

DR. Emad F. Khalaf

Assistant Prof., ECE, King Abdulaziz University, Dept. of Electrical and Computer Engineering.

Education

<i>Degree</i>	<i>Field of Study</i>	<i>Institution</i>	<i>Year</i>
PhD	Computer networks	Information Technology and Management (Poland)	2002
MS	Information Technology Engineering	Information Technology and Management (Poland)	1992

BS

Academic Experience

<i>From</i>	<i>To</i>	<i>Institution</i>	<i>Rank</i>	<i>Title (Chair, Coordinator, etc.)</i>	<i>Full or Part Time</i>
2003	2012	Dept. Of Computer Engineering, Philadelphia University, Jordan	Assistant Prof.	Lecturer & Coordinator	Full Time
2012	now	Dept. Of Electrical and Computer Engineering, King Abdulaziz university, Saudi Arabia.	Assistant Prof.	Lecturer & Coordinator	Full Time

Funded Research Projects

1. Dr. Mohamed Sherif El Sayed, **Dr. Emad Khalaf**, Eng. Mohamed Ghowanem, Std. Osama Al Yaseen, and Std. Nwaf Fadel Abu ramiah, "Bio-Computer Access Control Using Fingerprint", 1/5/2006 to 1/7/2007, Funded by Philadelphia University and King bdullah II Design & Development Bureau KADDB- Scientific Research Department – SRD.
2. Dr. Mohamed Sherif El Sayed, **Dr. Emad Khalaf**, Std. Osama Al Yaseen, and Std. Nwaf Fadel Abu ramiah, "Biometric and IT Security Solutions", Queen Rania National Entrepreneurship Competition, 1/2/2007 to 1/7/2007, Funded by Philadelphia University and King Abdullah II Design & Development Bureau KADDB- Scientific Research Department – SRD.
3. **Dr. Emad Khalaf**, Dr. Mohamed Sherif El Sayed. "Design and Implementation of an Email Security System using a New Proposed Galois Field Technique", (2007-2010), Funded by King Abdullah II Design and Development Bureau KADDB- Applied Research Program Department – ARPD.
4. Sheng Chen (University of Southampton, Distinguished Adjunct Professor KAU), **Emad Khalaf**, Ali Morfeq, Naif D. Alotaibi," B-spline Neural Network Based Nonlinear Equalisation for 4G and Beyond 4G Wireless Communication Systems", (HiCi-projects), KAU, 2014-2016 (300,000 SR).
5. Elmar Nöth (University of Erlangen-Nuremberg Germany, Distinguished Adjunct Professor KAU), Khaled Daqrouq, **Emad Khalaf**, Abdullah Dobaie, Abdulhameed Alkhateeb, "New Features for Speaker Group Characterization", (HiCi-projects), KAU, 2014-2016 (300,000 SR).
6. **Emad Khalaf**, Khaled Daqrouq, "Wavelet transforms average framing and Shannon entropy for signature recognition task", General project, KAU, 2014-16 (60,000 SR).

Honours and Awards

1. Best project award: National Technology Parade 2011/2012, Jordan.
2. Certificate of Achievement from Philadelphia University 2006/2007.
3. Certificate of Merit from Jordan Engineers Association (JEA) 2006/2007.
4. First-Top-10-List of Queen Rania National Entrepreneurship Competition, 1/2/2007 to 1/7/2007

Institutional and Professional Services

1. Member of core curriculum committee (CCC), Faculty of Engineering, KAU.
2. Member of Projects Committee, Department of Electrical and Computer Engineering, KAU.
3. Organization Committee (General Chairman) of Philadelphia Third Engineering Day (PED-2008), 7th of March 2008, Faculty of Engineering.
4. Organization Committee (General Chairman) of Philadelphia Second Engineering Day (PED-2007),

8th of March 2007, Faculty of Engineering.

5. Organization Committee (General Chairman) of Philadelphia First Engineering Day (PED-2006), 27th of February 2006, Faculty of Engineering.
6. Member of research group in PUSPC-research group, (www.puspc.com).
7. Member of Lecturer, Engineers, and Technicians Selection Committee for Employing in Philadelphia University.

\Publications

1. K. Daqrouq, M. Alfaouri, A. Alkhateeb, **E. Khalaf**, A. Morfeq, "Wavelet LPC with Neural Network for Spoken Arabic Digits Recognition System", *British Journal of Applied Science & Technology* 4(8): 1238-1255, 2014.
2. **Emad F. Khalaf**, Khaled Daqrouq, Ali Morfeq, "Arabic Vowels Recognition by Modular Arithmetic and Wavelets using Neural Network", *Life Science Journal*, Vol. 11, No. 3, p.33-41, 2014.
3. Ming Gao, Xia Hong, Sheng Chen, Chris J. Harris, **Emad Khalaf**, "PDFOS: PDF Estimation Based Over-Sampling for Imbalanced Two-Class Problems", *Neurocomputing (Elsevier)*, Volume 138, 22 August 2014, Pages 248-259. (doi:10.1016/j.neucom.2014.02.006)
4. Xia Hong, Sheng Chen, Chris J. Harris, **Emad Khalaf**, "Single-Carrier Frequency Domain Equalization for Hammerstein Communication Systems Using Complex-Valued Neural Networks", *Signal Processing, IEEE Transactions*, Volume:62, Issue: 17, Sept., 2014, pp.4467 – 4478.
5. ShengChena, XiaHongb, **EmadKhalaf**, AliMorfeq, Naif D.Alotaibi, "Adaptive B-spline neural network based nonlinear equalization for high-order QAM systems with nonlinear transmit high power amplifier", *Digital Signal Processing, IEEE Transactions*, 40 .May, 2015, pp. 238 – 249.
6. Chen Sheng, Hong Xia, **Khalaf Emad F.**, Alsaadi Fuad E. and Harris Christopher, "Comparative performance of complex-valued B-spline and polynomial models applied to iterative frequency-domain decision feedback equalization of Hammerstein channels" *IEEE Transactions on Neural Networks and Learning Systems*, (2016), pp. 1-13.
7. Sheng Chen, Xia Hong, **Emad Khalaf**, Ali Morfeq, Naif D. Alotaibi and Chris J. Harris, "Single-Carrier Frequency-Domain Equalization with Hybrid Decision Feedback Equalizer for Hammerstein Channels Containing Nonlinear Transmit Amplifier", *IEEE Transaction Wireless Communications*, *IEEE Trans. Wireless Communications*, Vol.16, No.5, pp.3341-3354, 2017.
8. **Emad F. Khalaf**, Mustafa M. Kadi, " A Survey of Access Control and Data Encryption for Database Security", *JKAU: Eng. Sci.*, Vol. 28, No. 1, 2017

Conferences Papers

1. K. Daqrouq, **Emad Khalaf**, O.Daoud, and A. Al-Qawasmi, "K-means Clustering Algorithm for Wavelet Transform Speaker Identification System", *Advanced Signal MIC-CSC2009*, 16-19 Dec. 2009.
2. Chen Sheng, Hong Xia, **Khalaf Emad**, Alsaad Fuad, Harris Christopher, " Complex-value B-spline neural network and its application to iterative frequency-domain decision feedback equalization for Hammerstein communication systems", In *IJCNN 2016: International Joint Conference on Neural Networks*, Vancouver, CA, 24 – 29 Jul 2016. 8pp.