BRUCE R. CHILDERS

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A comprehensive administrative vita is available by request.

SUMMARY OF INTERESTS

Collaborative, open and strategic leadership to bridge disciplines and backgrounds for shared purpose. Design of high performance, low energy and robust computing systems. Technology and practice to advance transparency, reuse and reproducibility of data science for accelerated discovery and trustworthy insight.

EDUCATION

Ph.D., Computer Science, University of Virginia *2000*
Thesis title: *Custom Embedded Counterflow Pipelines.*
B.S., Computer Science, College of William and Mary *1991*
Thesis title: *Source Code Compaction.* Graduated cum laude.

APPOINTMENTS AT UNIVERSITY OF PITTSBURGH

Dean, School of Computing and Information. *2022 – present*
Interim Dean, School of Computing and Information. *2020 – 2022*
Special Assistant to the Provost for Data Science, University of Pittsburgh. *2019 – 2021*
Affiliate Scholar, Pitt Institute for Cyber Law, Policy, and Security. *2018 – present*
Professor, Computer Science Department. *2012 – present*
Senior Associate Dean, School of Computing and Information. *2019 – 2020*
Associate Dean, Strategic Initiatives, School of Computing and Information. *2017 – 2019*
Executive Director, momacs Institute. *2019 – 2020*
Department Chair, Information Culture and Data Stewardship. *2018 – 2020*
Co-Director, Computer Engineering Program (Graduate). *2015 – 2017*
Director of Graduate Studies, Computer Science Department. *2019 – 2013*
Associate Professor, Computer Science Department. *2006 – 2012*
Assistant Professor, Computer Science Department. *2000 – 2006*
Secondary Faculty Appointment, Computer Engineering. *2000 – 2019*

HONORS AND AWARDS

Leadership Pittsburgh XXXIX, nominated by University of Pittsburgh. *2022 – 2023*
ACC Academic Leaders Network, Office of the Provost. *2018 – 2019*
CSD Teaching Award, CS 447 Computer Organization. *2014 – 2015*
CSD Teaching Award, CS 447 Computer Organization. *2011 – 2012*
CSD Teaching Award, CS 447 Computer Organization. *2009 – 2010*
CSD Teaching Award, CS 1541 Introduction to Computer Architecture. *2007 – 2008*
CSD Teaching Award, CS 3410 Computer Architecture Seminar. *2001 – 2002*
CSD Teaching Award, CS 3410 Computer Architecture Seminar. *2000 – 2001*
IBM Faculty Partnership Award, IBM Austin Center for Advanced Studies. *2001 – 2002*
IBM Faculty Partnership Award, IBM Austin Center for Advanced Studies. *2000 – 2001*
Honors, College of William and Mary, Source Code Compaction. *1990 – 1991*

UNIVERSITY AND SCHOOL COMMITTEES

Member, Honorary Degree Nomination Review Committee, University of Pittsburgh, 2024–present

Member, Board of Directors, Pittsburgh Robotics Network, representative for University of Pittsburgh's membership, 2021–present

Member, Pitt Quantum Advisory Committee, Pitt Research, University of Pittsburgh, 2021–present

Member, Pittsburgh Quantum Institute Steering Committee, Pitt Research, University of Pittsburgh, 2021–present

Member, Council of Deans, University of Pittsburgh, 2020–present

Member, Information Technology Advisory Group, University of Pittsburgh, 2020–present

Member, Program Advisory Board of the Master of Quantitative Economics, 2020–present

Member, Chancellor Search Committee, University of Pittsburgh, 2022–2023

Member, Associate Vice Provost for Data Science Search Committee, Office of the Provost, University of Pittsburgh, 2022

Chair, Plan for Pitt 2025 Strategic Plan Goal Committee for Goal 6: Building Foundational Strength, 2020

Member, STEM Research Restart Committee during COVID-19 Pandemic, University of Pittsburgh, 2020

Chair, Provost's Task Force on Data Science, 2019–2021

Co-chair, Mentoring Academy, Center for Mentoring, University of Pittsburgh, 2019–2020

Certified Facilitator for Entering Mentoring, National Research Mentoring Network (training at Pitt in May 2018, certified April 2020), 2018

Member, Planning and Budgeting Committee, School of Computing and Information, 2017–2020

Member, Provost's Ad Hoc Committee to Review Promotion and Tenure Policies, 2019

Participant, ACC Academic Leaders Network Program, selected participant by the Office of the Provost, University of Pittsburgh, 2018–2019

Chair, Tenure-Stream Faculty Search Committee, School of Computing and Information, 2017–2019

Chair, Nontenure-Stream Faculty Search Committee, School of Computing and Information, 2017–2019

Member, Provost Area Planning and Budgeting Committee, University of Pittsburgh, 2017–2018

Member, Leadership team developing Strategic Plan, School of Computing and Information, 2017–2018

Member, Committee on Research Data Management, University of Pittsburgh, 2017–2018

Member, Dean Search Committee, School of Computing and Information, 2016–2017

Member, Executive Committee, developing proposal for new campus unit of computing, University of Pittsburgh, 2015–2016

Co-Chair, Research and Collaboration Committee, developing proposal for new campus unit of computing, University of Pittsburgh, 2015–2016

Co-director, Graduate Computer Engineering Program, Computer Science Department, 2015–2017

Chair, Faculty Recruiting committee, Computer Science Department, 2013–2014

Chair, Graduate Admission and Financial Aid committee, Computer Science Department, 2009–2013

Director, Graduate Studies, Computer Science Department, 2009–2013

Computer Science representative, Tenure Council, Faculty of Arts and Sciences, 2008–2010

Chair, Graduate Program and Examinations Committee, Computer Science Department, 2005–2009

