Department of Electronics Engineering
List of Publications

1. **Yaseer A. Durrani** "Power and Thermal Modeling Approach for Homogeneously Stacked Butterfly Fat Tree Architecture in 3D ICs" Wiley International Journal of Numerical Modeling, Electronic Networks, Devices & Fields, Vol. 31, no. 1, DOI:10.1002/jnm.2330, **2018,** ISSN: 1099-1204, (IF: 0.515)

2. **Yaseer A. Durrani** "Power Macro-Modeling Technique for NoC-based Homogeneous Layered 3D ICs" Wiley International Journal of Numerical Modeling, Electronic Networks, Devices & Fields, Vol. 30, no. 6, DOI:10.1002/jnm.2309, **2017,** ISSN: 1099-1204, (IF: 0.515)

3. **Yaseer A. Durrani** "Power Analysis Approach for NoC-based Homogeneous Stacked 3D ICs" World Scientific Journal of Circuits, Systems and Computers, Vol. 27, no. 2, pp. 1-16, **2018**, Print ISSN: 0218-1266, Online ISSN: 1793-6454, https://doi.org/10.1142/S0218126618500342 (IF: 0.47)

4. **Yaseer A. Durrani**, T. Riesgo "Power modeling for High Performance network-on-chip architectures" Elsevier Journal of Microprocessors & Microsystems, Vol. 50, pp. 80-89, **2017**, ISSN:0141-9331, DOI:10.1016/j.micpro.2017.03.003, (IF: 0.571)

5. K. Mahmood, A. Rafique, **Yaseer A. Durrani** "Effect of Isothermal Treatment on Ni3Al Coatings Deposited by Air Plasma Spraying System, Journal Archives of Metallurgy and Materials, Vol. 63, no. 1, ISSN: 1733-3490, **2018** (IF: 0.571)

6. **Yaseer A. Durrani**, T. Riesgo "Efficient Power Analysis Approach and its Application to System-on-Chip Design" Elsevier Journal of Microprocessors & Microsystems, Vol. 46, no. 45, part A, pp. 11-20, **2016**, ISSN:0141-9331, DOI:10.1016/j.micpro.2016.09.003, (IF: 0.571) (Oct, 2016)

7. **Yaseer A. Durrani,** T. Riesgo "Power Macro-Modelling Technique and its application to SoC-based Design" Wiley International Journal of Numerical Modeling, Electronic Networks, Devices & Fields, Vol 29, no.6, **2016,** ISSN: 1099-1204, DOI: 10.1002/jnm.2207, (IF: 0.515)

8. **Yaseer A. Durrani**, T. Riesgo, M. I. Khan, T. Mahmood "Power Analysis approach and its application to IP-based SoC design" Emerald Group Publisher, International Journal of Computation and Mathematics in Electrical and Electronic Engineering" Vol. 35, Issue 3, pp. 1218-1236, **2016**, ISSN: 0332-1649**.** (IF: 0.371)

9. A. N. Khan, S. H. Khan, **Y. A. Durrani** "Microstructural Evaluation of High-Strength Bainitic Steel" Journal of Materials Evaluation" The American Society for Nondestructive Testing, Vol. 74, No. 11, pp. 1567-1573, **2016,** ISSN, 0025-5327. (IF: 0.255)

10. M. M. Rauf, M. Shahid, **Y. A. Durrani**, A. N. Khan, A. Hussain, R. Akhter "Cladding of Ni-20Cr Coating by Optimizing the CO_2 Laser Parameters" Springer Arabian Journal of Science & Engineering, ISSN: 1319-8025, Vol. 41, No. 6, pp. 2353-2362, **2015,** DOI 10.1007/s13369-015-1972-7. (IF: 0.367) (8-Dec. 2015)

11. I. N. Qureshi, M. Shahid, A. N. Khan, **Y. A. Durrani** "Evaluation of Titanium Nitride – Modified Bondcoat System Used in Thermal Barrier Coating in Corrosive Salts Environment at High Temperature" Springer Journal of Thermal Spray Technology, Vol. 24, No. 8, pp. 1520-1528, DOI:10.1007/s11666-015-0344-x, **2015,** ISSN: 1059-9630. (IF: 1.344)

12. **Yaseer A. Durrani**, T. Riesgo "High-Level Power Analysis for Intellectual Property-Based Digital Systems" Springer Journal of Circuits, Systems & Signal Processing, Vol. 33, No. 6, pp. 1035-1051,:10.1007/s00034-013-9692-2, **2013**, Print ISSN 028-081X, Online ISSN 1531-5878, (IF: 0.982) (28.Nov. 2013)

13. **Yaseer A. Durrani**, T. Riesgo "Power Estimation Technique for DSP Architecture", Elsevier Journal of Digital Signal Processing, Vol. 19, Issue 2, pp.213-219, **2009**, ISSN:1051-2004, (IF:1.871)

14. **Yaseer A. Durrani** "Power Optimization using Low-Transition Rate based LFSR Pattern Generator", Technical Journal, UET, Taxila, Vol. 22, No. 2, pp. 60-65, ISSN: 1813-1786, June, **2017**.

