Dr. Basil Hamed

PRESENT POSITION: **Professor of Electrical Engineering**
Faculty of Engineering
Islamic University of Gaza
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EDUCATION

Ph.D. Electrical Engineering May 1999
New Mexico State University, Las Cruces, NM, USA **Dissertation:** Comparison of Fuzzy Logic and Classical Controller Designs for Nonlinear Systems.

M.S Electrical Engineering May 1992

University of New Orleans, New Orleans, LA, USA **Technical Report**: Induction Motor of New Model for Studying Machine Transients

B.S Electrical Engineering May 1989

New Mexico State University, Las Cruces, NM, USA

TEACHING INTERESTS

Computer Controlled Systems, Control Systems, Robotics, Mechatronics, Optimal Control Systems, Nonlinear Control Systems, Microcontroller, Intelligent Control Systems (Fuzzy Logic Control), Advanced Digital Control, Adaptive Control Systems, Signals & Linear Systems, and Digital Signal Processing (DSP).

RESEARCH AREAS OF INTEREST

Dynamics and Adaptive Control Systems, Autonomous Mobile Robots & Manipulators, Shared-Control Systems, Fuzzy Logic Control (Mamdani &n Takagi-Sugeno Fuzzy), Renewable Energy (Solar & Wind), Mechatronics, Microcontroller and its application on Control Systems, Modulation & Simulation, Genetic Algorithms, FPGA applications, Optimal Control, and SCADA.

EXPERINCE

Professor, November 2016-Present, Department of Electrical Engineering, Islamic University of Gaza, Gaza Strip, Palestine.

Vice Engineering Dean for Research & Graduate Studies, August 2013-Auguset 2015, Islamic University of Gaza, Gaza Strip, Palestine.

Associate Professor, July 2011-November 2016, Department of Electrical Engineering, Islamic University of Gaza, Gaza Strip, Palestine.

Head –Department, August 2006- September 2008, Electrical & Computer Engineering Head- Department, Islamic University of Gaza, Gaza Strip, Palestine

Head –Department Associate, August 2004- August 2006, Electrical & Computer Engineering Head- Department Associate, Islamic University of Gaza, Gaza Strip, Palestine

Assistant Professor, August. 1999- August 2004, Department of Electrical & Computer Engineering, Islamic University of Gaza, Gaza Strip, Palestine.

Visiting Professor,

- June 2009-September 2009, Duisburg University, Duisburg, Germany. Diagnosis control using Fuzzy Control

- June 2005-August 2005, Magdeburg University, Magdeburg, Germany. Theoretically & experimentally of Mechatronics.

Teaching Assistant January 1994 - May 1999 Klipsch School of Electrical & Computer Engineering, New Mexico State University, Las Cruces, NM USA.

Research Assistant, January. 1991- August. 1992 Electrical Engineering Department, University of New Orleans, New Orleans, La USA (In the area of Electrical Power Systems with special emphasis on induction motors of new model for studying machine transients Power System interactions).

Academic Program Evaluator, September 2006- Present, evaluate new academic electrical & computer engineering programs for Palestinian universities submitted to the Palestinian Higher Education Ministry.

Editor in Chief: Journal of Engineering Research and Technology (JERT)

Editorial Board & **Technical Reviewer**, for many engineering international journals

AFFILIATION

DAAD scholarship June 2009-September 2009, Duisburg University, Duisburg, Germany
DAAD scholarship June 2005-August 2005, Magdeburg University, Magdeburg, Germany
Member Engineers' Association – GAZA Member,
ALPHA THETA A EPSILON Honor Society USA Member,
TAU BETA PI (National Engineering Honor Society) USA Member,
TAU ALPHA PI (National Honor Society), New Mexico State University Chapter

IEEE (Institute of Electrical Electronic Engineering) USA, Control Systems Society, Robotics and Automation Society,
Socieded de Ingenieros (Engineering Professional Society USA).
Arab Student Aid International Scholarship 1994-1997.
IEEE Counselor: September 2003- Sep. 2004, Electrical & Computer Engineering, Islamic University of Gaza.
IEEE Counselor: September 2010- Present, Electrical & Computer Engineering, Islamic University of Gaza

Publications
Books

- Basil Hamed and Mohammed EL-Moghany " Sun and Maximum Power Point Tracking Using Fuzzy Controllers via FPGA" LAP Lambert Academic Publishing (2011 -09-26) ISBN-13: 978-3-8465-0867-1 ISBN-10:3846508675