INVITED TALKS AND ACTIVITIES

Keynotes

Using Workflows for Reproducible Computationally-Driven Science, SAC-PA: Towards Security Assured Cyberinfrastructure in Pennsylvania, Pittsburgh, Pennsylvania, June 14, 2018

Achieving Scientific Reproducibility for Computer Science, Department of Computer Science, College of William and Mary, Williamsburg, Virginia (Invited for Homecoming Weekend), October 20, 2017

Learning to Share: Open, Reusable, and Accountable Experiments for Embedded Systems, 16th IEEE International Conference On Trust, Security And Privacy In Computing And Communications, Sydney, Australia, August 4, 2017

Achieving Yield, Density and Performance Effective DRAM at Extreme Technology Sizes, ACM Conference on Languages, Compilers and Tools for Embedded Systems (LCTES), Santa Barbara, California, June 14, 2016

OCCAM: Open Curation for Computer Architecture Modeling, HiPEAC Computing Systems Week, thematic session, Paris, France, May 2, 2013

Surfing the Wave of Emerging Hybrid Main Memory Architectures, 16th Workshop on Interaction between Compilers and Computer Architecture (INTERACT), New Orleans, Louisiana, February 25, 2012

Invited Panels and Activities

ACM Invited 3rd Workshop for DL-Technology: Data, Software, & Reproducibility, Association for Computing Machinery, New York, New York, December 7, 2017

2017 Workshop on Reproducibility Taxonomies for Computing and Computational Science, Sponsored by NSF, Arlington, Virginia, July 25, 2017

ACM Invited 2nd Workshop for DL-Technology: Data, Software, & Reproducibility, Association for Computing Machinery, New York, New York, May 5, 2016

Workshop on the Future of Research Curation and Research Reproducibility, Sponsored by IEEE and NSF, Washington, DC, November 5-6, 2016

ACM Invited Workshop for DL-Technology: Data, Software, & Reproducibility, Association for Computing Machinery, New York, New York, July 2, 2015

HPCSoC Modeling and Simulation Implications, DOE/NSF/DoD Invited Visioning Workshop on System-on-a-Chip Design for HPC, Denver, Colorado, August 27, 2014

Creating an Open Exchange for HPCSoC, DOE/NSF/DoD Invited Visioning Workshop on System-on-a-Chip Design for HPC, Denver, Colorado, August 27, 2014

Invited Talks

Workflow Systems: OCCAM, Modeling the World's Systems Conference, Pittsburgh, Pennsylvania, May 22, 2018

Dynamic Curation of Artifacts and Experiments is Changing the Way Digital Libraries will Operate, ACM Workshop on Data, Software and Reproducibility in Publication, New York, New York, December 7, 2017

We Must Learn to Share! Using OCCAM to Accelerate Computer Systems Research, ARM Research Summit, Cambridge, UK, September 15, 2016

Composing, Reproducing and Sharing Simulations, Workshop on Modeling and Simulation of Systems and Applications, Seattle, Washington, August 10, 2016

Achieving Yield, Density and Performance Effective DRAM at Extreme Technology Sizes, The Hong Kong Polytechnic University, Hong Kong, China, May 10, 2016

Artifact Evaluation, III Arnold Workshop: Reproducibility in Modeling and Code, American Association for the Advancement of Sciences (AAAS), Washington, DC (remote), February 15, 2016

Demonstration of OCCAM, Schloss Dagstuhl Perspectives Workshop on Artifact Evaluation for Publications (Dagstuhl), Warden, Germany, November 2, 2015

OCCAM Update: Open Curation for Computer Architecture Modeling, Modeling and Simulation for Systems and Applications, Seattle, Washington, August 14, 2015

Artifact Evaluation: The Process, Mechanism and our Experience, Workshop on DL-Technology: Data, Software and Reproducibility, Association for Computing Machinery, New York City, New York, July 2, 2015

OCCAM: Open Curation for Computer Architecture Modeling, ACM SIGPLAN and SIGBED Conference on Languages, Compilers and Tools for Embedded Systems (LCTES), Portland, Oregon, June 19, 2015

OCCAM: Open Curation for Computer Architecture Modeling, Cornell University, Computer Systems Laboratory (ECE), Ithaca, New York, May 11, 2015

OCCAM: Open Curation for Computer Architecture Modeling, School of Computer Science and Engineering, University of New South Wales, Sydney, Australia, November 14, 2014

OCCAM: Open Curation for Computer Architecture Modeling, Department of Computer Science, University of Utah, Salt Lake City, Utah, October 24, 2014

HPCSoC Modeling and Simulation Implications, Workshop on System-on-a-Chip Design for HPC, Denver, Colorado, August 27, 2014

Creating an Open Exchange for HPCSoC, Workshop on System-on-a-Chip Design for HPC, Denver, Colorado, August 27, 2014

OCCAM: Open Curation for Computer Architecture Modeling (An Update), SST Workshop and Tutorial, Catonsville, Maryland, June 26, 2014

Introducing the OCCAM project, SIGPLAN TRUST 2014, 1st Workshop on Reproducible Research Methodologies and New Publication Models in Computer Engineering, Edinburgh, Scotland, June 12, 2014

OCCAM: Is there a future for open-access simulation and experimentation?, DOE ModSim Workshop, Seattle, Washington, September 19, 2013

OCCAM: Open Curation for Computer Architecture Modeling, Modeling, Simulation and Emulation Workshop (MSE), Catonsville, Maryland, July 23, 2013

Hybrid Main Memory Systems for Energy-Efficient Computing, Rambus, Inc., Santa Clara, California (talk and tutorial), January 12, 2012

Cyberinfrastructure for Computer Architecture Research and Development, Computer Architecture Simulation Framework, Birds of a Feather, Supercomputing 2011, Seattle, Washington, November 15, 2011

