
PUBLICATIONS

Journal Papers (refereed)

- [J1] A. Aldandan, L. Dallol, M. ALdhefeeri, O. AlSalili, **S. E. Esmaeili**, F. Badreddine, G. Hussain, "Design and Implementation of a One-Seater Solar Car", The Journal of Sustainable Development of Energy, Water and Environment Systems, Vol 12, Issue 1, 2024. [<http://dx.doi.org/10.13044/j.sdwes.d12.0487>]
- [J2] **S. E. Esmaeili**, A. AlRasheedi, A. AlJarrah, M. H. Marzouk, and F. Y. AlBloushi, "Design and Implementation of a Compact Automated Spirulina Cultivation System for Households", Indonesian Journal of Agricultural Research, Vol. 6, No. 1, pp. 57-67, October 25, 2023. [<https://doi.org/10.32734/injar.v6i01.11746>]
- [J3] A. Abutaleb, M. Alhamad, M. Al-Orf, K. Alrashed, **S. E. Esmaeili**, "The Design of a Dual Open-Source 3D Printer Utilizing FDM and MSLA Printing Technologies", International Journal of Mechatronics and Applied Mechanics (IJOMAM), Issue 13, pp 103-111, 2023. [dx.doi.org/10.17683/ijomam/issue13.13]
- [J4] R. Bouhali, H. Al-Tabaa, S. Abdelfattah, M. Atiyeh, **S. E. Esmaeili** and H. Al-Tabbakh, "Otisma: An Integrated Application and Humanoid Robot as an Educational Tool for Children with Autism", Journal of Medical Engineering and Technology, Vol. 47, Issue 1, pp. 44-53, 2023. [<http://dx.doi.org/10.1080/03091902.2022.2097327>]
- [J5] **Seyed Esmaeili** and Abeer Imdoukh, "Decreasing the Power-Clock Resonant Signal Central Voltage as a Mean for Power Reduction in Integrated Power and Clock Distribution Networks", Indian Journal of Science and Technology, accepted for publication, Vol. 14, Issue 33, pp. 2671-2683, October 11th 2021. DOI: 10.17485/IJST/v14i33.1820
- [J6] **Seyed Esmaeili**, Ahmad Al-AbdulRazaq, Alaa Oqlah, Farah Al-Mujali, Maryam Al-Humoud, and Detlef Hummes, "Design and Assembly of An Automated Juice Mixing Machine", *International Journal of Computing and Digital Systems*, vol. 10, issue 01, February 2021. DOI: <http://dx.doi.org/10.12785/ijcds/100129>
- [J7] **S. E. Esmaeili**, M. Al-Khaldi, S. Al-Shammari, F. Darweesh, T. Al-Mannaei, A. Imdoukh, "Design, Analysis, and Mechanical Assembly of a Three-Wheeled Solar-Powered Electric Vehicle", *International Journal of Computing and Digital Systems*, vol. 09, issue 03, May 2020. ISSN: (2210-142X), DOI: <http://dx.doi.org/10.12785/ijcds/090315>
- [J8] Z. Ali, **S. E. Esmaeili**, "The Design of a Smart Refrigerator Prototype", Proceeding of the Electrical Engineering, Computer Science and Informatics Journal, vol. 4, pp. 579-583, Sep. 2017.
- [J9] **S. E. Esmaeili**, A. J. Al-Khalili, "Integrated power and clock distribution network", *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, vol. 21, issue, 10, pp.1941-1945, October 2013.

- [J10] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "Low-swing differential conditional capturing flip-flop for LC resonant clock distribution networks", *IEEE Transactions on Very Large Scale Integration (TVLSI) Systems*, vol. 20, issue 8, pp. 1547-1551, Aug. 2012.
- [J11] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "Dual-edge triggered sense amplifier flip-flop for resonant clock distribution networks", *IET Computers and Digital Techniques*, vol. 4, issue 6, pp.499-514, November 2010.
- [J12] **S. E. Esmaeili**, A. M. Farhangi, A. J. Al-Khalili, G. E. R. Cowan, "Skew compensation in energy recovery clock distribution networks", *IET Computers and Digital Techniques*, vol. 4, issue 1, pp.56-72, January 2010.
- ➔ One of IET Computer and Digital Techniques top accessed articles in December 2011.
- [J13] **S. E. Esmaeili**, N. I. Khachab, "Examining the efficiency of reducing interconnect cost through region-constrained placement without the utilization and guidance of a power model as a fast approach to reduce dynamic power consumption", *Kuwait Journal of Science & Engineering*, 37, (2B), pp. 73-92, 2010.

