

Muhammad Bilal*Assistant Professor, Department of Electrical and Computer Engineering, King Abdulaziz University***Education**

<i>Degree</i>	<i>Field of Study</i>	<i>Institution</i>	<i>Year</i>
Ph.D.	Electrical Engineering	LUMS, Lahore, Pakistan	2013
MS	Computer Engineering	LUMS, Lahore, Pakistan	2007
BS	Electronics Engineering	GIKI, Topi, Pakistan	2002

Academic Experience

<i>From To</i>	<i>Institution</i>	<i>Rank</i>	<i>Title</i>	<i>Full or Part Time</i>
2014 date	King Abdulaziz University, KSA	Assistant Professor		Full Time
2010	LUMS, Pakistan	Adjunct Faculty		Part Time

Non-Academic Experience (Including Consultations)

2013-2014	KAIST, South Korea	Postdoctoral Researcher		Full Time
2002-2005	NDC, Pakistan	Assistant Manager (Electronics)		Full Time

Funded Research Projects and Patents from The Last Five Years

- 2016 KAU DSR Distinct Research Grant (135-115-D1437)
Role: Principal Investigator
Title: Algorithmic Optimization and Hardware Acceleration of Histogram Intersection Kernel SVM for Video Based Object Detection on FPGA platform
Amount: SAR 10,000
- 2017 CEIES Research Grant
Role: Co-Investigator
Title: Hardware-Software Co-Design for SLAM
Amount: SAR 118,400

Principal Publications/Presentations from the Past Five Years

<https://scholar.google.com/citations?user=CA-LBK8AAAAJ&hl>

- Muhammad Bilal, Muhammad Shehzad Hanif, "Benchmark Revision for HOG-SVM Pedestrian Detector through Reinvigorated Training and Evaluation Methodologies", IEEE Transactions on Intelligent Transportation Systems, 2019 (Impact Factor: 4.051)
- Muhammad Bilal, A. Khan, M. U. K. Khan, C. M. Kyung, "A Low Complexity Pedestrian Detection Framework for Smart Video Surveillance Systems," IEEE Transactions on Circuits and Systems for Video Technology, 2017 (Impact Factor: 3.6)
- Muhammad Bilal, "A Resource-Efficient FPGA Implementation of Perspective Transformation for Bird's Eye View Generation using High-Level Synthesis Framework", IET Circuits, Devices & Systems, 2019, (Impact Factor: 1.395)
- Muhammad Bilal, "Algorithmic Optimization of Histogram Intersection Kernel SVM-based Pedestrian Detection using Low Complexity Features", IET Computer Vision, 2017 (Impact Factor: 1.087)
- Muhammad Bilal, Muhammad Shehzad Hanif, "High Performance Real-Time Pedestrian Detection using Light Weight Features and Fast Cascaded Kernel SVM Classification", Springer Journal of Signal Processing Systems, 2018 (Impact Factor: 1.09)
- H Javed, Muhammad Bilal, S Masud, "A Hardware-Software Co-Design Framework for Real-Time Video Stabilization", Journal of Circuits, Systems, and Computers, 2019. (Impact Factor: 0.595)
- A Badawi, M Bilal, "High-Level Synthesis of Online K-Means Clustering Hardware for a Real-Time Image Processing Pipeline", Journal of Imaging 5 (3), 38, 2019.
- MS Hanif, M Bilal, "Competitive residual neural network for image classification", ICT Express, 2019.

Recent Professional Development Activities (*Workshops, Trainings etc.*)

- *World Robot Olympiad, 2019*
- *Summer STEM Workshop 2019 (Mawhiba KSA)*
- *Workshop on IoT, KAU, 2019*
- *Introductory Robotics Workshop, ECE Club, 2018*