Jazz2: A Flexible and Extensible Framework for Structural Testing in a Java VM, 9th International Conference on the Principles and Practice of Programming in Java (PPPJ), Copenhagen, Denmark, August 25, 2011

Commercially Available Chip Multiprocessors for Research, CRA-W/CDC Workshop on Multicore Computer Architecture Research, Newport Beach, California, March 6, 2011

Seminar on Emerging Paradigms and Uses for Dynamic Binary Translation, Schloss Dagstuhl - Leibniz Center for Informatics, Warden, Germany, October 26-31, 2008

Fragment Cache Management for Dynamic Binary Translators in Embedded Systems, International Conference on Compilers, Architecture and Synthesis for Embedded Systems (CASES), Salzburg, Austria, October 1, 2007

Evaluating Indirect Branch Handling Mechanisms in Software Dynamic Translation Systems, ACM/IEEE Int'l. Symposium on Code Generation and Optimization (CGO), San Jose, California, March 12, 2007

Integrated CPU and L2 Cache Frequency/Voltage Scaling using Supervised Learning, Schloss Dagstuhl Seminar on Power-Aware Computing, Warden, Germany, January 23, 2007

Techniques and Tools for Dynamic Optimization, NSF Next Generation Software Workshop (NGS), Rodos, Greece, April 25, 2006

Continuous Compilation for Aggressive and Adaptive Code Transformation, Center for Embedded Systems, University of California, Irvine, CA, May 13, 2005

Continuous Compilation for Aggressive and Adaptive Code Transformation, Department of Computer Science, North Carolina State University, Raleigh, NC, May 4, 2005

Jazz: A Tool for Demand-Driven Structural Testing, 14th ETAPS Int'l. Conference on Compiler Construction (CC), Edinburgh, Scotland, April 5, 2005

Continuous Compilation for Aggressive and Adaptive Code Transformation, Electrical and Computer Engineering and Computer Science, University of Rochester, Rochester, New York, March 31, 2005

Continuous Compilation for Aggressive and Adaptive Code Transformation, School of Electrical Engineering and Computer Science, Oregon State University, Corvallis, Oregon, February 17, 2005

Continuous Compilation: A New Approach to Aggressive and Adaptive Code Transformation, Pennsylvania State University, State College, PA, November 11, 2004

Instrumentation in Software Dynamic Translators for Self-Managed Systems, ACM SIGSOFT Workshop on Self-Managing Systems (WOSS), Newport Beach, California, October 31, 2004

Continuous Compilation: A New Approach to Aggressive and Adaptive Code Transformation, COPPE – Systems Engineering and Computer Science Program, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, July 1, 2004

Continuous Compilation: A New Approach to Aggressive and Adaptive Code Transformation, Instituto de Informatica, Federal University of Rio Grande do Sul, Porto Alegre, Brazil, June 29, 2004

Overhead Reduction in Software Dynamic Translators, NSF Workshop on Next Generation Software (NGS), Santa Fe, New Mexico, April 2004

SoftTest: A Framework for Software Testing of Java Programs, Eclipse Technology Workshop, Anaheim, California, October 27, 2003

Continuous Compilation: A New Approach to Aggressive and Adaptive Code Transformation, NSF Workshop on Next Generation Software (NGS), Nice, France, April 2003

Power-Aware Information Appliances, IBM Austin Center for Advanced Studies, Austin, Texas, February 2001

Reordering memory bus transactions for reduced power consumption, IBM Austin Research Lab, Systems Group, Austin, Texas, June 2000

Custom Counterflow Pipelines,, Hewlett-Packard Inc., Performance Delivery Laboratory, Cupertino, California, March 1998

Application-Specific Counterflow Pipelines, Center for Computing Science, Institute for Defense Analysis, Bowie, Maryland, February 1998

Counterflow Pipeline Synthesis, Hewlett-Packard Inc., California Language Laboratory, Cupertino, California, August 1996

A Study on the Potential of Counterflow Pipelines for Application-Specific Microprocessors,, School of Engineering and Applied Sciences, University of Virginia, Charlottesville, Virginia, October 1995

Source Code Compaction, Department of Computer Science, College of William and Mary, Williamsburg, Virginia, April 1991

SPONSORED PROJECTS

Major Funded Projects

Open Center for Curation of Computer Architecture Modeling, Bruce Childers (PI), Daniel Mossé (Co-PI), Department of Defense, January 2018-present (multiple contracts) [$1,418,964]

Network Coordination Center for the Models of Infectious Disease Agent Study, Wilbert van Panhuis (PI, Pitt), Bruce Childers, Jeremy Espino (Pitt), Kim Wong (Pitt), Bill Hogan (University of Florida), Elizabeth Halloran (Fred Hutchinson Cancer Research Center), Lauren Ancel Meyers (University of Texas at Austin), and Nick Reich (University of Massachusetts Amherst), National Institutes of Health, July 2019– [$6,700,000]

SI2-SSE: EASE: Improving Research Accountability through Artifact Evaluation, Bruce Childers (PI), Daniel Mossé (Co-PI), National Science Foundation, Division of Advanced Cyberinfrastructure, September 2015-August 2019 [$499,515]

SHF: Small: A Brick in the Wall: Achieving Yield, Performance and Density Effective DRAM Beyond 22nm Technology, Jun Yang (PI), Bruce Childers (Co-PI), Youtao Zhang (Co-PI), National Science Foundation, Division of Computer and Communication Foundations, July 2014-June 2019 [$449,999]

OCCAM: Open Curation for Computer Architecture Modeling, Bruce Childers (PI), Daniel Mossé (Co-PI), Alex Jones (Co-PI), National Science Foundation, Division of Computer and Network Systems, September 2013-August 2018 [$543,042]