15. **Yaseer A. Durrani** "Fundamentals of Low-Noise in Analog Circuits", Technical Journal, UET, Taxila, Vol. 22, No. 1, pp. 46-51, ISSN: 1813-1786, Jan, **2017**.

16. **Yaseer A. Durrani** "Design of High Performance IIR filter Using Vedic Multiplier Method", Technical Journal, UET, Taxila, Vol. 21, No. 4, pp. 46-51, ISSN: 1813-1786, Oct, **2016**.

17. **Yaseer A. Durrani** "Design of Fourth Order Active Band-pass Filter with Sallen & Key Topology", Technical Journal, UET, Taxila, Vol. 21, No. 3, pp. 51-56, ISSN: 1813-1786, July, **2016**.

18. **Yaseer A. Durrani**, A. Ahmad "Hybrid Power Analysis Approach for Electronic System Design", Technical Journal, UET, Taxila, Vol. 21, No.2, pp. 26-32, April, **2016**, ISSN: 1813-1786.

19. **Yaseer A. Durrani** "Low-Power Integrated Circuit Design Approach" Technical Journal, UET, Taxila, Vol. 21, No.1, pp. 32-42, Jan, **2016,** ISSN: 1813-1786.

20. **Yaseer A. Durrani** "Linear Regression-Based Power Analysis for Digital Electronic Systems" Technical Journal, UET, Taxila, Vol. 20, No. 4, pp. 44-48, Oct. **2015**, ISSN: 1813-1786.

21. **Yaseer A. Durrani** "High Level Power Optimization for Array Multipliers", Journal of the Nucleus, Vol. 50, No. 4, pp. 351-358, **2013**, ISSN: 0029-5698

22. **Yaseer A. Durrani** "Accurate Power Analysis for Conventional MOS Transistors Using 0.12um Technology" Journal of the Nucleus, Vol. 50, No. 4, pp. 341-350, **2013,** ISSN: 0029-5698.

23. **Yaseer A. Durrani**, T. Riesgo "High-Level Power Analysis for IP-Based Digital Systems" American Scientific Publisher, Journal of Low Power Electronics, Vol. 9, No. 4, pp. 435-444, **2013**, ISSN: 1546-1998, (IF: 0.485)

24. **Yaseer A. Durrani**, T. Riesgo "Architectural Power Analysis for Intellectual Property-Based Digital System", American Scientific Publisher, Journal of Low Power Electronics, Vol. 3, No. 3, pp. 271-279(9), **2007**, ISSN:1546-1998, (IF:0.485)

25. **Yaseer A. Durrani**, Teresa Riesgo "Power Estimation for Intellectual Property-Based Digital Systems at Architectural Level" Elsevier Journal of King Saud University-Computer and Information Sciences, Vol. 26, No. 3, pp. 287-295, DOI:10.1016/j.jksuci.2014.03.005, **2014**, ISSN: 1319-1578.

26. **Yaseer A. Durrani** "Power Analysis for Deep Submicrometer Conventional MOS Transistors" Journal of Engineering & Computer Sciences, Vol 6, No. 1, pp. 33-49, **2013,** ISSN:16584023**.**

27. **Yaseer A. Durrani** "LUT-based power macromodelling technique for digital systems", Punjab University Journal of Scientific Research, Vol. XXXX No.1, pp. 45-56, **2010,** ISSN:0555-7674.

28. N. Waheed, **Yaseer A. Durrani**, "Design of Efficient Photo-voltaic Cell" 32nd IEEEP National Engineering Student Competition, Feb, 2017, Karachi, Pakistan.

29. S. Naseem, S. Riaz, M. Azam, S. S. Ali, **Yaseer A. Durrani**, "Power Macro Modeling for CMOS Inverter of 0.12 um Technology", In Proceedings for International Conference on Advanced Computer Science and Electronics Information, pp. 509-513, July 2013, Beijing, China

30. **Yaseer A. Durrani**, "Power Estimation Technique for Deep Submicrometer Conventional MOS Transistors", In Proceedings for IEEE International Conference on Intelligent Engineering Systems, pp. 393-398, June 2011, Poprad, Slovakia

31. **Yaseer A. Durrani**, "Efficient power macromodeling technique for Conventional MOS Transistors", In Proceedings for International Conference on Electrical Engineering & Informatics, pp. 115-118, July 2011, Bundang, Indonesia (IEEE Sponsored)