- Basil Hamed and Hosam Abu Elreesh "Design of GA-Fuzzy Controller for Magnetic Levitation Using FPGA: Real Time Application "LAP Lambert Academic Publishing (2011-10-13) ISBN-13: 978-3-8465-2697-2, ISBN-10:3846526975

- Basil Hamed and Walid Issa "A New Approach for Robust Internal Model Control of Nonlinear Systems: Control Systems Application" LAP Lambert Academic Publishing (November 21, 2011) ISBN-13: 978-3846556900, ISBN-10: 3846556904

- Basil Hamed "Comparison of Fuzzy Logic and Classical Controller Designs for Nonlinear Systems. "Ph.D. Dissertation, New Mexico State University, Las Cruces, NM. USA, 1999. ISBN:0-599-20080-4

Journal

- Basil Hamed and Ahmad El Khateb " Hybrid Fuzzy FED PID Control of Nonlinear Systems" Al-Aqsa University Journal (Natural Sciences Series), Vol.14, No.1, Pages 29-41, Jan.2010 ISSN 2070-3155

- Basil Hamed " Application of a LabVIEW for Real-Time Control of Ball and Beam System" IACSIT International Journal of Engineering and Technology, Vol.2, No.4, August 2010 ISSN: 1793-8236

- Basil Hamed and Moayed Al-Mobaied" Fuzzy Logic Speed Controllers Using FPGA Technique for Three-Phase Induction Motor Drives" DIRASAT JOURNAL: ENGINEERING SCIENCES, VOL 37, NO 2, OCTOBER 2010   ISSN: 1026-3764

- Basil Hamed "A mimicking human arm with 5 DOF controlled by LabVIEW" IACSIT International Journal of Engineering and Technology, Vol.3, No.1, February 2011 ISSN: 1793-8236

- Basil Hamed " Real-Time Application Surveillance Security System based on LabVIEW" IACSIT International Journal of Computer Theory and Engineering (IJCTE), Vol.3, No.3, June, 2011   ISSN:1793-8201

- Basil Hamed "Design and Implementation of Stair-Climbing Robot for Rescue Applications" International Journal of Computer and Electrical Engineering (IJCEE), Vol.3, No.3, June, 2011 ISSN: 1793-8163

- Basil Hamed and Moayed Al-Mobaied, "Fuzzy PID Controllers Using FPGA Technique for Real Time DC Motor Speed Control" Intelligent Control & Automation Journal (ICA), Vol. 2, No. 3, August 2011 ISSN: 2153-0653

- Basil Hamed and Walid Issa, "A Modified Internal Model Control for Unstable – Time Delayed System" International Journal of Engineering and Advanced Technology (IJEAT), Volume-1, Issue-1, October 2011 ISSN: 2249 – 8958

- Basil Hamed "Design & Implementation of Smart House Control Using LabVIEW" International Journal of Soft Computing and Engineering (IJSCE) ,Volume-1, Issue-6, January 2012 ISSN: 2231-2307

- Basil Hamed and Hosam Abu Elreesh "Design of Optimized Fuzzy logic Controller for Magnetic Levitation Using Genetic Algorithms" JOURNAL OF INFORMATION AND COMMUNICATION TECHNOLOGIES, VOLUME 2, ISSUE 1, JANUARY 2012 ISSN: 2047-3168.

- Basil M. Hamed, Mohammed S. El-Moghany, "Fuzzy Controller Design using FPGA for Sun Tracking in Solar Array System", International Journal of Intelligent Systems and Applications, ,IJISA, vol.4, no.1, pp.46-52, February 2012 ISSN: 2074-904X

- Basil Hamed, "Efficient Authorized Access Security System Control Using ATMEL 89C55 & Mobile Bluetooth," *International Journal of Computer Theory and Engineering* vol. 4, no. 1, pp. 112-118, February **-** 2012 ISSN: 1793-821X

- Basil M. Hamed, Mohammed S. El-Moghany, "Fuzzy Controller Design Using FPGA for Photovoltaic Maximum Power Point Tracking**,"** International Journal of Advanced Research in Artificial Intelligence. Volume 1 No. 3, pp. 14-21, June 2012 ISSN : 2165-4069

- Basil Hamed "Implementation of Fully Automated Electricity for large Building Using SCADA Tool like LabVIEW", CURRENT TRENDS IN TECHNOLOGY & SCIENCES. Volume : 1, Issue : 1 (July-2012) ISSN: 2279-0535