The Impact of Emerging Platforms for Artifact Review and Active Curation on the ACM Digital Library, Bruce Childers (PI), Alfred P. Sloan Foundation, January 2016-April 2017 [$123,728]

CSR:Large: Storage Class Memory Architecture for Energy Efficient Data Centers, Bruce Childers (PI), Sangyeun Cho (Co-PI), Rami Melhem (Co-PI), Daniel Mossé (Co-PI), Jun Yang (Co-PI), Youtao Zhang (Co-PI), National Science Foundation, Division of Computer and Network Systems, July 2010-June 2016 [$1,900,000]

Cyberinfrastructure for Computer Architecture Design and Evaluation, Bruce Childers (PI), National Science Foundation, Division of Computing and Communication Foundations, August 15, 2011-July 2012 [$89,335]

Tera-PCM: A Low Power Terabyte Main Memory Using Phase Change Memory, Bruce Childers (PI), Rami Melhem (Co-PI), Daniel Mossé (Co-PI), National Science Foundation, Division of Computing and Communication Foundations, Computer Processes and Artifacts Program, 2008-2011 [$300,000]

REEact: A Robust Execution Environment for Fragile Multicore Systems, Bruce Childers (PI at Pitt), Mahmut Kandemir (PI at PSU), Mary Jane Irwin (Co-PI at PSU), Mary Lou Soffa (PI at UVA), Jack Davidson (Co-PI at UVA), National Science Foundation, Division of Computing and Communication Foundations, Computer Processes and Artifacts Program, 2008-2011 [$224,000 (Pitt amount) of $1,339,998 (total)]

Yield and Reliability Enhancement for On-Chip Multicore Memories in Nanoscale Technology, Bruce Childers (PI), Sangyeun Cho (Co-PI), National Science Foundation, Division of Computing and Communication Foundations, Computer Processes and Artifacts Program, 2007-2011 [$400,000]

REEact: A Robust Execution Environment for Fragile Multicore Systems, Bruce Childers (PI at Pitt), Mahmut Kandemir (PI at PSU), Mary Jane Irwin (Co-PI at PSU), Jack Davidson (Co-PI at UVA), Mary Lou Soffa (PI at UVA), National Science Foundation, Division of Computer and Network Systems, Computer Systems Program, 2007-2008 [$40,000 (Pitt amount) of $200,000 (total)]

A Community Resource Development Project for a Retargetable and Reconfigurable Software Dynamic Translation Infrastructure, Bruce Childers (PI at Pitt), Jack Davidson (PI at UVA), National Science Foundation, Computing Research Infrastructure Program, 2005-2008 [$106,803 (Pitt amount) of $213,606 (total)]

Debugging Dynamic Code Modifications, Bruce Childers (PI at Pitt), Mary Lou Soffa (PI at UVA), National Science Foundation, Division of Computer and Network Systems, Computer Systems Program, 2005-2007 [$89,934 (Pitt amount) of $200,000 (total)]

Memory Systems for Cognitive Architectures, Daniel Mossé (PI), Bruce Childers (Co-PI), Raytheon, 2004-2005 [$150,000]

Adapting Program Code Continuously and Adaptively, Bruce Childers (PI at Pitt), Mary Lou Soffa (PI at UVA), Jack Davidson (Co-PI at UVA), National Science Foundation, Division of Computer and Network Systems, Next Generation Software Program, 2003-2007 [$660,538 (Pitt amount) of $1,192,949 (total)]

Continuous Compilation: A New Approach to Aggressive and Adaptive Code Transformation, Bruce Childers (Co-PI at Pitt), Mary Lou Soffa (PI at Pitt), Jack Davidson (PI at UVA), National Science Foundation, Next Generation Software Program, 2002-2003 [$159,781 (Pitt amount) of $319,781 (total)]

Systems-on-a-chip Education and Training, Tom Cain (PI), Don Chiarulli (Co-PI), Bruce Childers (Co-PIT), Steven Levitan (Co-PI), Raymond Hoare (Co-PI), Ivan Kourtev (Co-PI), Pittsburgh Digital Greenhouse, 2000-2001 [$500,000]

Other Funded Projects

Student Travel Support: 22nd International Conference on Parallel Architectures andCompilation Techniques (PACT 2013), Bruce Childers (PI), National Science Foundation, Division of Computer and Communication Foundations, 2013 [$15,000]

Research Experience for Undergraduates supplement to CSR:Large: Storage Class Memory Architecture for Energy Efficient Data Centers, Bruce Childers (PI), Sangyeun Cho (Co-PI), Rami Melhem (Co-PI), Daniel Mossé (Co-PI), Jun Yang (Co-PI), Youtao Zhang (Co-PI), National Science Foundation, Division of Computer and Network Systems, 2013 [$16,000]

Phoenix Summer Workshop, Bruce Childers, Microsoft Corporation, held at University of Virginia, Charlottesville, Virginia, 2007 [$2,000]

Demand-driven Structural Testing, Bruce Childers, Central Research Development Fund, University of Pittsburgh, 2005-2007 [$15,000]

Jazz: A Tool for Demand-Driven Structural Testing, Bruce Childers, Hewlett International Small Grant, University of Pittsburgh, 2005 [$1,500]

Research Experience for Undergraduates supplement to Adapting Program Code Continuously and Adaptively, Bruce Childers (Co-PI) and Mary Lou Soffa (PI), National Science Foundation, 2004-2005 [$6,000]

SoftTest: Scalable and Flexible Software Testing of Java Programs, Bruce Childers (Co-PI) and Mary Lou Soffa (PI), IBM Research, 2002-2003 [$35,000]

Power-Aware Information Appliances, Bruce Childers, IBM Faculty Partnership Award, IBM Austin Center for Advanced Studies, 2001-2002 [$25,000]