32. **Yaseer A. Durrani**, A. Abril, T. Riesgo, "Efficient power macromodeling technique for IP-based digital system", In Proceedings for IEEE International Symposium on Circuits & Systems, pp. 1145-1148, May 2007, New Orleans, USA

33. **Yaseer A. Durrani**, A. Abril, T. Riesgo, "High-level power estimation for digital system", SPIE Proceedings of VLSI Circuits & Systems III, Vol. 6590, pp. 1-8, DOI:10.1117/12.721182, **May 2007**, (Invited Paper)

34. **Yaseer A. Durrani**, "Architectural Power Macromodeling Technique for DSP Architectures", In Proceedings for IEEE International Conference on Design & Technology of Integrated Systems in Nanoscale Era, pp. 255-260, April 2009, Cairo, Egypt

35. **Yaseer A. Durrani**, "Accurate power estimation technique for DSP Architectures", In Proceedings for IEEE International Symposium on Industrial Electronics, pp. 1123-1128, July 2009, Seoul, Korea

36. **Yaseer A. Durrani,** "Efficient Power Optimization Technique for Array Multipliers", In Proceedings for 3rd Symposium on Engineering Sciences, pp. 207-213, March 2010, Lahore, Pakistan

37. S. Shahbaz, **Yaseer A. Durrani**, "Power Macromodelling for SRAM Cell Using 0.12um Technology", In Proceedings for 3rd Symposium on Engineering Sciences, pp. 195-200, March 2010, Lahore, Pakistan

38. B. Arif, **Yaseer A. Durrani,** "Power Macromodelling for DRAM Cell Using 0.12um Technology", In Proceedings for 3rd Symposium on Engineering Sciences, pp. 215-217, March 2010, Lahore, Pakistan

39. **Yaseer A. Durrani**, T. Riesgo, "Statistical power estimation for IP-based design", In Proceedings for IEEE Conference on Industrial Electronics Society, pp. 4935-4939, Nov. 2006, Paris, France

40. **Yaseer A. Durrani**, T. Riesgo, "LUT-Based Power Macromodeling Technique for DSP Architectures", In Proceedings for IEEE International Conference on Electronics, Circuits and Systems, pp. 1416-1419, Dec. 2007, Morocco

41. **Yaseer A. Durrani**, T. Riesgo, "Power macromodeling for IP modules", In Proceedings for IEEE Intern. Conference on Electronics, Circuits & Systems, pp. 1172-1175, Dec. 2006, Nice, France

42. **Yaseer A. Durrani**, A. Abril, T. Riesgo, "Architectural power estimation technique for IP-based system-on-chip", In Proceedings for IEEE International Symposium on Industrial Electronics, pp. 2364-2368, June 2007, Vigo, Spain

43. **Yaseer A. Durrani**, T. Riesgo, "Power estimation for IP-based modules", In Proceeding for International Symposium on System-on-Chip, pp. 95-98, Nov. 2006, Tampere, Finland (IEEE Sponsored)

44. **Yaseer A. Durrani**, T. Riesgo,"Statistical power estimation for register transfer level" , In Proceedings for International Conference on Mixed Design of Integrated Circuits and Systems, pp. 522-527, June 2006. Gdynia, Poland (IEEE Sponsored)

45. **Yaseer A. Durrani**, T. Riesgo, "Power macromodeling for high level power estimation", In Proceedings for International Workshop on Reconfigurable Communication-Centric System-on-Chip, pp. 232-236, July 2006. Montpellier, France

46. **Yaseer A. Durrani**, T. Riesgo, "Power estimation for register transfer level by genetic algorithm", In Proceedings for International Conference on Informatics in Control Automation and Robotics, pp. 527-530, Aug. 2006. Setubal, Portugal

47. **Yaseer A. Durrani**, T. Riesgo, "High level statistical power estimation", In Proceeding for International Workshop on Symbolic Method and Applications to Circuit Design", Oct. 2006, Firenze, Italy

48. **Yaseer A. Durrani**, T. Riesgo, A. Abril, "Power macromodeling technique for IP-based system", In Proceeding for International Conference on Design of Circuits and Integrated Systems", Nov. 2006, Barcelona, Spain

49. Haider, Shafiq, et al. "Frequency interval gramians based structure preserving model order reduction for second order systems." Asian Journal of Control 20.2 (2018): 790-801.

50. **S.A.A.Zaidi**, A. Tuoheti, M.Martina and G.Masera,"FPGA accelerator of Algebraic Quasi Cyclic LDPC Codes for NAND flash memories," in Design & Test, IEEE

51. **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, 2013.

52. **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.

53. 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.

54. [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.

55. Haider, Khawaja Shafiq, et al. "Frequency limited Gramians-based structure preserving model order reduction for discrete time second-order systems." International Journal of Control 92.11 (2019): 2608-2619.

56. Haider, Shafiq, et al. "Time-limited Gramians-based model order reduction for second-order form systems." Transactions of the Institute of Measurement and Control 41.8 (2019): 2310-2318.

