Dr. Mohammed Farag

Assistant Professor

Personal Data:

Nationality | Egypt
Date of Hire | 2018
Date Rank Obtained | March 2018
Department | Electrical Engineering
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Education:

Academic Degree	Major	specialty	Place of Issue	Address	Date
Doctorate (PhD)	Electrical Engineering	Computer Engineering	Virginia Tech University	Blacksburg, Virginia, USA	December 2012
Masters (M.Sc.)	Electrical Engineering	Communications and Electronics	Alexandria University	Alexandria, Egypt	April 2007
Bachelor (B.Sc.)	Electrical Engineering	Communications and Electronics	Alexandria University	Alexandria, Egypt	July 2003

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions):

PhD	Architectural Enhancements to Increase Trust in Cyber-Physical Systems Containing Untrusted Software and Hardware
Master	Hardware Implementation of The Advanced Encryption Standard on Field Programmable Gate Arrays

Experiences:

Title of Job	Address of Work	Country	Date	
Assistant Professor	King Faisal University - College of Engineering	USA	From	2018
			To	Present
Assistant Professor	Electrical Engineering Department, Faculty of Engineering, Alexandria University.	Egypt	From	2013
			To	2017
Research Assistant	The Bradley Department of Electrical and Computer Engineering, Virginia Polytech Institute and State University	USA	From	2009
			To	2012
Research and Teaching Assistant	Electrical Engineering Department, Faculty of Engineering, Alexandria University.	Egypt	From	2003
			To	2008

Research Interests:

1. Machine Learning for Edge devices
2. Cyber-physical security
3. Hardware and embedded system design
4. FPGA prototyping ،
5. System-on-chip interconnects
6. Hardware Trojan design and detection methods

Publications:

#	Name of author(s)	Title of Publication	Publisher and Date of Publication	Link of Publication
1.	Ahmed, Khaled E and Rizk, Mohamed R and Farag, Mohammed M	Overloaded CDMA crossbar for network-on-chip	IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017	Click Here
2.	Mohammed Gamal, Mohamed El-Banna, Mohammed M Farag	Hardware implementation of an LQR controller of a drum-type boiler turbine on FPGA	2016 28th International Conference on Microelectronics (ICM)	Click Here
3.	Khaled E Ahmed, Mohamed R Rizk, Mohammed M Farag	Aggregated CDMA crossbar for network-on-chip	2016 28th International Conference on Microelectronics (ICM)	Click Here
4.	Omar G Lotfy, Ahmed A Kassem, Emad M Nassief, Hassan A Ali, Mario R Ayoub, Magdy A El-Moursy, Mohammed M Farag	Lane departure warning tracking system based on score mechanism	2016 IEEE 59th International Midwest Symposium on Circuits and Systems (MWSCAS)	Click Here
5.	Ahmed S Eissa, Mahmoud A Elmohr, Mostafa A Saleh, Khaled E Ahmed, Mohammed M Farag	SHA-3 Instruction Set Extension for A 32-bit RISC processor architecture	2016 IEEE 27th International Conference on Application-specific Systems, Architectures and Processors (ASAP)	Click Here
6.	Kamal Bassuony, Mostafa Gaber, Shaimaa Lazem, Karim Youssef, Mohammed Morsy Farag	E-playground: simultaneous identification of multi-players in educational physical games using low-cost RFID	Proceedings of the 2nd Africa and Middle East Conference on Software Engineering, 2016	Click Here

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7.	Khaled E Ahmed, Mohammed M Farag	Parallel overloaded CDMA interconnect (OCI) bus architecture for on-chip communications	2015 IEEE International Conference on Electronics, Circuits, and Systems (ICECS)	Click Here
8.	Khaled E Ahmed, Mohammed M Farag	Hardware/software co-design of a dynamically configurable SHA-3 System-on-Chip (SoC)	2015 IEEE International Conference on Electronics, Circuits, and Systems (ICECS)	Click Here
9.	Shaimaa Lazem, Kamal Bassuony, Mostafa Gaber, Karim Youssef, Mohammed Morsy Farag	On Using Games to Enhance the Learning Experience in Egypt	Bulletin of the IEEE Technical Committee on Learning Technology, Volume 17, Number 4, December 2015	Click Here
10.	Khaled E Ahmed, Mohammed M Farag	Enhanced overloaded CDMA interconnect (OCI) bus architecture for on-chip communication	2015 IEEE 23rd Annual Symposium on High-Performance Interconnects	Click Here
11.	Khaled E Ahmed, Mohammed M Farag	Overloaded CDMA bus topology for MPSoC interconnect	2014 International Conference on ReConFigurable Computing and FPGAs (ReConFig14)	Click Here
12.	Mohammed M Farag, Mohammad A Ewais	Smart employment of circuit redundancy to effectively counter trojans (SECRET) in third-party IP cores	2014 International Conference on ReConFigurable Computing and FPGAs (ReConFig14)	Click Here
13.	Mohamed Azab, Bassem Mokhtar, Mohammed M Farag	CyNetPhy: Towards Pervasive Defense-in-Depth for Smart Grid Security	2014 International Conference on Critical Information Infrastructures Security	Click Here
14.	Mohammed M Farag, Mohamed Azab, Bassem Mokhtar	Cross-layer security framework for smart grid: Physical security layer	2014 IEEE PES Innovative Smart Grid Technologies, Europe	Click Here
15.	Lee W Lerner, Mohammed M Farag, Cameron D Patterson	Run-time prediction and preemption of configuration attacks on embedded process controllers	2012 Proceedings of the First International Conference on Security of Internet of Things	Click Here
16.	Mohammed M Farag, Lee W Lerner, Cameron D Patterson	Interacting with Hardware Trojans over a network	Hardware-Oriented Security and Trust (HOST), 2012 IEEE International Symposium on	Click Here
17.	Mohammed M Farag, Lee W Lerner, Cameron D Patterson	Thwarting Software Attacks on Data-Intensive Platforms with Configurable Hardware-Assisted Application Rule Enforcement	Field Programmable Logic and Applications (FPL), 2011 International Conference on	Click Here
18.	MRM Rizk, M Morsy	Optimized area and optimized speed hardware implementations of AES on FPGA	2007 2nd International Design and Test Workshop	Click Here

Language Proficiency:

1. Arabic
2. English