Power-Aware Information Appliances, Bruce Childers, IBM Faculty Partnership Award, IBM Austin Center for Advanced Studies, 2000-2001 [$25,000]

POSTDOCTORAL FELLOWS, STUDENTS AND STAFF

Ph.D. Theses Advised

Qi Yu, *Managing Heterogeneous Memory for GPGPUs*, University of Pittsburgh, visiting PhD student scholar (advisor during time at University of Pittsburgh), China Scholarship Council, October 2017–September 2019

Qian Cheng, *Design of Hybrid Memory*, University of Pittsburgh, visiting PhD student scholar (advisor during time at University of Pittsburgh), China Scholarship Council, October 2016–September 2018

Santiago Bock, *Quality of Service in Software-Managed Hybrid Main Memory*, University of Pittsburgh (Bruce Childers, Committee chair), graduated Fall 2017, employed at Apple

Musfiq Rahman, *Continuous Online Memory Testing*, University of Pittsburgh (Bruce Childers, Committee chair), graduated December 2016, employed at Nvidia

Ryan Moore, *Dynamic Application Threading for Improved Performance*, University of Pittsburgh, received Andrew Mellon Predoctoral Fellowship in 2012/2013 (Bruce Childers, Committee chair), graduated December 2013, employed at IBM, Pittsburgh, Pennsylvania

Jon Misurda, *Efficient Branch and Node Testing*, University of Pittsburgh (Bruce Childers, Committee chair), graduated December 2011, employed at University of Arizona, Tucson, Arizona

José A. Baiocchi, *Dynamic Binary Translation for Embedded Systems with Scratchpad Memory*, University of Pittsburgh (Bruce Childers, Committee chair), graduated December 2011, employed at Google

Yuqiang Huang, *Checking Static and Dynamic Optimizations*, University of Pittsburgh (Bruce Childers, Committee chair), admitted to candidacy, writing dissertation, employed at MicroStrategy, Tyson's Corner, Virginia

Hyunjin Lee, *Fault and Yield Aware On-Chip Memory Design and Management*, University of Pittsburgh (Bruce Childers, Committee co-chair and Sangyeun Cho, Committee co-chair), graduated August 2011, employed at Intel Labs, Microarchitecture Research Lab, as Software Engineer, Santa Clara, California

Alexandre Peixoto Ferreira, *The Design of a High Capacity and Energy Efficient Phase Change Main Memory*, University of Pittsburgh (Daniel Mossé, Committee chair and Bruce Childers, Committee co-chair), graduated April 2011, employed at IBM Research Austin as Post-Doctoral Researcher, Austin, Texas

Naveen Kumar, *Debugging Adaptive Code*, University of Pittsburgh (Bruce Childers, Committee co-chair and Mary Lou Soffa, Committee co-chair), received Andrew Mellon Predoctoral Fellowship in 2005/2006, graduated May 2008, employed at Google

Min Zhao, *Profit-Driven Optimization*, University of Pittsburgh (Bruce Childers, Committee co-chair and Mary Lou Soffa, Committee co-chair), received Andrew Mellon Predoctoral Fellowship in 2003/2004, graduated August 2006, employed at Hewlett-Packard as Senior Software Engineer, Cupertino, California

Postdoctoral Fellow and Staff

David Wilkinson, *OCCAM Open Curation for Computer Architecture Modeling*, University of Pittsburgh, professional staff (Systems Programmer III), August 2014–present

John Johnson, *OCCAM Open Curation for Computer Architecture Modeling*, University of Pittsburgh, professional staff (Research Software Engineer), April 2020–April 2021

Luis Oliveira, *EASE/OCCAM Improving Research Accountability through Artifact Evaluation*, University of Pittsburgh, postdoctoral fellow (co-advised with Daniel Mosse'), April 2016–August 2019

Other Ph.D. Theses Advised

I worked closely with and advised these students in group research.

Darya Pokutnaya, *Developing and validating a comprehensive implementation framework for reporting reproducible infectious disease computational modeling studies*, University of Pittsburgh, School of Public Health. Advised by Marquis Hawkins (previously by Willem G. Van Panhuis), graduated Spring 2023. Worked regularly and directly on design of reproducibility approaches and tools as part of PhD thesis.

Yu Du, *Computer Architecture Techniques for Large-Capacity Hybrid Memory*, University of Pittsburgh (Rami Melhem, Committee chair), graduated Spring 2015

Miao Zhao, *Shared Resource Management in Multi-core Systems with Hybrid Main Memory*, University of Pittsburgh (Rami Melhem, Committee chair), graduated August 2015

Nevine AbouGhazaleh, *Power Management Techniques for Conserving Energy in Multiple System Components*, University of Pittsburgh (Rami Melhem, Committee co-chair, and Daniel Mossé, Committee co-chair), graduated May 2008 (acted as a mentor/advisor throughout dissertation in the PARTS group), employed at Intel Microarchitecture Research Labs, Hillsboro, Oregon.