57. 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**.

58. 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, Accepted, **Impact factor: 1.407**.

59. 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, **Impact factor: 2.2**.

60. 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.

61. K. S. Haider, A. Ghafoor, M. Imran, F. M. Malik, "Time limited Gramians based model order reduction for second order systems". **Impact Factor: 1.579**

62. S. Haider, A. Ghafoor, M. Imran, F. M. Malik, "Techniques for computation of frequency limited H-Infinity norm", 4th International Conference on Mechanical, Electronics and Computer Engineering, China, pp. 1-5, 2017.

63. K. S. Haider, I. H. Kazmi, M. I. Rehman, "Kalman filter based state estimation for Linearized Twin Rotor System", Frontiers of information technology, CIIT IEEE Pakistan, 2011.

64. 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.

65. Tariqullah, Aamir Rashid, "Angularly Stable and Broadband Chiral Metamaterial Based Design for Asymmetric Transmission of Linearly Polarized Waves", Microwave and Optical Technology Letters (MOTL) (Accepted July 2020).

66. Saba Arshad, Farooq A. Tahir, Aamir Rashid, M. M. Saad Missen & James A. Flint (2020), "Coplanar-waveguide fed Circularly Polarized Antenna for Wireless WLAN/LTE Applications, Electromagnetics, DOI: 10.1080/02726343.2020.1780379

67. Ejaz, F., Hamayun, M. T., Hussain, S., Ijaz, S., Yang, S., Shehzad, N., & Rashid, A. (2019). An adaptive sliding mode actuator fault tolerant control scheme for octorotor system. International Journal of Advanced Robotic Systems. Volume 16, issue 2, March 2019.

68. Qaisar Bashir, Muhammad Naeem Shehzad, Aamir Rashid et al, "An online temperature-aware scheduling technique to avoid thermal emergencies in multiprocessor systems", Elsevier journal of Computers & Electrical Engineering, Volume 70, August 2018, Pages 83-98.

69. Mudassar Murtaza, Aamir Rashid et al. "An Angularly Stable Broadband Cross-Polarization Conversion Metasurface", EuCAP 2019, pp. 1-3.

70. Usman et al "Atomization analysis of the extremely sensitive laser-based dual mode biomedical sensor", Lasers in medical science,2019

71. Usman et al "Investigation of cauty length and more spacing effects in dual mode sensor" IEEE sensors, 2018

72. Usman et al, "Design of Logestics Air Vehicle (LAV) to avoid real-time obstacles in logestics and biomedics" 3rd ICETEMS 2018

73. Usman et al 'Multimode Competition in Lasers in the Light of Optical Feedback', published in 10th IEEE International Conference on Frontiers of Information Technology (FIT).

74. Usman et al 'An Analysis of Newton's Method in Wireless Systems using Gabor Frames', published in 15th IEEE International Multi Topic Conference (INMIC).

75. Usman et al 'Development of an optical sensor for the detection of Volatile Organic Compounds', published in 9th IEEE International Conference on Frontiers of Information Technology (FIT).

76. Usman et al 'An Application of Newton's Method in Wireless Systems', published in 8th ACM International Conference on Frontiers of Information Technology (FIT).

77. Usman et al Multirate Signal Processing: Some Useful Graphical Results" published in IEEE Third International Conference on Emerging Technologies (ICET).

78. **S. Z. H. Naqvi**, M. A. Choudhry, A. Z. Khan and M. Shakeel, "Intelligent System for Classification of Pulmonary Diseases from Lung Sound," 2019 13th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS), Karachi, Pakistan, 2019, pp. 1-6, doi: 10.1109/MACS48846.2019.9024831.

79. M. A. Imtiaz, M. Naveed, N. Bibi, S. Aziz and **S. Z. H. Naqvi**, "Control System Design, Analysis & Implementation of Two Wheeled Self Balancing Robot (TWSBR)," 2018 IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, 2018, pp. 431-437, doi: 10.1109/IEMCON.2018.8614858.

80. S. Aziz, **S. Z. Hassan Naqvi**, M. U. Khan and T. Aslam, "Electricity Theft Detection using Empirical Mode Decomposition and K-Nearest Neighbors," 2020 International Conference on Emerging Trends in Smart Technologies (ICETST), Karachi, Pakistan, 2020, pp. 1-5, doi: 10.1109/ICETST49965.2020.9080727.

81. **S. Z. Hassan Naqvi**, S. Aziz, M. U. Khan, N. Asghar and G. Rasool, "Emotion Recognition System using Pulse Plethysmograph," 2020 International Conference on

Emerging Trends in Smart Technologies (ICETST), Karachi, Pakistan, 2020, pp. 1-6, doi: 10.1109/ICETST49965.2020.9080725.

