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ENGR. MUHAMMAD MUZAMMIL

Professional Experience	<p>Regular Lecturer for BS Electrical Engineering at International Islamic University (IIUI), Sep 2017 to date: Taught following courses in IIUI:</p> <ul style="list-style-type: none"> • Digital System Design • Circuit Analysis-1 • FPGA Based Designs • Microprocessor & Microcontroller • Microcontroller Based System Design • Digital Logic Design • Fundamentals of Programming <p>Visiting Assistant Prof for BS and B-Tech Electrical at IIUI University from 2014 to date: Taught following courses in B-Tech EE and BSEE:</p> <ul style="list-style-type: none"> • Switchgear & Protective Devices (Th + Lab) • Microprocessor Theory & Interfacing (Th + Lab) • Power Transmission & Distribution • FPGA Based Design (Th + Lab) • Microprocessor & Microcontroller (Th + Lab) • Microcontroller Based System Design (Th + Lab) <p>Lab Engineer for BS Electrical Engineering at International Islamic University (IIUI), April 2011 to Sep 2017 (6.5 years): Demonstrated following labs:</p> <ul style="list-style-type: none"> • FPGA Based Design Lab • Embedded System Lab • Digital Logic Design Lab • Microprocessor & Microcontroller Lab • Computer Networks Lab • Circuit Analysis 1 Lab • Electrical Machines <p>SCM at Advance Engineering Research Organization (AERO, NESCOM), Aug 2000 to Mar 2011 (10.5 Years) Job Responsibilities:</p> <ul style="list-style-type: none"> • Design and development of HDL designs on Xilinx FPGAs. • R&D of electromechanical control system on PIC series Microcontroller. • Designing of Printed Circuit Boards on Protel 99SE. • Designing and simulation of Digital and Analog circuits and simulate them in software such as Proteus, EWB, MatLab etc • Cost estimation • Coordinator for the implementation of AS-9100 Quality Management System. • Development of procedures and WIs for QMS implementation. • Initialization and monitoring the production processes at management end. • Report and letter writing.
Education	<p>PhD Electronics Engineering, Thesis Writer, from International Islamic University, Islamabad, Pakistan (2015 to date)</p>

	<p>MS Electrical Engineering (Digital Techniques), CGPA 3.49/4.00 from University of Engineering and Technology, Taxila, Pakistan in 2010-2014</p> <p>BSc Electrical Engineering (Electronics), CGPA 3.56/4.00, from Federal Urdu University of Arts Science & Technology, Islamabad, 2005-2009</p> <p>D.A.E. (Electronics) 1st Division 1996-1999, from Punjab Board of Technical Education, Lahore, Pakistan</p> <p>Matric (Science) 1st Division 1995-1996, from Federal Board of Intermediate and Secondary Education, Islamabad, Pakistan</p> <p>PhD Research Topic: Novel Image Fusion System based on Diverse Feature Extraction Techniques</p> <p>MS Electrical Engineering Thesis Title: Hardware implementation of Diamond Search Motion Estimation Algorithm on FPGA</p>
Research Publications	<ul style="list-style-type: none"> • M. Muzammil, I. Ali, U. Javed, M. Amir, I. U. Haq, "Spatial Stimuli Gradient Based Multifocus Image Fusion Using Multiple Sized Kernels", Technical Gazette, <i>Accepted for Publication (Feb, 2021)</i>, Paper ID: TV-20191030075647 • S. Maqsood, U. Javed, M. M. Riaz, M. Muzammil, F. Muhammad, & S. Kim,., Multiscale Image Matting Based Multi-Focus Image Fusion Technique. Electronics, 9(3), 472. 2020, ISSN 2079-9292, https://doi.org/10.3390/electronics9030472 • M. Muzammil, Z. A. Khan, M. O. Ullah and I. Ali, "Performance analysis of block matching motion estimation algorithms for HD videos with different search parameters," 2016 International Conference on Intelligent Systems Engineering (ICISE), Islamabad, 2016, pp. 306-311. • S. A. Kazmi, M. H. Shah, S. Khan, O. O. Khalifa and M. Muzammil, "Poincare based PPG signal analysis for varying physiological states," 2016 International Conference on Intelligent Systems Engineering (ICISE), Islamabad, 2016, pp. 105-110.1- I. Ali, M. Muzammil, G. Raja, "Performance analysis of motion estimation algorithms based on motion activity in video sequences" Pakistan Journal of Sciences, Vol 64 No. 1, Page: 39-45, March, 2012 • I. Ali, G. Raja, M. Muzammil and A. K. Khan, "Adaptive Modified Hexagon Based Search Motion Estimation algorithm," 2014 IEEE Fourth International Conference on Consumer Electronics Berlin (ICCE-Berlin), Berlin, 2014, pp. 147-148. • M. Muzammil, I. Ali, M. Sharif, A.K. Khan, "An Efficient FPGA Architecture for Hardware Realization of Hexagonal Based Motion Estimation Algorithm", 2015 International Conference on Consumer Electronics-Taiwan (ICCE-TW), June, 2015, pp. 422-423 • M. Muzammil, G. Raja, I. Ali, "Field Programmable Gate Array (FPGA) Architecture of Diamond Search Motion Estimation Algorithm for Real-Time Video Applications", NED University Journal of Research - Applied Sciences, Vol XII, No. 4, 2015. URL: http://www.neduet.edu.pk/NED-Journal/2015/15vol4paper4.html
Personal Information	<p>Father's Name: Siraj-ul-Hassan</p> <p>PEC Reg No.: ELECT/29182</p> <p>Date of Birth: 07th Jan, 1981</p> <p>NIC No.: 37406-2989938-9</p> <p>Nationality: Pakistani</p> <p>Domicile: Punjab</p> <p>Marital Status: Married</p> <p>Dependents: 04</p>