Mauricio Lima Pilla, *Reuse through Speculation on Traces*, Computer Science Institute, Brazil (Pilippe O. A. Navauv, advisor, and Felipe M.G. Franca, co-advisor), visited the University of Pittsburgh in 2002-2003, graduated June 2004 (acted as a mentor/advisor at Pitt and during dissertation), employed at Unversidade Federal de Pelotas, Rio Grande do Sul, Brazil as Assistant Professor

Master Projects

Forbes Turley, *Managing Memory Resources in the Hybrid Memory Cube*, University of Pittsburgh, December 2018

Chris Corsi, *Clustering to Understand the Impact of Artifact Evaluation*, University of Pittsburgh (co-advised with Panos Chrysanthis), April 2018

John Johnson, *CLEVERCUBE: Smart Memories Securing Architectures*, University of Pittsburgh, April 2018

Chuck Smith, *Analyzing Access Contention in the Hybrid Memory Cube*, University of Pittsburgh, April 2018

Anuradha Kulkarni, *The Effect of Artifact Evaluation on Scholarly Impact*, University of Pittsburgh (co-advised with Panos Chrysanthis), April 2017

Chelsea Mafrica, *Continuous Query Processing in Hybrid Main Memory*, University of Pittsburgh, April 2015

Brian Dicks, *Simulation in the OCCAM Framework*, University of Pittsburgh, April 2014

José Baiocchi, *Dynamic Translation for MIPS Processor Embedded Systems*, University of Pittsburgh, August 2007

Perry Rajnovic, *Instruction Set Support for Fast Indirect Branch Translation*, University of Pittsburgh, August 2007

Brian Smyth, *A Graphical User Interface for Structural Testing in Eclipse*, University of Pittsburgh, August 2005

Jonathan Misurda, *Demand-Driven Structural Software Testing with Dynamic Instrumentation*, University of Pittsburgh, April 2005

Jim Clause, *Demand-Driven Def-Use Testing*, University of Pittsburgh, Ph.D. student at Georgia Tech, April 2005

Shukang Zhou, *Code Buffer Management in Distributed Virtual Execution Environments*, University of Pittsburgh, December 2004

Juliya Litman, *An Integrated Code Coverage System for Software Test and Analysis*, University of Pittsburgh, April 2004, Microsoft

Haidong Xia, *Trace-Level Value Reuse*, University of Pittsburgh (co-advised with Mary Lou Soffa), December 2003

Joe Slember, *Program Profiling Primitives*, University of Pittsburgh (co-advised with Mary Lou Soffa), Ph.D. student at Carnegie Mellon University, December 2003

Sridhar Daita, *An API for Program Instrumentation in a Software Dynamic Translator*, University of Pittsburgh, December 2003

Nancy Miller, *Understanding and Controlling Static Leakage of Processor Functional Units*, University of Pittsburgh, April 2003, Carnegie Mellon University

Naveen Kumar, *Software Dynamic Translation on the MIPS/Irix Platform*, University of Pittsburgh, Ph.D. student at University of Pittsburgh, May 2002

Madhuri Vemulapalli, *Branch Coverage Analysis for Java Programs*, University of Pittsburgh (co-advised with Mary Lou Soffa), May 2001

Hongliang Tang, *Adapting Processor Supply Voltage to Instruction-Level Parallelism*, University of Pittsburgh, December 2001

Undergraduate Projects

John Johnson, *Research Experience for Undergraduates*, University of Pittsburgh, Computer Science undergraduate, Spring 2015, Fall 2015, Spring 2016, Spring 2017

Seth Stayer, *Research Experience for Undergraduates*, University of Pittsburgh (co-advised with Panos Chrysanthis), Computer Science undergraduate, Spring 2017

Jordan McAleer, *Senior capstone experience*, University of Pittsburgh, Computer Science undergraduate, Spring 2015

Matthew Monaco, *Senior capstone experience*, University of Pittsburgh, Computer Science undergraduate, Summer/Fall 2011

Christian DeLozier, *Graphical User Interface for Memory Fault Monitoring*, University of Pittsburgh, Computer Science undergraduate, senior capstone experience and independent study Fall 2009 and Spring 2010 (graduated with a B.S., 2010)

Jason Mars, *Overhead Reduction for Indirect Branch Handling in Dynamically Translated Code*, University of Pittsburgh, Computer Science undergraduate, Research Experience for Undergraduates (graduated with a B.S., 2005)

Stacey Shogan, *Compact Binaries with Code Compression in a Software Dynamic Translator*, University of Pittsburgh, Computer Engineering senior project (graduated with a B.S., April 2004)

Lidiya Ber, *SoftTest: A Framework for Software Testing of Java Programs*, University of Pittsburgh, CS undergraduate, independent study (graduated April 2004, co-advised with Mary Lou Soffa)

Kevin Cammarata, *SoftTest: A Framework for Software Testing of Java Programs*, University of Pittsburgh, CS undergraduate, independent study (graduated April 2003, co-advised with Mary Lou Soffa)

Joe Atzinger, *Power Measurement*, University of Pittsburgh, Computer Engineering independent study, 2002

Craig Williford, *Cache Line Reordering for Reduced Power Consumption*, University of Pittsburgh, Computer Engineering senior project (graduated May 2002)

Josh Mehl, *Student Co-op Internship*, University of Pittsburgh, Computer Science Co-op, Summer 2002

Chris Scott, *Power Measurement*, University of Pittsburgh, Computer Engineering independent study, 2001

SOFTWARE SYSTEMS

In computing research, software and data systems embody novel contributions.

OCCAM: A software system to institute cloud-hosted and federated interactive repositories of data science workflows, computational models, data sets, results and other associated artifacts. It allows flexibly combining data, software and other tools into workflows to conduct transparent experiments, which can be collaboratively shared, modified and run online by groups of users. A demonstration of the system is available: `https://occam.cs.pitt.edu`. Originally conceived by Bruce Childers and Daniel Mosse' for a NSF-sponsored project on scientific reproducibility in computer systems research. David Wilkinson is the lead software developer.

StrataX: A software dynamic translator and executive to support embedded systems with tight constraints on memory and performance. Developed in collaboration with José Baiocchi (as part of his Ph.D. thesis) at the University of Pittsburgh. Jason Hiser and Jack Davidson at the University of Virginia also contributed. This system was focus of the tutorial at HiPEAC, Paris, France, January 2012.

