

Mario J. Badr

CONTACT INFORMATION

The Edward S. Rogers Department of Electrical and Computer Engineering
Room 1107, Sandford Fleming Bldg.
10 King's College Road, Toronto, ON M5S 3G4 Canada
University of Toronto

EDUCATION

University of Toronto, Toronto, Ontario, Canada

Ph.D., Computer Engineering, September, 2013 - Present

Dissertation: "Developing Novel Evaluation Methodologies for Assessing Multi-Threaded Applications"

Advisor: Natalie Enright Jerger

University of Toronto, Toronto, Ontario, Canada

M.A.Sc, Computer Engineering, January, 2014

Thesis: "Synthetic Traffic Models That Capture Cache Coherent Behaviour"

Advisor: Natalie Enright Jerger

University of Toronto, Toronto, Ontario, Canada

B.A.Sc, Electrical Engineering, May, 2011

RESEARCH INTERESTS

Many/multi-core architectures, cache coherence, interconnection networks, application modelling, machine learning, design space exploration.

PEER-REVIEWED PUBLICATIONS

Joshua San Miguel, **Mario Badr**, and Natalie Enright Jerger. Load Value Approximation. In Proceedings of the International Symposium on Microarchitecture (MICRO), to appear, December 2014. (acceptance rate: 19%)

Mario Badr and Natalie Enright Jerger. SynFull: Synthetic Traffic Models Capturing a Full Range of Cache Coherence Behaviour. In Proceedings of the International Symposium on Computer Architecture (ISCA), June 2014. (acceptance rate: 18%)

PRESENTATIONS AND POSTERS

International Symposium on Microarchitecture

Poster

December, 2014

Joshua San Miguel, Mario Badr, and Natalie Enright Jerger. *Load Value Approximation*

International Symposium on Computer Architecture

Presentation

June, 2014

Mario Badr and Natalie Enright Jerger. *SynFull: Traffic Models Capturing Cache Coherence Behaviour*

Connections: University of Toronto ECE Graduate Symposium

Presentation

May, 2014

Mario Badr and Natalie Enright Jerger. *SynFull: Synthetic Traffic Models That Capture Cache Coherent Behaviour*. (Awarded Best Oral Performance)

Connections: University of Toronto ECE Graduate Symposium

Presentation

May, 2012

Mario Badr, Wenbo Dai, and Natalie Enright Jerger. *Realistic Synthetic Traffic*.

TEACHING
EXPERIENCE

Engineering Strategies and Practice, 1st Year Undergraduate

Teaching Assistant

Tutorials

Supervised students through the design process for a given project and provided feedback on written design documents, with a focus on stimulating an engineering methodology to design.

Computer Fundamentals, 1st Year Undergraduate

Teaching Assistant

Tutorials, Computer Lab

Taught the fundamentals of computer programming in C, including data structures, recursion, and sorting algorithms.

Computer Organization, 3rd Year Undergraduate

Teaching Assistant

Computer Lab

Supervised and helped students implement a simple von Neumann processor using verilog.

Computer Architecture, 4th Year Undergraduate & Graduate

Teaching Assistant

Tutorials, Computer Lab

Taught computer architecture concepts, including caches, pipelining, out-of-order cores, and cache coherence.

INDUSTRY
EXPERIENCE

Environment Canada, Toronto, Ontario Canada

Intern

June, 2009 - August, 2010

Implemented new features and bug fixes for the NinJo workstation, a java-based tool for meteorologists. Notable projects include upgrading the visualization framework for lightning strikes to be faster and use significantly less memory, incorporating storm cell data for Canada, and helping to create a configurable view of weather data for a given storm cell.

PROFESSIONAL
DEVELOPMENT

Mini-MBA

Ten Classes

2015

Gained an understanding of fundamental business concepts and applied what I learned in a group-based case competition.

Oral Presentation Skills

Five Classes

2014

Examined presentation structure and the use of visual aids. Exchanged feedback with peers and the instructor on individual oral presentations.

Prewriting Strategies for Developing and Organizing Your Ideas

Four Classes

2014

Learned several new strategies for developing and organizing ideas before (and during) the writing process.

NSERC Proposal Workshop

Three Classes

2014

Examined features of good and bad proposal writing, and exchanged feedback with peers on our own NSERC proposals.

Teaching Fundamentals Certificate

Six Workshops

2012-2013

Improved my teaching skills with workshops on pedagogy, research, academic integrity, and students in difficulty.

SCHOLARSHIPS & AWARDS	SGS Conference Grant - \$880	<i>2014</i>
	TD Bank Higher Education Award - \$3,800	<i>2007</i>
UNIVERSITY SERVICE	Member	
	Bargaining Support Committee, <i>January - April, 2014</i>	
	Steward	
	Canadian Union of Public Employees, <i>2013-2014</i>	
	Social Event Coordinator	
	Electrical and Computer Engineering Graduate Student Society, <i>2012-2013</i>	