
PUBLICATIONS

Patents

- [P1] Reversible Adjustable Eyeglasses with Polarized and/or Prescription Lenses, **Seyed Ebrahim Esmaeili**, Patent Number: EP 2 930 553 B1, November 9th 2016.
- [P2] Reversible Adjustable Eyeglasses with Polarized and/or Prescription Lenses, **Seyed Ebrahim Esmaeili**, Patent Number: US 9,470,907 B2, October 18th 2016.
- [P3] Wheeled Suitcase, Hanan Sherif Al-Hashemi and **Seyed Ebrahim Esmaeili**, Patent Number: US 9,095,193 B1, August 2015.

Journal Papers (refereed)

- [J1] R. Bouhali, H. Al-Tabaa, S. Abdelfattah, M. Atiyeh, **S. 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*, accepted for publication, June 2022. [<http://dx.doi.org/10.1080/03091902.2022.2097327>]
- [J2] **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 2021. DOI: 10.17485/IJST/v14i33.1820
- [J3] **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>
- [J4] **S. E. Esmaeili**, M. Al-Khalidi, 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>
- [J5] 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.
- [J6] **S. E. Esmaeili**, A. J. Al-Khalili, "Integrated power and clock distribution network", *IEEE Transactions on Very Large Scale Integration (TVLSI) Systems*, vol. 21, issue, 10, pp.1941-1945, October 2013.
- [J7] **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.

- [J8] **S. E. Esmaili**, 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.
- [J9] **S. E. Esmaili**, 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.
- [J10] **S. E. Esmaili**, 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. M. Al-Ajmi, G. A. Thiab, F. M. Hamoudah, N. M. Mahmoud, **S. E. Esmaili**, 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.
- [C2] B. Ali, D. Thahir, K. Al-Karmi, **S. E. Esmaili**, 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.
- [C3] A. Al-Kandari, A. AlMuzaini, A. Al-Humaidan, H. Al-Jouhari, **S. E. Esmaili**, 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.
- [C4] A. Aleidan, A. Almajedi, A. Alqattan, F. Alramezi, **S. E. Esmaili**, and A. Alateyah, "Design and Implementation of an Educational Suit", IEEE Integrated STEM Education Conference, March 26, 2022.
- [C5] M. Makhseed, F. Abdel Salam, S. El-Aswad, **S. E. Esmaili**, "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
- [C6] H. F. Al-Enezi, **S. E. Esmaili**, "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
- [C7] F. Al-Alawi, D. Bouresli, **S. E. Esmaili**, "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
- [C8] **S. E. Esmaili**, 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*

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- [C9] 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.
 - [C10] 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.
 - [C11] 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.
 - [C12] 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.
 - [C13] A. Al-Ramadhan, B. Al-Sahen, M. Ayeshe, **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.
 - [C14] **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.
 - [C15] **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.
 - [C16] **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.
 - [C17] 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.
 - [C18] **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.
 - [C19] **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.
 - [C20] **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.
 - [C21] **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.
- [C22] **S. E. Esmaili**, 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.
- [C23] **S. E. Esmaili**, 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.
- [C24] **S. E. Esmaili**, 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.
- [C25] **Seyed E. Esmaili**, 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.
- [C26] **S. E. Esmaili**, 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] D. Alqemlas, F. Edhbayah, S. Alhudaibi, S. Alzanki, **S. E. Esmaili**, J. Yousafzai, "Upcycle Bot (re-sort)", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 7, 15-16 April 2020.
- [A2] A. Alfaiakawi, B. Alsabah, M. Abedi, A. Almatrouk, **S. E. Esmaili**, "BEACH CLEANER", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 9, 15-16 April 2020.
- [A3] H. Al-Shammari, F. Al-Azmi, M. Taqi, N. Al-Attar, **S. E. Esmaili**, "Tangible Media Table", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 10, 15-16 April 2020.
- [A4] A. Alajmi, J. Shah, L. Al-Wuqayan, N. Alajmi, **S. E. Esmaili**, M. Khanafer, "Self-Lawn Mower", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 11, 15-16 April 2020.
- [A5] N. AlSanea, L. Saleh, S. E. Esmaili, K. Sultan, "Smart Charitable Fridge", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 13, 15-16 April 2020.
- [A6] A. Al-AbdulRazzaq, F. Almjali, A. Oqlah, M. Al-humoud, **S. E. Esmaili**, "Juice Mixing Machine", *12th Undergraduate Research Conference on Applied Computing*, Dubai, page 19, 15-16 April 2020.

- [A7] 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.
- [A8] 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.
- [A9] 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.
- [A10] 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.
- [A11] 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.
- [A12] 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.
- [A13] A. Al-Khalidi, 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**
- [A14] F. Al-Suwailem, 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.
- [A15] 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.
- [A16] 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**
- [A17] 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.
- [A18] 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**
- [A19] 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.
- [A20] N. Al-Aghbar, **S. E. Esmaeili**, "PLEN 4 Autism", *8th Undergraduate Research Conference on Applied Computing*, Zayed University, Dubai, page 51, April 2016.
- [A21] 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.