

List of Recent Publications

1. S.A.A. Zaidi, A. Tuoheti, M. Martina, and G. Masera., "FPGA accelerator of Algebraic Quasi Cyclic LDPC Codes for NAND flash memories," *Design & Test, IEEE*, Nov. 2015
2. M. Awais, A. Ahmed, S. A. Ali, M. Naeem, W. Ejaz and A. Anpalagan, "Resource Management in Multicloud IoT Radio Access Network," in *IEEE Internet of Things Journal*, vol. 6, no. 2, pp. 3014-3023, April 2019, doi: 10.1109/JIOT.2018.2878511.
3. Ijaz M, Zaidi SAA, Rashid A (2021) Uniform patterns based area-efficient and accurate stochastic computing finite impulse response filter. *PLOS ONE* 16(1): e0245943. <https://doi.org/10.1371/journal.pone.0245943>
4. Raza H, Zaidi SAA, Rashid A, Haider S (2021) An area efficient and high throughput implementation of layered min-sum iterative construction a posteriori probability LDPC decoder. *PLOS ONE* 16(3): e0249269. <https://doi.org/10.1371/journal.pone.0249269>
5. Riaz, U, Aziz, S, Umar Khan, M, Zaidi, S, Ukasha, M, Rashid, A. A novel embedded system design for the detection and classification of cardiac disorders. *Computational Intelligence*. 2021; 37(4): 1844- 1864. <https://doi.org/10.1111/coin.12469>
6. Rani, S., Haider, S., Bukhari, S.H.R., Zaidi, S.A.A. and Huda, A.B. (2022), Performance Optimization of Apodized FBG Biomedical Sensor for Variation in Temperature and Presence of Noise. *IEEJ Trans Elec Electron Eng*, 17: 847-855. <https://doi.org/10.1002/tee.23573>
7. Rashid A, Murtaza M, Zaidi SAA, Zaki H, Tahir FA (2023), A single-layer, wideband and angularly stable metasurface based polarization converter for linear-to-linear cross-polarization conversion. *PLOS ONE* 18(1): e0280469. <https://doi.org/10.1371/journal.pone.0280469>
8. Ahmed, J., Zaidi, S., Aziz, S., Rashid, A., & Haider, S. (2023). Real time vision-based implementation of plant disease identification system on FPGA. *Mehran University Research Journal of Engineering And Technology*, 42(2), 19-29. [doi:10.22581/muet1982.2302.03](https://doi.org/10.22581/muet1982.2302.03)
9. M. Sarwar Awan, S. Azhar Ali Zaidi and J. Mir, "UETT4K Anti-UAV: A Large Scale 4K Benchmark Dataset for Vision-Based Drone

- Detection in High-Resolution Imagery," in *IEEE Access*, vol. 13, pp. 73553-73568, 2025, doi: 10.1109/ACCESS.2025.3562890
10. S.A.A. Zaidi, M. Awais, C. Condo, M. Martina, and G. Masera., "Fpga accelerator of quasi cyclic EG-LDPC codes decoder for NAND flash memories". In Design and Architectures for Signal and Image Processing (DASIP), 2013 Conference on, pages 190–195, Oct 2013.
 11. S.A.A. Zaidi, M. Martina, and G. Masera., "Rapid Prototyping of Floating Point AWGN Channel Using High Level Synthesis". In Forum on Specification and Design Languages (FDL), 2014 Conference on, paper 46, Oct 2014.
 12. A. Zahir, S.A.A. Zaidi, A. Pulimeno, M. Graziano, D. Demarchi, G. Masera and G. Piccinini., "Molecular transistor circuits: From device model to circuit simulation". In Nanoscale Architectures (NANOARCH), 2014 IEEE/ACM International Symposium on, Paris, pp. 129-134, July 2014.
 13. G.Xiao, W.Ahmad, S.A.A. Zaidi, M. Ruo Roch, G. Causapruno., "High Speed VLSI Architecture for Finding the First W Maximum/minimum Values". In Applications in Electronics Pervading Industry, Environment & Society (APPLEPIES), 2014 Conference on, paper 5, May 2014.
 14. K. S. Haider, A. Ghafoor, M. Imran, F. M. Malik, "Model reduction of large scale descriptor systems using time limited Gramians", *Asian Journal of Control*, vol. 19, no. 4, pp. 1-11, 2017. Impact factor: 1.407.
 15. S. Haider, A. Ghafoor, M. Imran, F. M. Malik, "Frequency interval Gramians based structure preserving model order reduction for second order systems", *Asian Journal of Control*
 16. K. S. Haider, A. Ghafoor, M. Imran, F. M. Malik, "Frequency limited Gramians based structure preserving model order reduction for discrete time second order systems". *International Journal of Control*
 17. M. Saqlain, M. Riaz, and K. S. Haider, "Controller design for performance analysis and optimization of twin rotor system", *International Science Journal*, vol. 29, no 2, pp. 349-355, 2017.
 18. K. S. Haider, A. Ghafoor, M. Imran, F. M. Malik, "Time limited Gramians based model order reduction for second order systems".
 19. S. Ali, R. Mohd-Mokhtar and S. Haider, "Infinite and Finite Time-Frequency Interval based Variants of Second-Order Balanced