Conference Papers (refereed)

- [C1] A. Al Hulaibi, H. Wahid, S. Al Saif, J. Sadeq, **S. E. Esmaeili**, M. Kandil, "SkyBot - A Novel Autonomous Window Cleaning Drone", 4th International Conference on Electrical, Communication and Computer Engineering (ICECCE 2023), Dubai, UAE, December 30-31, 2023.
- [C2] A. M. Al-Ajmi, G. A. Thiab, F. M. Hamoudah, N. M. Mahmoud, **S. E. Esmaeili**, F. M. Badreddine, "Project Averroes: An Effective, Durable, and Consumer-Oriented Solution to the Locomotion Problem in VR Environments", 4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, June 09-11, 2022. [10.1109/HORA55278.2022.9799872]
- [C3] B. Ali, D. Thahir, K. Al-Karmi, **S. E. Esmaeili**, A. Alateyah, "Pothole Patrol: An autonomous Vehicle for Locating and Repairing Potholes", 4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, June 09-11, 2022. [10.1109/HORA55278.2022.9799954]
- [C4] A. Al-Kandari, A. AlMuzaini, A. Al-Humaidan, H. Al-Jouhari, **S. E. Esmaeili**, A. Behiry, "VGRIP: Virtual Reality in a GRIP", 4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, June 09-11, 2022. [10.1109/HORA55278.2022.9799929]
- [C5] A. Aleidan, A. Almajedi, A. Alqattan, F. Alramezi, **S. E. Esmaeili**, and A. Alateyah, "Design and Implementation of an Educational Suit", IEEE Integrated STEM Education Conference, March 26, 2022.
- [C6] M. Makhseed, F. Abdel Salam, S. El-Aswad, **S. E. Esmaeili**, "Design and Assembly of a Smart Recycling Bin", 3rd International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, June 11-13, 2021. DOI: 10.1109/HORA52670.2021.9461315
- [C7] H. F. Al-Enezi, **S. E. Esmaeili**, "The Design of a Drivable Airport Luggage Trolley", 3rd International Congress on Human-Computer Interaction, Optimization and Robotic

- Applications, Ankara, Turkey, June 11-13, 2021. DOI: 10.1109/HORA52670.2021.9461363
- [C8] F. Al-Alawi, D. Bouresli, **S. E. Esmaeili**, "Design and Assembly of a Smart Steamer", 3rd International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, June 11-13, 2021. DOI: 10.1109/HORA52670.2021.9461275
- [C9] **S. E. Esmaeili**, A. Lulu, F. Sharar, F. Kheder, R. Kablaoui, "The Design of a Tangible Table Based on An Array of Vertically Moving Blocks", *2021 IEEE 7th International Conference on Virtual Reality (ICVR)*, Foshan, China, May 20-22, 2021. DOI: 10.1109/ICVR51878.2021.9483703
- [C10] A. Al-Jumah, K. Hamad, A. Al-Hosainan, A. Talaat, **S. E. Esmaeili**, "The Design of a Touchable Table Prototype", *2018 5th IEEE International Conference on Engineering Technologies and Applied Sciences (ICETAS)*, Bangkok, Thailand, November 22-23, 2018.
- Best paper award
- Best presentation award
- [C11] R. Al-Shammary, D. Mousa, **S. E. Esmaeili**, "The Design of a Smart Medicine Box", *The 26th Iranian Conference on Electrical Engineering (ICEE)*, Sadjad University of Technology in co-operation with the permanent Secretariat of ICEE, Mashhad, May 2018, pp. 130-134.
- [C12] R. Y. AL-Asad, A. J. AL-Zuhair, **S. E. Esmaeili**, "Smart Phone Based Facial and Text Recognition Application (RICO)", *The 26th Iranian Conference on Electrical Engineering (ICEE)*, Sadjad University of Technology in co-operation with the permanent Secretariat of ICEE, Mashhad, May 2018, pp.125-129.
- [C13] Manal Al-Enezi, Esraa Al-Qattan, **S. E. Esmaeili**, "Sun Chaser Robot", IEEE 9th GCC Conference and Exhibition, Manama, Bahrain, May 8-11, 2017, pp. 1-6.
- [C14] A. Al-Ramadhan, B. Al-Sahen, M. Ayesha, **S. E. Esmaeili**, "The Design of a Boat Safety and Accident Prevention System", IEEE 9th GCC Conference and Exhibition, Manama, Bahrain, May 8-11, 2017, pp. 1-6.
- [C15] **S. E. Esmaeili**, A. J. Al-Khalili, "10 GHz throughput FinFET dual-edge triggered flip-flops", *2014 IEEE 27th Canadian Conference on Electrical and Computer Engineering (CCECE)*, pp. 1-4, May 2014.
- [C16] **S. E. Esmaeili**, R. Islam, A. J. Al-Khalili, and G. E. R. Cowan, "Dual-edge triggered sense amplifier flip-flop utilizing an improved scheme to reduce area, power, and complexity", *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)*, pp. 292-295, Dec 2012.
- [C17] **S. E. Esmaeili**, A. M. Farhangi, A. J. Al-Khalili, G. E. R. Cowan, "Reduced wire length clock tree structure using the matched-delay skew compensation technique", *IEEE Canadian Conference on Electrical and Computer Engineering(CCECE)*, pp. 1 – 4, May 2012.
- [C18] Riadul Islam, **S. E. Esmaeili**, Thouhidul Islam, "A high performance clock precharge SEU hardened flip-flop", *IEEE 9th International Conference on ASIC*, pp. 574 – 577, October 2011.

