

Dr. Mazen M. Kharbutli

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PERSONAL INFORMATION

- **Nationality:** Jordanian
- **Date of Birth:** March 8, 1977
- **Marital Status:** Married

EDUCATION

- **Ph.D. in Computer Engineering** Aug. 2002 – Dec. 2005
 - University:** North Carolina State University (NCSU), Raleigh, NC, USA
 - Advisor:** Dr. Yan Solihin
 - Co-advisor:** Dr. Milos Prvulovic, Georgia Institute of Technology, USA
 - Dissertation:** Improving the Security of the Heap through Inter-Process Protection and Intra-Process Temporal Protection
 - GPA:** 4.0/4.0
 - Honors:** Selected to the *Phi Kappa Phi* Honor Society
- **M.S. in Electrical Engineering** Aug. 2000 – May 2002
 - University:** University of Maryland, College Park, MD, USA
 - Specialty:** Computer Engineering
 - Advisor:** Dr. Donald Yeung
 - Scholarly Paper:** Memory Hierarchy in Chip Multiprocessors
- **B.S. in Electrical Engineering** Sept. 1995 – June 2000
 - University:** Jordan University of Science and Technology (JUST), Irbid, Jordan
 - Specialty:** Computer Engineering
 - GPA and Rank:** 84.1% (Excellent) Class Rank: 3/107
 - Honors:** University President's Honor List
Engineering Dean's Honor List

EXPERIENCE

- Feb. 2006 – present: Assistant Professor of Computer Engineering, JUST, Jordan.
- July 2008 – Aug. 2008: Acting Dean of the Faculty of Computer and Information Tech., JUST, Jordan.
- Sept. 2007 – Aug. 2008: Vice Dean of the Faculty of Computer and Information Tech., JUST, Jordan.
- Jan. 2003 – Dec. 2005: Research Assistant, North Carolina State University, USA.
- Jan. 2003 – Dec. 2003: Teaching Assistant, North Carolina State University, USA.
- Jan. 2001 – May 2002: Teaching Assistant and Grader, University of Maryland, USA.
- Oct. 2000 – Jan. 2001: Research Assistant, University of Maryland, USA.

TEACHING (Courses Taught)

CPE 251	Digital Logic Design	Fall 2008 Summer 2006 Spring 2006	2 sections 2 sections 1 section	69 students 39 students
CPE 252	Computer Organization and Design	Spring 2007	2 sections	54 students
CPE 253/255	Digital Logic Design Lab	Spring 2008 Summer 2007 Fall 2006	1 section 2 sections 1 section	20 students 26 students 20 students
CPE 254	Digital Logic Design and Comp. Arch.	Summer 2007	1 section	33 students
CPE 311	Object-Oriented SW Development	Spring 2006	2 sections	86 students
CPE 341	Applied Probability and Queuing Theory	Fall 2007	1 section	30 students
CPE 352	Computer Architecture	Summer 2008 Spring 2008 Fall 2007 Fall 2006	1 section 1 section 1 section 2 sections	29 students 47 students 32 students 58 students
CPE 740	High Performance Computer Architecture	Spring 2008 Fall 2006	1 section 1 section	23 students 40 students
CPE 745	Parallel Computing	Fall 2008 Spring 2007	1 section 1 section	34 students

PUBLICATIONS (in refereed journals and conferences)