HMMSim: A framework to simulate and analyze computer main memory organizations, including organizations that use DRAM and phase-change memory. Developed in collaboration with Alexandre Ferreira (as part of his Ph.D. thesis), Miao Zhou (Ph.D. student), Rami Melhem and Daniel Mosse'. This simulator was the focus of the tutorial at MICRO-44, Porte Alegre, Brazil, December 2011.

Strata: A retargetable and reconfigurable framework for software dynamic translation. Co-developed with numerous graduate and undergraduate students and faculty, including Jose Biaccohi, Naveen Kumar, Jason Mars, Ryan Moore and Stacey Shogan (students at University of Pittsburgh); Jason Hiser, Kevin Scott, and Dan Williams (students at University of Virginia); and, Jack Davidson and Mary Lou Soffa (faculty at University of Virginia). Targeted to ARM, MIPS, PowerPC, and PISA instruction sets and embedded system resource management at Pitt. This system was focus of tutorials MICRO-38 and CGO 2005.

TDB: A source-level debugger for dynamically translated programs. Implemented with the gdb debugger and the Strata software dynamic translator for the SPARC instruction set architecture. Developed in collaboration with Naveen Kumar at the University of Pittsburgh (as part of his Ph.D. thesis) and Mary Lou Soffa at the University of Virginia. This system was described and demonstrated at CGO 2005.

TUTORIALS ABOUT SOFTWARE SYSTEMS

These tutorials described software systems that we have built incorporating our research outcomes.

Bruce Childers, Luis Oliveira, David Wilkinson, "Using OCCAM with SST", *Tutorial given for the Advanced Computing Systems Research Program, Laboratory for the Physical Sciences*, Catonsville, Maryland, July 2018

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Bruce R. Childers and Jack W. Davidson, "An Infrastructure for Designing Custom Embedded Counterflow Pipelines", *Hawaii Int'l. Conf. on System Sciences*, pp. 1530–1605 (Vol. 8), Maui, Hawaii, January 2000

Bruce R. Childers and Jack W. Davidson, "Architectural Considerations for Application-Specific Counterflow Pipelines", *IEEE Conf. on Adv. Research in VLSI*, pp. 3–22, Atlanta, Georgia, March 1999

Michael A. Alexander, Mark W. Bailey, Bruce R. Childers, Jack W. Davidson and Sanjay Jinturkar, "Memory Bandwidth Optimizations for Wide-Bus Machines", *Hawaii Int'l. Conf. on System Sciences*, pp. 466–475 (Vol. 1), January 1993

Workshop

These workshops are competitively peer-reviewed and typically part of host conference.

David Wilkinson, Luis Oliveira, Daniel Mosse, Bruce Childers, "Long-Term Preservation of Repeatable Builds in Occam", *Containers and New Orchestration Paradigms for Isolated Environments in HPC*, Denver, Colorado, November 2019

David Wilkinson, Luis Oliveira, Daniel Mosse, Bruce Childers, "Software Provenance: Track the Reality Not the Virtual Machine", *First Int'l. Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS)*, Phoenix, Arizona, June 2018

Luis Oliveira, David Wilkinson, Daniel Mosse, Bruce Childers, "Supporting Long-term Reproducible Software Execution", *First Int'l. Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS)*, Phoenix, Arizona, June 2018

Santiago Bock, Bruce R. Childers, Rami Melhem and Daniel Mosse', "Characterizing the Overhead of Software-Managed Hybrid Main Memory", *7th Annual Non-volatile Memories Workshop*, San Diego, California (short version for presentation of MASCOTS 2015 paper), March 2016

Yu Du, Miao Zhou, Bruce R. Childers, Rami Melhem, and Daniel Mossé, "Bit Mapping for Balanced PCM Cell Programming", *5th Annual Non-volatile Memories Workshop*, San Diego, California (short version for presentation of ISCA 2013 paper), March 2014

Miao Zhou, Yu Du, Bruce R. Childers, Rami Melhem, and Daniel Mossé, "Writeback-Aware Bandwidth Partitioning for Multi-core Systems with PCM", *5th Annual Non-volatile Memories Workshop*, San Diego, California (short version for presentation of PACT 2013 paper), March 2014

Lei Jiang, Youtao Zhang, Bruce R. Childers and Jun Yang, "FPB: Fine-grained Power Budgeting to Improve Write Throughput of Multi-level Phase Change Memory", *4th Annual Non-volatile Memories Workshop*, San Diego, California (short version for presentation of MICRO 2012 paper), March 2013

Lei Jiang, Bo Zhao, Youtao Zhang, Jun Yang, and Bruce R. Childers, "Improving Write Operations in MLC Phase Change Memory", *3rd Annual Non-volatile Memories Workshop*, San Diego, California (short version for presentation of HPCA 2012 paper), March 2012

Miao Zhou, Santiago Bock, Alexandre Ferreira, Bruce R. Childers, Daniel Mossé, and Rami Melhem, "Writeback-aware Partitioning and Replacement for Last-Level Caches in Phase Change Main Memory Systems", *3rd Annual Non-volatile Memories Workshop*, San Diego, California (short version for presentation of HiPEAC 2012 paper), March 2012

Nevine AbouGhazaleh, Alexandre Ferreira, Cosmin Rusu, Ruibin Xu, Bruce R. Childers, Rami Melhem and Daniel Mossé, "Integrated CPU and L2 Cache Frequency/Voltage Scaling using Supervised Learning", *HiPEAC Workshop on Statistical and Machine Learning Approaches Applied to Architectures and Compilation*, Ghent, Belgium, January 2007

Naveen Kumar, Jonathan Misurda, Bruce R. Childers, and Mary Lou Soffa, "Instrumentation in Software Dynamic Translators for Self-Managed Systems", *ACM SIGSOFT Workshop on Self-Managed Systems*, pp. 90–94, Long Beach, California, October 2004