82. M. U. Khan, S. Aziz, **S. Z. Hassan Naqvi**, A. Zaib and A. Maqsood, "Pattern Analysis Towards Human Verification using Photoplethysmograph Signals," 2020 International Conference on Emerging Trends in Smart Technologies (ICETST), Karachi, Pakistan, 2020, pp. 1-6, doi: 10.1109/ICETST49965.2020.9080751.

83. M. U. Khan, S. Aziz, **S. Z. Hassan Naqvi** and A. Rehman, "Classification of Coronary Artery Diseases using Electrocardiogram Signals," 2020 International Conference on Emerging Trends in Smart Technologies (ICETST), Karachi, Pakistan, 2020, pp. 1-5, doi: 10.1109/ICETST49965.2020.9080694.

84. M. U. Khan, S. Aziz, M. Sohail, **S. Z. Hassan Naqvi**, S. Samer and Z. Sajid, "Detection of Subacute Intestinal Obstruction from Surface Electromyography Signatures," 2020 International Conference on Emerging Trends in Smart Technologies (ICETST), Karachi, Pakistan, 2020, pp. 1-6, doi: 10.1109/ICETST49965.2020.9080710.

85. **Sumair Aziz**., Khan, M.U., Alhaisoni, M., Akram, T. and Altaf, M., 2020. Phonocardiogram Signal Processing for Automatic Diagnosis of Congenital Heart Disorders through Fusion of Temporal and Cepstral Features. Sensors, 20(13), p.3790. **(IF: 3.27)**

86. **Sumair Aziz**., Awais, M., Akram, T., Khan, U., Alhussein, M. and Aurangzeb, K., 2019. Automatic scene recognition through acoustic classification for behavioral robotics. Electronics, 8(5), p.483. **(IF: 2.41)**

87. Ali, H., Adnan, S.M., **Sumair Aziz**., Ahmad, W. and Obaidullah, M., 2019. Sound Classification of Parkinsonism for Telediagnosis. Technical Journal, 24(01), pp.90-97.

88. Adnan, S.M., Irtaza, A., **Sumair Aziz**., Ullah, M.O., Javed, A. and Mahmood, M.T., 2018. Fall detection through acoustic local ternary patterns. Applied Acoustics, 140, pp.296-300. **(IF: 2.44)**

89. ud Din, Z., Adnan, S.M., Ahmad, R.W., **Sumair Aziz**., Ismail, W. and Iqbal, J., 2018. Classification of Tomato Plants' Leaf Diseases Using Image Segmentation and SVM. Technical Journal, 23(02), pp.81-88.

90. Shah, S.A., Malik, A., **Sumair Aziz**. and Ahmad, W., 2018. Sound Recognition Aimed towards Hearing Impaired Individuals in Urban Environment using Ensemble Methods. Journal of Information Communication Technologies and Robotic Applications, pp.30-39.

91. **Aziz, S.**, Hayat, M.M., Naqvi, S.Z.H., Furqan, M., Khan, M.U. and Zahid, M.Z., 2020, June. Electrocardiography based Biometric Verification System. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-5). IEEE.

92. Khan, M.U., Mushtaq, Z., Shakeel, M., **Aziz, S.** and Naqvi, S.Z.H., 2020, June. Classification of Myocardial Infarction using MFCC and Ensemble Subspace KNN. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-5). IEEE.

93. Khan, M.U., **Aziz, S.**, Ch, J.M., Shahjehan, A., Imtiaz, A. and Waseem, A., 2020, June. Detection of Acute Coronary Syndrome using Electrocardiogram Signal Analysis.

In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.

94. Khan, M.U., Amjad, F., **Aziz, S.**, Naqvi, S.Z.H., Shakeel, M. and Imtiaz, M.A., 2020, June. Surface Electromyography based Pakistani Sign Language Interpreter. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-5). IEEE.

95. Naqvi, S.Z.H., **Aziz, S.**, Khan, M.U., Abbas, M., Haider, A. and Hashmi, H.A., 2020, June. Electrocardiography based System for Characterization of Diabetes. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.

96. **Aziz, S.**, Ibraheem, S., Malik, A., Aamir, F., Khan, M.U. and Shehzad, U., 2020, June. Electrooculugram based Communication System for People with Locked-in-Syndrome. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.

97. Khan, M.U., Saad, M., **Aziz, S.**, Ch, J.M., Naqvi, S.Z.H. and Qasim, M.A., 2020, June. Electrocardiogram based Gender Classification. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.

98. Naqvi, S.Z.H., Arooj, M., **Aziz, S.**, Khan, M.U. and Choudhary, M.A., 2020, June. Spectral Analysis of Lungs sounds for Classification of Asthma and Pneumonia Wheezing. In 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE) (pp. 1-6). IEEE.