- Mazen Kharbutli and Yan Solihin, “**Counter-Based Cache Replacement and Bypassing Algorithms**”, in *IEEE Transactions on Computers (IEEE-TOC)*, April 2008.
- Mazen Kharbutli, Xiaowei Jiang, Yan Solihin, Guru Venkataramani, and Milos Prvulovic, “**Comprehensively and Efficiently Protecting the Heap**”, in *the Proceedings of the 12th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, October 2006.
- Rithin Shetty, Mazen Kharbutli, Yan Solihin, and Milos Prvulovic, “**HeapMon: A Helper-Thread Approach to Programmable, Automatic, and Low-Overhead Memory Bug Detection**”, in *IBM Journal of Research and Development: Special Issue on Exploratory Systems (IBM-JRD)*, April 2006.
- Mazen Kharbutli, “**Improving the Security of the Heap through Inter-Process Protection and Intra-Process Temporal Protection**”, *PhD Dissertation, North Carolina State University*, December 2005.
- Mazen Kharbutli and Yan Solihin, “**Counter-Based Cache Replacement Algorithms**”, in *the Proceedings of the 23rd IEEE International Conference on Computer Design (ICCD)*, October 2005.
- Mazen Kharbutli, Yan Solihin, and Jaejin Lee, “**Eliminating Conflict Misses Using Prime Number-Based Cache Indexing**”, in *IEEE Transactions on Computers (IEEE-TOC)*, May 2005.
- Rithin Shetty, Mazen Kharbutli, Yan Solihin, and Milos Prvulovic, “**HeapMon: a Low Overhead, Automatic, and Programmable Memory Bug Detector**”, in *the Proceedings of the IBM Watson Conference on Interaction between Architecture, Circuits, and Compilers (P=ac2)*, October 2004.

- Mazen Kharbutli, Keith Irwin, Yan Solihin, and Jaejin Lee, “**Using Prime Numbers for Cache Indexing to Eliminate Conflict Misses**”, in *the Proceedings of the 10th IEEE International Conference on High Performance Computer Architecture (HPCA)*, February 2004.

ADVISING (Research)

- Rami Al-Sheikh, “**Improving the Performance of L2 Caches through Combining Both Locality and Cost-Sensitivity Principles in Cache Replacement Policies**”, M.S. Thesis, JUST, August 2008.
- Abdullah Zizan, “**Improving the Performance of L2 Caches by Combining Counter-Based Cache Replacement and Correlation Prefetching Algorithms**”, M.S. Thesis, JUST, May 2008.

PRESENTATIONS

- “**Comprehensively and Efficiently Protecting the Heap**”, in *the 12th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*. San Jose, CA, USA. October 2006.
- “**Counter-Based Cache Replacement Algorithms**”, in *the 23rd IEEE International Conference on Computer Design (ICCD)*. San Jose, CA, USA. October 2005.
- “**Improving Cache Performance Using Event Counting in Cache Replacement and Bypassing**”, in *the NCSU ECE Graduate Student Association Seminar Event*. August 2004. Second place winner.
- “**Using Prime Numbers for Cache Indexing to Eliminate Conflict Misses**”, in *the NCSU ECE Graduate Student Association Seminar Event*. August 2003. Second place winner.

PROFESSIONAL SERVICES

- Acting Dean of the Faculty of Computer and Information Technology at JUST.
- Vice Dean of the Faculty of Computer and Information Technology at JUST.
- Faculty advisor for the Open Source Group (OSG) at JUST.
- Member of the international advisory board for the International Congress on Pervasive Computing and Management (ICPCM), 2008.
- Reviewer for several international journals and conferences.
e.g. IEEE Transactions on Knowledge and Data Engineering (IEEE-TKDE); IEEE Int. Symposium on Workload Characterization (IISWC); ACM Conf. on Compilers, Architecture, and Synthesis for Embedded Systems (CASES); ACM Transactions on Architecture and Code Optimization (TACO); IEEE Int. Conf. on Dependable Systems and Networks (IEEE-DSN).
- Member of the following Department of Computer Engineering committees at JUST:

Labs and Tenders Committee	2006/2007 academic year
Curriculum and Course Equivalency Committee	2006/2007 academic year
Curriculum Committee	2007/2008 academic year
Curriculum Committee	2008/2009 academic year
Students Affairs and Course Equivalency Committee	2008/2009 academic year

- Member of the following Faculty of Computer and Information Technology committees at JUST:
 - Labs and Lab Manuals Improvement Committee 2006/2007 academic year
 - Students' Practical Training Committee 2007/2008 academic year
 - Course Schedules and Teaching Loads Committee 2007/2008 academic year

HONORS and SCHOLARSHIPS

- Oct. 2003 : Selected to the **Phi Kappa Phi** Honor Society.
- Aug. 2000: Full scholarship from JUST to pursue the M.S. and Ph.D. degrees in Computer Engineering in the USA.
- June 2000: University President's Honor List at JUST.
- June 2000: Engineering Dean's Honor List at JUST.

REFERENCES (available upon request)