

Khaled E. Ahmed

CONTACT INFORMATION	6335 Thunderbird Cres., V6T 2G9, Vancouver, BC, Canada,	+1 (778) 751-8116 khaledea@ece.ubc.ca k.e.elsayed@gmail.com
EDUCATION	Electrical and Computer Engineering, University of British Columbia, Canada Doctorate of Philosophy in Electrical and Computer Engineering (Sept. 2017 to date) <ul style="list-style-type: none">• Development of dynamic slicing tools for Android and Java programs.• Reverse engineering and analysis of Android malware that infiltrated the Google Play store.• Development of an automated dynamic analysis tool for Android malware detection.• Grade: A+ (GPA: 4/4) Faculty of Engineering, Alexandria University, Alexandria, Egypt Masters of Science in Electrical and Electronic Engineering (Sept. 2014 to July 2017) <ul style="list-style-type: none">• CDMA Network-on-chip design.• Software/Hardware Co-design of cryptographic applications.• Grade: Distinction with degree of honor (GPA: 3.95/4) Bachelor's Degree in Electrical and Electronic Engineering (Sept. 2009 to July 2014) <ul style="list-style-type: none">• Thesis: ASIC implementation of TMS320C25 DSP (With Si-Ware Systems and FabCat)• Grade: Distinction with degree of honor (GPA: 3.94/4, Rank: 2nd/332)	
RESEARCH INTERNSHIPS	Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland (July 2014 to Sept. 2014) <ul style="list-style-type: none">• Optimized hardware accelerators by exploiting parallelism using High Level Synthesis (HLS).	
TEACHING EXPERIENCE	University of British Columbia, Vancouver, Canada (Winter 2018 to date) <ul style="list-style-type: none">• Software Engineering CPEN 321• Computer Architecture CPEN 411 Alexandria University, Alexandria, Egypt (Fall 2014 to Spring 2017) <ul style="list-style-type: none">• x86 Microprocessors• Computer Architecture• Modeling and Design of VLSI Integrated Circuits• Digital Integrated Circuits• Logic Circuit Design• Semiconductor Devices Online course: Hardware Design using VHDL vlsiacademy.org/vhdl1.html	
PAPERS IN PROGRAM ANALYSIS	Khaled Ahmed , Mieszko Lis, Julia Rubin, "Slicer4J: A Dynamic Slicer For Java", <i>ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), tools track, 2021</i> Khaled Ahmed , Mieszko Lis, Julia Rubin, "MANDOLINE: Dynamic Slicing of Android Applications with Trace-Based Alias Analysis", <i>IEEE International Conference on Software Testing, Verification and Validation (ICST), Distinguished Paper Award, 2021</i>	
PAPERS IN DIGITAL HARDWARE DESIGN	Khaled E. Ahmed , Mohamed R. Rizk, Mohammed M. Farag, "Overloaded CDMA Crossbar for Network-On-Chip", <i>IEEE Transactions on Very Large Scale Integration Systems, Volume: PP, Issue: 99</i> . Khaled E. Ahmed , Mohamed R. Rizk, Mohammed M. Farag, "Overloaded CDMA Interconnect	

for Network-on-Chip (OCNoC)”, *IEEE International Conference on Reconfigurable Computing and FPGAs (ReConfig)*, 2016.

Khaled E. Ahmed, Mohamed R. Rizk, Mohammed M. Farag, “Aggregated CDMA Crossbar for Network-on-Chip”, *International Conference on Microelectronics (ICM)*, 2016. **Best poster award**

Ahmed S. Eissa, Mahmoud A. Elmohr, Mostafa A. Saleh, **Khaled E. Ahmed**, Mohammed M. Farag, “Hardware Implementation of A SHA-3 Application-Specific Instruction Set Processor”, *International Conference on Microelectronics (ICM)*, 2016.

Mostafa Medra, **Khaled E. Ahmed**, Timothy N. Davidson, “MOSIC: A New Ordering for OSIC MIMO Detection”, *IEEE International workshop on Signal Processing advances in Wireless Communications (SPAWC)*, 2016.

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”, *IEEE International Conference on Application-specific Systems, Architectures and Processors*, 2016.

Khaled E. Ahmed, Kareem M. Attiah, Ahmed S. Eltrass, “Multiple Signal Classification Algorithm Compensated by Extended Kalman Particle Filtering for Wi-Fi Through Wall Multi-Target Tracking”, *IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communications*, 2016.

Khaled E. Ahmed, Mohammed M. Farag, “Hardware/Software Co-Design of A Dynamically Configurable SHA-3 System-on-Chip (SoC)”, *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)*, 2015.

Khaled E. Ahmed, Mohammed M. Farag, “Parallel Overloaded CDMA Interconnect (OCI) Bus Architecture for On-Chip Communications”, *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)*, 2015.

Khaled E. Ahmed, Mohammed M. Farag, “Enhanced Overloaded CDMA Interconnect (OCI) Bus Architecture for on-Chip Communication”, *IEEE Annual Symposium of High Performance Interconnects (HOTI)*, 2015.

Khaled E. Ahmed, Mohammed M. Farag, “Overloaded CDMA Bus Topology for MPSoC Interconnect”, *IEEE International Conference on Reconfigurable Computing and FPGAs (ReConfig)*, 2014.

AWARDS	<ul style="list-style-type: none"> Natural Sciences and Engineering Research Council - Canada Graduate Scholarships (NSERC CGS-D) (Jan. 2020 to Jan. 2022) Four Year Fellowship (FYF) from the University of British Columbia (Sept. 2017 to Jan. 2020) Graduate Support Initiative (GSI) from the University of British Columbia (Sept. 2017, Sept. 2018)
SKILLS & BACKGROUND	Java, Python, Andorid Studio, C/C++, MATLAB, VHDL, Verilog, and L ^A T _E X
RELEVANT PHD COURSEWORK	Mobile Analysis, Compilers, Software Testing, Computer Architecture.
REFERENCES	Available upon request