99. **M. A. Imtiaz**, S. Aziz, A. Zaib, A. Maqsood, M. U. Khan and A. Waseem, "Wearable Scene Classification System for Visually Impaired Individuals," 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), Istanbul, Turkey, 2020, pp. 1-6, doi: 10.1109/ICECCE49384.2020.9179439.

100. M. U. Khan, S. Aziz, J. M. Ch., A. Shahjehan, **M. A. Imtiaz** and A. Waseem, "Detection of Acute Coronary Syndrome using Electrocardiogram Signal Analysis," 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), Istanbul, Turkey, 2020, pp. 1-6, doi:10.1109/ICECCE49384.2020.9179337.

101. S. Aziz, M. Ahmed, S. Z. H. Naqvi, M. U. Khan, **M. A. Imtiaz** and A. Waseem, "Machine Bearing Fault Diagnosis System using Tri-Axial Accelerometer," 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), Istanbul, Turkey, 2020, pp. 1-6, doi: 10.1109/ICECCE49384.2020.9179326.

102. M. U. Khan, Z. A. Choudry, S. Aziz, S. Z. H. Naqvi, A. Aymin and **M. A. Imtiaz**, "Biometric Authentication based on EMG Signals of Speech," 2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), Istanbul, Turkey, 2020, pp. 1-5, doi: 10.1109/ICECCE49384.2020.9179354.

103. M. U. Khan, S. Aziz, A. Malik and **M. A. Imtiaz**, "Detection of Myocardial Infarction using Pulse Plethysmograph Signals," 2019 International Conference on Frontiers of Information Technology (FIT), Islamabad, Pakistan, 2019, pp. 95-955, doi: 10.1109/FIT47737.2019.00027.

104. M. U. Khan, **M. A. Imtiaz**, S. Aziz, Z. Kareem, A. Waseem and M. A. Akram, "System Design for Early Fault Diagnosis of Machines using Vibration Features," 2019 International Conference on Power Generation Systems and Renewable Energy Technologies (PGSRET), Istanbul, Turkey, 2019, pp. 1-6, doi: 10.1109/PGSRET.2019.8882726.

105. **M. A. Imtiaz**, M. Naveed, N. Bibi, S. Aziz and S. Z. H. Naqvi, "Control System Design, Analysis & Implementation of Two Wheeled Self Balancing Robot (TWSBR)," 2018 IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, 2018, pp. 431-437, doi: 10.1109/IEMCON.2018.8614858.

106. S. Aziz, Z. Kareem, M. U. Khan and **M. A. Imtiaz**, "Embedded System Design for Visual Scene Classification," 2018 IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, 2018, pp. 739-743, doi: 10.1109/IEMCON.2018.8614864.

107. **M. A. Imtiaz** and Gulistan Raja "Isolated Word Automatic Speech Recognition (ASR) System using MFCC, DTW and KNN", IEEE 2nd Asia Pacific Conference on Multimedia and Broadcasting, APMediaCast 2016, Bali, Indonesia, 17-19 Nov. 2016.

108. S.S. Hussain, **M. A. Imtiaz**, M. N. Majoka, H.S. Zad, A. Zohaib and M. A. Umar *"Low Power Full Adder Using GDI Cells"*, 3rd International Conference on Engineering & Emerging Technologies (ICEET), Lahore, PK, 7-8 April, 2016.

109. Sumair Aziz., **Khan, M.U.**, Alhaisoni, M., Akram, T. and Altaf, M., 2020. Phonocardiogram Signal Processing for Automatic Diagnosis of Congenital Heart Disorders through Fusion of Temporal and Cepstral Features. *Sensors*, *20*(13), p.3790. **(IF: 3.27)**

110. Sumair Aziz., Awais, M., Akram, T., **Khan, U.**, Alhussein, M. and Aurangzeb, K., 2019. Automatic scene recognition through acoustic classification for behavioral robotics. *Electronics*, *8*(5), p.483. **(IF: 2.41)**

111. Sumair Aziz**,** Awais, M., **Khan, M.U.**, Iqtidar, K., Khan, M.U., 2020. Classification of Cardiac Disorders using 1D Local Ternary Patterns based on Pulse Plethysmograph Signals. *Expert Systems*, **(IF: 1.54)** *(Accepted - In Press)*

112. **MUHAMMAD UMAR KHAN**, SUMAIR AZIZ, 2020. A novel pulse plethysmograph signal analysis method for identification of myocardial infarction, dilated cardiomyopathy, and hypertension. *Turk. J. Electr. Eng. Comput. Sci*. **(IF: 0.68)** *(under review)*

113. Nadir, M., Adnan, S.M, Sumair Aziz**, Muhammad Umar Khan**. 2020. Marine Mammals Classification using Acoustic Binary Patterns. *Archives of Acoustics* **(IF: 0.91)** *(in press)*

114. **Khan, M.U**., Sumair Aziz, et. al. 2020. An Expert Hypertension Detection System featuring Pulse Plethysmograph Signals and Hybrid Feature Selection and Reduction Scheme. *IEEE Access* **(IF: 3.74) – *(under review)***

115. Khan, M.U., Sumair Aziz, et. al. 2020. A Two-Stage Classification Model Integrating Feature Fusion for Coronary Artery Disease Detection and Classification *Multimedia Tools and* Applications **(IF: 2.31)** *(under review)*

116. Aziz, S., Hayat, M.M., Naqvi, S.Z.H., Furqan, M., **Khan, M.U.** and Zahid, M.Z., 2020, June. Electrocardiography based Biometric Verification System. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-5). IEEE.