- Truncation for Stable and Unstable Systems," in *IEEE Access*, doi: 10.1109/ACCESS.2020.3034797. Impact Factor: 3.75.
20. Ali, S., Mohd-Mokhtar, R., Haider, S., Bukhari, S. H. R., & Rasool, A. (2021). Model Reduction Techniques for Unstable Second Order-Form Systems. *IEEJ Transactions on Electrical and Electronic Engineering*, 16(3), 445-454.
 21. Haider Shafiq; Bintul Huda, Aamina, Rasool Akhtar, Bukhari Syed Hashim Raza, "Subspace Identification of Fault Modes for Twin Rotor System", *International Journal of Intelligent Unmanned Systems*.
 22. Raza, H., Zaidi, S. A. A., Rashid, A., & Haider, S. (2021). An area efficient and high throughput implementation of layered min-sum iterative construction a posteriori probability LDPC decoder. *Plos one*, 16(3), e0249269.
 23. Bilal Aslam, Umar Hasan Khan, Ayesha Habib, Yasar Amin, Hannu Tenhunen, "Frequency signature chipless RFID tag with enhanced data capacity," *IEICE Electronics Express*, vol. 12, issue. 17, 2015 DOI: 10.1587/elex.12.20150623 (Peer-reviewed, IF=0.8)
 24. Bilal Aslam, Umar Hasan Khan, Muhammad Awais Azam, Yasar Amin, Jonathan Loo, Hannu Tenhunen, "Miniaturized decoupled slotted patch RFID tag antennas for wearable healthcare," *International Journal of RF and Microwave Computed-Aided Engineering*, 2016 DOI: 10.1002/mmce.21048 (Peer-reviewed, IF=1.528)
 25. Umar Hasan Khan, Bilal Aslam, Muhammad Awais Azam, Yasar Amin, Hannu Tenhunen, "Compact RFID-enabled moisture sensor," *Radioengineering*, vol. 25, no.3, 2016 DOI: 10.13164/re.2016.0449 (Peer-reviewed, IF=1.076)
 26. Umar Hasan Khan, Bilal Aslam, Javeria Khan, Misha Nadeem, Humayun Shahid, Muhammad Awais Azam, Yasar Amin, Hannu Tenhunen, "A novel asterisk-shaped circularly polarized RFID tag for on-metal applications," *Applied Computational Electromagnetic Society*, vol. 31, no. 9, 2016 (Peer-reviewed, IF=0.68)
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 32. Bilal Aslam, Muhammad Kashif, Yasar Amin, Hannu Tenhunen, “Low-profile magnetically coupled dual resonance patch antenna for UHF RFID applications,” AEU – International Journal of Electronics and Communications, vol. 133, 2021 DOI: 10.1016/j.aeue.2021.153672 (Peer-reviewed, IF=3.2)
 33. Zeba Khanam*, Bilal Aslam*, Sangeet Saha, Xiaojun Zhai, Shoaib Ehsan, Rustam Stolkin, and Klaus McDonald-Maier, “Gamma-Induced Image Degradation Analysis of Robot Vision Sensor for Autonomous Inspection of Nuclear Sites,” IEEE Sensors Journal, 2022 DOI: 10.1109/JSEN.2021.3050168 (Peer-reviewed, IF=5.13)
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 35. Bilal Aslam, Sangeet Saha, Mubariz Zaffar, Shoaib Ehsan, Xiaojun Zhai, Christopher Frost, Carlo Cazzaniga, Rustam Stolkin, and Klaus McDonald-Maier, “Degradation measurement of commercial camera sensors under fast neutron beamline” Proceedings of Single Event Effects (SEE) Symposium Military &

- Aerospace Programmable Logic Devices (MAPLD) Combined Workshop, San Diego, USA, May 20-23, 2019 (Peer-reviewed)
36. Zeba Khanam, Sangeet Saha, Bilal Aslam, Xiaojun Zhai, Shoaib Ehsan, Carlo Cazzaniga, Christopher Frost, Rustam Stolkin, and Klaus McDonald-Maier, "Modelling neutron-induced degradation in depth images of Kinect sensor", IEEE Nuclear & Space Radiation Effects Conference (NSREC), San Antonio, USA, July 8-12, 2019 (Peer-reviewed)
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 38. Kanwal Habib, Bilal Aslam, Muhammad Kashif, Muhammad Nauman Ashraf, Yasar Amin, and Muhammad Iram Baig, "Compact High Gain, High Isolation, and Ultra-broadband AMC-based MIMO Antenna for 5G Millimetre Wave Applications," 20th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Murree, Pakistan, August 22-25, 2023 (Peer-reviewed)
 39. Tooba Gul, Bilal Aslam, Umar Hasan Khan, Muhammad Kashif, and Iram Baig, "Design and Analysis of SIW Iris Bandpass Filters for Ku-Band Applications," 19th International Conference on Emerging Technologies (ICET), Topi, Pakistan, 19-20 November 2024 (Peer-reviewed)
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