

Curriculum Vitae

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Education

Ph.D., Computer Science, University of Virginia, 2006
M.C.S., Computer Science, University of Virginia, 2001
Certificate, Computer Science, Mills College, 1999
Certificate, Chinese Studies, Hopkins-Nanjing Center,
Johns Hopkins University School of Advanced International Studies, 1993
B.A., Asian Studies, University of California, Berkeley, 1991

Employment History

Research Associate, Department of Computer Science, University of Virginia, 2007 - present
Research software dynamic translation applied to problems in computer security.
Lecturer, Department of Computer Science, University of Virginia, 2006 - 2007
Instructor, Department of Computer Science, University of Virginia, Spring 2006
Research Assistant, Department of Computer Science, University of Virginia, 1999-2006
Teaching Assistant, Department of Computer Science, University of Virginia, 1999 - 2003
Intern, IBM Austin Research Laboratory, Systems Software, Austin, TX, Summer 2002
Researched linux kernel modifications to use performance counters for system monitoring.
Intern, Cohesive Technology Solutions, Mountain View, CA, Summer 1999
Assisted installation and maintenance of linux-based network at backbone data center.
Research Assistant, Mills College, Oakland, CA, Fall 1998
Teaching Assistant, Department of Mathematics and Computer Science, Mills College, 1998 - 1999

Teaching Experience

Advising

Undergraduate thesis co-adviser. Nicholas Williams, 'Improving Computer Security One Test Suite At A Time,' 2007.

Instructing

CS 101E: Introduction to Computer Science, Spring 2007
CS 216: Program and Data Representation, Fall 2006 - Spring 2007
CS 333: Computer Architecture, Fall 2006
CS 110: Introduction to Information Technology, Spring 2006

Assisting

CS 101: Introduction to Computer Science, 1999-2000, 2002-2003
CS 201: Software Development Methods, Fall 2002
CS 654: Advanced Computer Architecture (Graduate-level), Fall 2001
MCS 113: Digital Logic, Spring 1999
MCS 125: Theory of Algorithms, Spring 1999
MCS 124: Data Structures and Algorithm Analysis, Fall 1998
MCS 004: Discrete Math, Fall 1998

Honors

Graduate Teaching Award, University of Virginia, 2003

Computer Science Award, Mills College, 1999

Publications

Refereed Conference and Workshop Proceeding Publications

Co, M., Coleman, C.L., Davidson, J.W., Ghosh, S., Hiser, J.D., Knight, J.C., Nguyen-Tuong, A., ‘A Lightweight Software Control System for Cyber Awareness and Security,’ to appear in *International Symposium on Resilient Control Systems*, Idaho Falls, Idaho, August, 2009.

Hiser, J.W., Coleman, C., Co, M., Davidson, J.W., ‘MEDS: The Memory Error Detection System,’ in *International Symposium on Engineering Secure Software and Systems*, Leuven, Belgium, February, 2009, pp. 164–179.

Co, M., Weikle, D. A.B., Skadron, K., ‘A Break-Even Formulation for Evaluating Branch Predictor Energy Efficiency,’ in *2005 Workshop on Complexity-Effective Design* held in conjunction with the *32nd Annual ACM/IEEE International Symposium on Computer Architecture*, June, 2005.

Co, M., Skadron, K., ‘The Effects of Context Switching on Branch Predictor Performance,’ in *2001 IEEE International Symposium on Performance Analysis of Systems and Software*, Tucson, AZ, November, 2001, pp. 77–84.

Journal Articles

Co, M., Skadron, K., ‘Evaluating Trace Cache Energy-Efficiency,’ *ACM Transactions on Architecture and Code Optimization*, Vol. 3, No. 4, December, 2006, pp. 450–476.

Unrefereed Publications

Co, M., ‘Designing Energy-Efficient Fetch Engines,’ Ph.D. dissertation, University of Virginia, Department of Computer Science, 2006.

Co, M., Weikle, D. A.B., Skadron, K. ‘Potential for Branch Predictor Adaptation at the Program and Phase Level for Performance and Energy-Efficiency,’ University of Virginia, Department of Computer Science Technical Report No. CS-2005-19, November, 2005.

Co, M., Skadron, K. ‘Evaluating Trace Cache Energy-Efficiency,’ University of Virginia, Department of Computer Science Technical Report No. CS-2004-31, October 10, 2004.

Co, M., Skadron, K. ‘Evaluating the Energy Efficiency of Trace Caches,’ University of Virginia, Department of Computer Science Technical Report No. CS-2003-19, October 28, 2003.

Professional Activities

Reviewer,

High-Performance Embedded Architecture and Compilation

ACM Transactions on Architecture and Code Optimization

Euro-Par

IEEE International Symposium on Performance Analysis of Systems and Software

IEEE Workshop on Workload Characterization

New Student Mentor, University of Virginia, 2000-2002

Member, Association for Computing Machinery

Member, Institute of Electrical and Electronics Engineering

Competencies and Interests

Computer Skills:

Programming Languages: C, C++, Java, x86 assembly, PHP, HTML, CSS, SQL

Utilities: vi, sh, perl, sed, gdb, Microsoft Visual Studio .NET, CVS, L^AT_EX

Language Abilities:

English: Fluent spoken and written

Chinese (Mandarin): Advanced spoken and written

French: Intermediate reading