117. **Khan, M.U**., Mushtaq, Z., Shakeel, M., Aziz, S**.** and Naqvi, S.Z.H., 2020, June. Classification of Myocardial Infarction using MFCC and Ensemble Subspace KNN. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-5). IEEE.

118. **Khan, M.U**., **Aziz, S.**, Ch, J.M., Shahjehan, A., Imtiaz, A. and Waseem, A., 2020, June. Detection of Acute Coronary Syndrome using Electrocardiogram Signal Analysis. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

119. **Khan, M.U**., Amjad, F., Aziz, S., Naqvi, S.Z.H., Shakeel, M. and Imtiaz, M.A., 2020, June. Surface Electromyography based Pakistani Sign Language Interpreter. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-5). IEEE.

120. Naqvi, S.Z.H., Aziz, S**.**, **Khan, M.U.**, Abbas, M., Haider, A. and Hashmi, H.A., 2020, June. Electrocardiography based System for Characterization of Diabetes. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

121. Aziz, S., Ibraheem, S., Malik, A., Aamir, F., **Khan, M.U**. and Shehzad, U., 2020, June. Electrooculugram based Communication System for People with Locked-in-Syndrome. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

122. **Khan, M.U**., Saad, M., **Aziz, S.**, Ch, J.M., Naqvi, S.Z.H. and Qasim, M.A., 2020, June. Electrocardiogram based Gender Classification. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

123. Naqvi, S.Z.H., Arooj, M., Aziz, S**.**, **Khan, M.U.** and Choudhary, M.A., 2020, June. Spectral Analysis of Lungs sounds for Classification of Asthma and Pneumonia Wheezing. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

124. Imtiaz, M.A., Aziz, S., Zaib, A., Maqsood, A., **Khan, M.U.** and Waseem, A., 2020, June. Wearable Scene Classification System for Visually Impaired Individuals. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

125. Aziz, S., Ahmed, M., Naqvi, S.Z.H., **Khan, M.U.**, Imtiaz, A. and Waseem, A., 2020, June. Machine Bearing Fault Diagnosis System using Tri-Axial Accelerometer. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

126. **Khan, M.U.**, Aziz, S., Zainab, A., Tanveer, H., Iqtidar, K. and Waseem, A., 2020, June. Biometric System using PCG Signal Analysis: A New Method of Person Identification. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

127. Naqvi, S.Z.H., Aziz, S., Tariq, M.H., **Khan, M.U**., Aslam, H.A. and Imtiaz, M.A., 2020, June. Effect of Al-Quran Recitation on Human Physiology. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-6). IEEE.

128. Aziz, S., Bilal, M., **Khan, M.U.** and Amjad, F., 2020, June. Deep Learning-based Automatic Morphological Classification of Leukocytes using Blood Smears. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-5). IEEE.

129. **Khan, M.U.**, Choudry, Z.A., Aziz, S., Naqvi, S.Z.H., Aymin, A. and Imtiaz, M.A., 2020, June. Biometric Authentication based on EMG Signals of Speech. In *2020 International Conference on Electrical, Communication, and Computer Engineering (ICECCE)* (pp. 1-5). IEEE.

130. Bibi, S., Javid, M.A., Muhammad, B., Habiba, U., Rashid, Q., Amin, N., **Khan, M.U.** and Aziz, S., 2020. Metabolic evaluation of brain tumor using magnetic resonance spectroscopy. *Materials Today: Proceedings*.

131. **Khan, M.U.**, Aziz, S., Naqvi, S.Z.H. and Rehman, A., 2020, March. Classification of Coronary Artery Diseases using Electrocardiogram Signals. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-5). IEEE.

132. Naqvi, S.Z.H., Aziz, S., **Khan, M.U**., Asghar, N. and Rasool, G., 2020, March. Emotion Recognition System using Pulse Plethysmograph. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-6). IEEE.

133. Aziz, S., Naqvi, S.Z.H., **Khan, M.U.** and Aslam, T., 2020, March. Electricity Theft Detection using Empirical Mode Decomposition and K-Nearest Neighbors. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-5). IEEE.

