences

1. R. Errouissi, and S. Alkhaddeim, "Output Feedback Control Of Three-Phase Grid-Tied Inverter With LCL Filter With Enhanced Transient Response," *SPEEDAM conference*, Sorrento, Italy, June, 24-26, 2020.
2. R. Errouissi, H. Shareef, and A. Wahyudie, "A Novel Design of PR Controller with Anti- windup Scheme for Single-Phase Interconnected PV Systems," *IEEE-IAS General Meeting*, Detroit, MI, USA, October 1115, 2020.
3. R. Errouissi, H. Shareef, and F. Awwad, "Disturbance Observer-Based Control for Three-Phase Grid-tied Inverter With LCL Filter," *IEEE-IAS General Meeting*, Detroit, MI, USA, October 1115, 2020.
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- . Ashwaq Alkhatib, Hussain Shareef, Optimal Placement and Sizing of Distributed Generation for Power Loss Mitigation and Voltage Profile Enhancement Using Atom Search Optimization, 5th international conference on smart and sustainable technologies, Rudjera Boskovica 32, Split, Croatia, 2-4 July 2020.
5. M. Jouiad, J. Abed, N. Rajput, A. Najar, **A. El Moutaouakil**, "The Role of Plasmonics on the Photocatalytic Activity in Water Splitting," the International Conference on Electronic Engineering and Renewable Energy (ICEERE'20), Saidia, Morocco, April 13-15, 2020
6. **A. El Moutaouakil**, H. Fukidome, T. Otsuji, "Investigation Of Terahertz Properties In Graphene Ribbons", 45th International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW-THz), NY, USA, November 8-13, 2020 (Participated despite rejection by the college due to "the conference requires only 2-page paper for the IEEE Xplore)
7. **A. El Moutaouakil**, "Terahertz electronics: Toward untapped energy sources," International Renewable and **Sustainable** Energy Conference 2020 (IRSEC'20), Rabat, Morocco, November 25-28, 2020,
8. M. Prakash and A. Abdrabou, "Performance Insights on Using Multipath TCP for Wireless Multihomed IoT Gateways," Proc. of International Conference on Computer, Information and Telecommunication Systems (CITS), 2020.

Patents

1. Zadeh, Ebrahim Ghafar, and Falah Awwad. "Functionalized optical lens and method of manufacturing." U.S. Patent 10,809,513, issued October 20, 2020.
2. Rashad Ramzan, Omar Farooq Siddiqui, Muhammad Amin, Nabil Bastaki, "Plant Water Sensor." United States Patent 10,605,746, March 31, 2020.
3. Mahmoud F.Y. Al Ahmad, Nabil Bastaki, Bisni Fahad Mon, ""Apparatus and Method for Physiological Mechanical and Electrical Activity Monitoring." United States Patent 10,722,124, July 28, 2020.
4. Wireless Multiplexing using Tunable Antenna: **Mahmoud Al Ahmad** and Mohamed Deeb. USxxxxx, 2020.
5. Frequency Agile Antenna: **Mahmoud Al Ahmad** and Ala Abu Sanad. USxxxxx, 2020.
6. Bioreactor system and method of operating same for cellular composition identification and quantification: **MFY Al Ahmad**, H Laghari. US10564123, 2020.
7. Electrical Extraction of Piezoelectric Constants: **Mahmoud FY Al Ahmad**. US 16674515,2020
8. A Gaouda, KB Shaban, M Salama, A Abdrabou, R Elshatshat, M. Khairalla, A.M. Abdrabou, Smart device to detect faults in primary substation power feeders, US Patent 10,794,965, 2020.
9. A Gaouda, KB Shaban, M Salama, A Abdrabou, R Elshatshat, M. Khairalla, A.M. Abdrabou, Smart fault detection device to anticipate impending faults in power transformers, US Patent 10,613,157, 2020.