- [C19] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "Estimating required driver strength in the resonant clock generator", *2010 IEEE Asia Pacific Conference on Circuits and Systems*, pp. 927-930, December 2010.
- [C20] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "Dual-edge triggered pulsed energy recovery flip-flops", *IEEE International NEWCAS Conference*, pp.345-348, June 2010.
- [C21] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "Dual-edge triggered energy recovery DCCER flip-flop for low energy applications", *European Conference on Circuit Theory and Design*, pp.57-60, August 2009.
- [C22] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "A study on the effects of temperature and loading on the power consumption in energy recovery resonant clocking", *Proceedings of the International Conference on Information Science, Technology and Applications*, pp.91-95, March 2009.
- [C23] **S. E. Esmaeili**, A. J. Al-Khalili, G. E. R. Cowan, "A novel Approach for skew compensation in energy recovery clock distribution networks", *IEEE 20th International Conference on Microelectronics*, pp.365-368, 2008.
- [C24] **S. E. Esmaeili**, G. E. R. Cowan, A. J. Al-Khalili, "Power reduction in energy recovery and square-wave clock distribution networks operating at half frequency with dual-edge triggered flip-flops", *Joint 6th International IEEE Northeast Workshop on Circuits and Systems and TAISA Conference*, pp.125-128, June 2008.
- [C25] **S. E. Esmaeili**, N. I. Khachab, "Efficiency of components' region-constrained placement to reduce FPGA's dynamic power consumption", *14th IEEE International Conference on Electronics, Circuits and Systems*, pp.857-860, December 2007.
- [C26] **Seyed E. Esmaeili**, Nabil I. Khachab, Moustafa Y. Ghannam, "Effect of glitches on the efficiency of components region-constrained placement as a fast approach to reduce FPGAs dynamic power consumption", *International Conference on Microelectronics*, pp.222-225, December 2006.
- [C27] **S. E. Esmaeili**, N. I. Khachab, M. Y. Ghannam, "Effect of glitches on the efficiency of components' region-constrained placement as a fast approach to reduce FPGA's dynamic power consumption", *IEEE Computer Society Annual Symposium on Emerging VLSI Technologies and Architectures*, 2 pages, March 2006.