134. Aziz, S., **Khan, M.U.**, Usman, A. and Mobeen, A., 2020, March. Pattern Analysis for Classification of Power Quality Disturbances. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-5). IEEE.

135. **Khan, M.U.**, Aziz, S., Naqvi, S.Z.H., Zaib, A. and Maqsood, A., 2020, March. Pattern Analysis Towards Human Verification using Photoplethysmograph Signals. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-6). IEEE.

136. Khan, A., **Aziz, S.**, Bashir, M. and **Khan, M.U.**, 2020, March. IoT and Wireless Sensor Network based Autonomous Farming Robot. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-5). IEEE.

137. **Khan, M.U.**, Aziz, S., Sohail, M., Naqvi, S.Z.H., Samer, S. and Sajid, Z., 2020, March. Detection of Subacute Intestinal Obstruction from Surface Electromyography Signatures. In *2020 International Conference on Emerging Trends in Smart Technologies (ICETST)* (pp. 1-6). IEEE.

138. **Khan, M.U.**, Aziz, S., Malik, A. and Imtiaz, M.A., 2019, December. Detection of Myocardial Infarction using Pulse Plethysmograph Signals. In *2019 International Conference on Frontiers of Information Technology (FIT)* (pp. 95-955). IEEE.

139. Aziz, S., **Khan, M.U**., Aamir, F. and Javid, M.A., 2019, December. Electromyography (EMG) Data-Driven Load Classification using Empirical Mode Decomposition and Feature Analysis. In *2019 International Conference on Frontiers of Information Technology (FIT)* (pp. 272-2725). IEEE.

140. Aziz, S., **Khan, M.U.**, Shakeel, M., Mushtaq, Z. and Khan, A.Z., 2019, December. An Automated System towards Diagnosis of Pneumonia using Pulmonary Auscultations. In *2019 13th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS)* (pp. 1-7). IEEE.

141. **Khan, M.U.**, Aziz, S., Iqtidar, K., Saud, A. and Azhar, Z., 2019, December. Biometric Authentication System Based on Electrocardiogram (ECG). In *2019 13th International Conference on Mathematics, Actuarial Science, Computer Science and Statistics (MACS)* (pp. 1-6). IEEE.

142. **Khan, M.U.**, Aziz, S., Iqtidar, K., Zainab, A. and Saud, A., 2019, December. Prediction of Acute Coronary Syndrome Using Pulse Plethysmograph. In *2019 4th International Conference on Emerging Trends in Engineering, Sciences and Technology (ICEEST)* (pp. 1-6). IEEE.

143. **Khan, M.U.**, Aziz, S., Sohail, M., Shahid, A.A. and Samer, S., 2019, November. Automated Detection and Classification of Gastrointestinal Diseases using surface-EMG Signals. In *2019 22nd International Multitopic Conference (INMIC)* (pp. 1-8). IEEE.

144. **Khan, M.U.**, Aziz, S., Amjad, F. and Mohsin, M., 2019, November. Detection of Dilated Cardiomyopathy using Pulse Plethysmographic Signal Analysis. In *2019 22nd International Multitopic Conference (INMIC)* (pp. 1-5). IEEE.

145. Aziz, S., Bashir, M., Mughal, O., **Khan, M.U.** and Khan, A., 2019, October. Image Pattern Classification for Plant Disease Identification using Local Tri-directional Features. In *2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)* (pp. 0973-0978). IEEE.

146. Aziz, S., **Khan, M.U.**, Choudhry, Z.A., Aymin, A. and Usman, A., 2019, October. ECG-based Biometric Authentication using Empirical Mode Decomposition and Support Vector Machines. In *2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)* (pp. 0906-0912). IEEE.

147. **Khan, M.U.**, Aziz, S., Ibraheem, S., Butt, A. and Shahid, H., 2019, October. Characterization of term and preterm deliveries using electrohysterograms signatures. In *2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)* (pp. 0899-0905). IEEE.

148. **Khan, M.U.**, Aziz, S., Bilal, M. and Aamir, M.B., 2019, August. Classification of EMG Signals for Assessment of Neuromuscular Disorder using Empirical Mode Decomposition and Logistic Regression. In *2019 International Conference on Applied and Engineering Mathematics (ICAEM)* (pp. 237-243). IEEE.

149. **Khan, M.U.**, Imtiaz, M.A., Aziz, S., Kareem, Z., Waseem, A. and Akram, M.A., 2019, August. System Design for Early Fault Diagnosis of Machines using Vibration Features. In *2019 International Conference on Power Generation Systems and Renewable Energy Technologies (PGSRET)* (pp. 1-6). IEEE.

150. Aziz, S., Kareem, Z., **Khan, M.U.** and Imtiaz, M.A., 2018, November. Embedded System Design for Visual Scene Classification. In *2018 IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON)* (pp. 739-743). IEEE.