- Hosam Abu Elreesh, Basil Hamed , "FPGA Fuzzy Controller Design for Magnetic Ball Levitation" International Journal of Intelligent Systems and Applications, ,IJISA, Vol.4, No.10, pp.72-81, September 2012 ISSN: 2074-904X

- Basil M. Hamed and Mohammed S. El-Moghany, "Fuzzy Controller Design Using FPGA for Sun and Maximum Power Point Tracking in Solar Array System," International Journal of Modeling and Optimization vol. 3, no. 2, pp. 189-197, April 2013. **ISSN:** 2010-3697

- Basil Hamed and Hosam Abu Elreesh "FPGA Optimized Fuzzy Controller Design for Magnetic Ball Levitation using Genetic Algorithms" ACEEE Int. J. on Electrical and Power Engineering, Vol. 4, No. 2, Aug 2013 ISSN 2158-7574

- Basil Hamed, and Loai Khashan "Design of A hierarchical Sugeno Fuzzy Controller for HVAC in Large Buildings" Journal of Engineering Research and Technology (JERT), Vol. 1, No. 1, March 2014 ISSN 2312-2307

- Basil Hamed, and Fadi Alami "Adaptive Hierarchical Fuzzy controller for HVAC Systems in Low Energy Buildings" Academic Platform Journal of Engineering and Science (APJES), Volume: 3 -Issue: 2, Aug 2015 ISSN: 2147-4575

- Basil Hamed, and Abd Al Karim Abu Ras "Fuzzy Controller for Dual Sensors Cardiac Pacemaker System in Patients with Bradycardias at Rest" Intelligent Control and Automation Journal (ICA), Vol. 6, No. 3, August 2015 ISSN: 2153-0653

- Basil Hamed, and Ahmed Alostaz "Optimized Particle Filter for Tracking of a Moving Video Object" Journal of Electrical Engineering : Volume 15 / 2015 - Edition : 4 ISSN: 1582-4594

- Ahmed Alostaz and Basil Hamed "OPTIMIZED AUTOMATED TRACKING OF A MOVING OBJECT WITH A ROBOTIC EYE SYSTEM " Control and Intelligent Systems Volume 44 / 2016 - Edition : 1   DOI: 10.2316/Journal.201.2016.1.201-2721 ISSN (Online): 1925-5810, ISSN (Hardcopy): 1480-1752

Conference

- Basil Hamed and Ahmad El Khateb " Optimized Hybrid Fuzzy Fed PID Control of Nonlinear Systems" 6th INTERNATIONAL ENGINEERING CONFERENCE (IEC 2008) Mansoura/Sharm El-Sheikh

- Basil Hamed and Ahmad El Khateb " Hybrid Takagi-Sugeno Fuzzy FED PID Control of Nonlinear Systems" AIP Conf. Proc. -- June 12, 2008 -- Volume 1019, pp. 99-102 INTELLIGENT SYSTEMS AND AUTOMATION: 1st Mediterranean Conference on Intelligent Systems and Automation (CISA 08); doi:10.1063/1.2953061

- Basil Hamed "Eye Controlled Typing Using PIC16F877A" The 2nd International Conference on Information Communication (ICICS), May 22-24, 2011, Irbid, Jordan ISBN 978-1-4507-8208-1

- Mohammed S. El-Moghany , Basil M. Hamed, "TWO AXES SUN TRACKER USING FUZZY CONTROLLER via PIC16F877A", 4th International Engineering Conference (IEC4), 15-16 October 2012, Gaza, Palestine

- Basil Hamed" ALERATING SYSTEM DESIGN USING PIC16F877A FOR POWER DISTRIBUTION SYSTEM" , 4th International Engineering Conference (IEC4), 15-16 October 2012, Gaza, Palestine

- Basil Hamed, Mohammed S. El-Moghany," Fuzzy Controller Design Using FPGA for Sun and Maximum Power Point Tracking in Solar Array System", 2th International Conference on System Engineering and Modeling (ICSEM 2013) April 21-22, 2013, Beijing. China.

- Basil Hamed and Fadi Alami "Adaptive Hierarchical Fuzzy controller for HVAC Systems in Low Energy Buildings" 2nd INTERNATIONAL SYMPOSIUM ON INNOVATIVE TECHNOLOGIES IN ENGINEERING AND SCIENCE (ISITES2014) June 18-20, Karabuk – TURKEY ISSN: 2148-7464

- Basil Hamed and Adham Abu Shamla " Gaza's Water Wells System Based on SCADA" 5th International Conference for Engineering and Sustainability (ICES5) December 8-9 2014, Faculty of Engineering-Islamic University Gaza