Published Abstracts

- [A1] C. El-Neaman, D. Al-Hazza, M. Ahmed, H. Al-Korki, M. El-Abd, and **S. Esmaeili**, "Smart Helmet: Towards Enhancing Workers Safety", 14th Undergraduate Research Conference on Applied Computing, Dubai, 23-24 November 2022.
- [A2] D. Alqemlas, F. Edhbayah, S. Alhudaibi, S. Alzanki, **S. E. Esmaeili**, J. Yousafzai, "Upcycle Bot (re-sort)", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 7, 15-16 April 2020.
- [A3] A. Alfailakawi, B. Alsabah, M. Abedii, A. Almatrouk, **S. E. Esmaeili**, "BEACH CLEANER", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 9, 15-16 April 2020.
- [A4] H. Al-Shammari, F. Al-Azmi, M. Taqi, N. Al-Attar, **S. E. Esmaeili**, "Tangible Media Table", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 10, 15-16 April 2020.
- [A5] A. Alajmi, J. Shah, L. Al-Wuqayan, N. Alajmi, **S. E. Esmaeili**, M. Khanafer, "Self-Lawn Mower", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 11, 15-16 April 2020.
- [A6] N. AlSanea, L. Saleh, S. E. Esmaeili, K. Sultan, "Smart Charitable Fridge", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 13, 15-16 April 2020.
- [A7] A. Al-AbdulRazzaq, F. Almjali, A. Oqlah, M. Al-humoud, **S. E. Esmaeili**, "Juice Mixing Machine", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 19, 15-16 April 2020.
- [A8] H. Al-Jouhari, A. Al-Humaidan, A. Al-Kanderi, A. AlMuzaini, **S. E. Esmaeili**, "VGRIP – Virtual Reality in a GRIP", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 33, 15-16 April 2020.
- [A9] A. Mahmoud, B. Zaidan, E. Soliman, M. A Borhamah, **S. E. Esmaeili**, "Self-Stabilizing Bed", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 35, 15-16 April 2020.
- [A10] R. Bouhali, M. Atiyeh, S. Saad, H. Al-Tabaa, **S. E. Esmaeili**, "Otisma – Therapy Robot", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 57, 15-16 April 2020.
- [A11] N. F. AlEnezi, O. M. AlAjmi, S. T. Khudadah, S. A. AlSharhan, **S. E. Esmaeili**, "Autonomous Beach Cleaner", *11th Undergraduate Research Conference on Applied Computing*, Dubai, page 18, 17-18 April 2019.
- [A12] A. Lulu, F. Sharar, F. Kheder, R. Kablaoui, **S. E. Esmaeili**, "Flow Blocks – Tangible Media", *11th Undergraduate Research Conference on Applied Computing*, Dubai, page 19, 17-18 April 2019.
- [A13] H. Ali, L. Mubarak, F. Alqattan, E. Deyab, **S. E. Esmaeili**, "ICU Drone", *11th Undergraduate Research Conference on Applied Computing*, Dubai, page 64, 17-18 April 2019.
- [A14] A. Al-Khaldi, M. Al-Qemlas, N. Al-Faresi, **S. E. Esmaeili**, "PCS: Portable Car Shade", *11th Undergraduate Research Conference on Applied Computing*, Dubai, page 72, 17-18 April 2019. → Best Poster Presentation Award
- [A15] F. Al-Swailem, F. Al-Sahlawi, H. Abushalfa, S. Thani, **S. E. Esmaeili**, "BALANCE", *11th Undergraduate Research Conference on Applied Computing*, Dubai, page 74, 17-18 April 2019.

- [A16] H. Al-Nasser, S. Al-Asfour, N. Al-Ali, R. Al-Yaqoub, **S. E. Esmaeili**, "Smart Medicine Holder", *11th Undergraduate Research Conference on Applied Computing*, Dubai, page 158, 17-18 April 2019.
- [A17] H. F. Al-Enezi, **S. E. Esmaeili**, "Drivable Airport Cart", *10th Undergraduate Research Conference on Applied Computing*, Dubai, page 162, April 2018. → **People Choice Poster Award**
- [A18] A. Al-Khuder, W. Al-Othman, **S. E. Esmaeili**, "DCR: Dust Cleaning Robot for Solar Panels", *10th Undergraduate Research Conference on Applied Computing*, Dubai, page 163, April 2018.
- [A19] A. Al-Enezi, E. Al-Qattan, **S. E. Esmaeili**, "Sun Chaser Robot", *8th Undergraduate Research Conference on Applied Computing*, Zayed University, Dubai, page 29, April 2016. → **Best Poster Presentation Award**
- [A20] A. Al-Mutairi, A. Al-Terkait, **S. E. Esmaeili**, "The Design of A PCB Milling Machine", *8th Undergraduate Research Conference on Applied Computing*, Zayed University, Dubai, page 47, April 2016.
- [A21] N. Al-Aghbar, **S. E. Esmaeili**, "PLEN 4 Autism", *8th Undergraduate Research Conference on Applied Computing*, Zayed University, Dubai, page 51, April 2016.
- [A22] S. Al-Majed, B. M. Al-Zaid, **S. E. Esmaeili**, "Smart Recycling Bin", *8th Undergraduate Research Conference on Applied Computing*, Zayed University, Dubai, page 44, April 2016.