B. R. Childers, M. L. Soffa, J. Beaver, L. Ber, K. Cammarata, T. Kane, J. Litman, and J. Misurda, "SoftTest: A framework for software testing of Java programs", *Eclipse Technology Exchange Workshop*, Anaheim, California, October 27, 2003

Naveen Kumar and Bruce R. Childers, "Flexible Instrumentation for Software Dynamic Translation", *Workshop on Exploring the Trace Space for Dynamic Optimization Techniques*, San Francisco, California, June 2003

Nevine AbouGhazaleh, Daniel Mossé, Bruce R. Childers, and Rami Melhem, "Toward The Placement of Power Management Points in Real Time Applications", *Workshop on Compilers and Operating Systems for Low Power*, October 2001

Bruce R. Childers, Hongliang Tang and Rami Melhem, "Adapting Processor Supply Voltage to Instruction-Level Parallelism", *Koolchips Workshop*, Monterey, California, December 2000

Tarun Nakra, Bruce R. Childers, and Mary Lou Soffa, "Width-Sensitive Scheduling for Resource Constrained VLIW Processors", *ACM Workshop on Feedback-Directed and Dynamic Optimization*, Monterey, California, December 2000

Daniel Mossé, Hakan Aydin, Bruce R. Childers, and Rami Melhem, "Compiler-Assisted Dynamic Power-Aware Scheduling for Real-Time Applications", *Workshop on Compilers and Operating Systems for Low Power*, Philadelphia, Pennsylvania, October 2000

Bruce R. Childers and Tarun Nakra, "Reordering Memory Bus Transactions for Reduced Energy Consumption", *ACM SIGPLAN Workshop on Languages, Compilers, and Tools for Embedded Systems*, pp. 146–161, Vancouver, Canada, June 2000

Bruce R. Childers and Jack W. Davidson, "Automatic Architectural Design of Wide-Issue Counterflow Pipelines", *Workshop on Compiler and Architecture Support for Embedded Systems*, Washington, DC, 1999

Bruce R. Childers and Jack W. Davidson, "A Design Environment for Counterflow Pipeline Synthesis", *ACM SIGPLAN Workshop on Languages, Compilers, and Tools for Embedded Systems*, pp. 223–234 (Vol. 1474), Lecture Notes in Computer Science, Springer, June 1998

Bruce R. Childers, Jack W. Davidson, and Wm. Wulf, "Synthesis of Application-Specific Counterflow Pipelines", *Workshop on Interaction between Compilers and Computer Architecture*, San Jose, California, February 1996

Invited

David Wilkinson, Bruce Childers, Bernard Rous, Wayne Graves and Jack Davidson, "ACM Pilot Demo 1 - Collective Knowledge: Packing and Sharing, Version 3", *Video available from the ACM Digital Library*, 2017, DOI: https://dl.acm.org/citation.cfm?doid=3068854

David Wilkinson, Bruce Childers, Bernard Rous, Wayne Graves and Jack Davidson, "ACM Pilot Demo 2 - OCCAM: Sharing and Modification, Version 3", *Video available from the ACM Digital Library*, 2017, DOI: https://dl.acm.org/citation.cfm?doid=3076215

David Wilkinson, Bruce Childers, Bernard Rous, Wayne Graves and Jack Davidson, "ACM Pilot Demo 3 - Code Ocean: Code Modification and Derivation, Version 3", *Video available from the ACM Digital Library*, 2017, DOI: https://dl.acm.org/citation.cfm?doid=3076216

Bruce R. Childers, Grigori Fursin, Shriram Krishnamurthi, Andreas Zeller, "Artifact Evaluation for Publications, Dagstuhl Perspectives Workshop 15452", *Dagstuhl Reports Vol. 5, Num. 11, pp. 29-35*, 2015

Apala Guha, Jason D. Hiser, Naveen Kumar, Jing Yang, Min Zhao, Shukang Zhou, Bruce R. Childers, Jack W. Davidson, Kim Hazelwood, and Mary Lou Soffa, "Virtual Execution Environments: Support and Tools", *Workshop on Next Generation Software, Int'l. Symp. on Parallel and Distributed Systems*, pp. 1–6, Long Beach, California, March 2007

Jason D. Hiser, Naveen Kumar, Min Zhao, Shukang Zhao, Bruce R. Childers, Jack W. Davidson and Mary Lou Soffa, "Techniques and Tools for Dynamic Optimization", *NSF Next Generation Software Workshop*, Manhattan Beach, California, April 2006

Nevine AbouGhazaleh, Bruce R. Childers, Daniel Mossé, Rami Melhem, "Energy Conservation in Memory Hierarchies using Power-Aware Cached-DRAM", *Proceedings of the Schloss Dagstuhl Seminar on Power-Aware Computing Systems*, June 2005

Kevin Scott, Naveen Kumar, Bruce R. Childers, Jack W. Davidson, and Mary Lou Soffa, "Overhead reduction techniques for software dynamic translation", *NSF Next Generation Software Workshop, Int'l. Parallel and Distributed Processing Symp.*, Santa Fe, New Mexico, April 2004

Bruce R. Childers, Jack W. Davidson and Mary Lou Soffa, "Continuous Compilation: A New Approach to Aggressive and Adaptive Code Transformation", *NSF Next Generation Software Workshop, Int'l. Parallel and Distributed Processing Symp.*, Nice, France, April 2003

DEPARTMENT AND PROFESSIONAL SERVICE

Department

Member, Faculty Recruiting committee, Computer Science Department, 2014–2015

Member, Graduate Admission and Financial Aid committee, Computer Science Department, 2013-2018

Reviewer, Central Research Development Fund, Office of Research, 2011

Member, Hewlett Int'l. Grant Program Selection Committee, University Center for International Studies, 2007

Member, Faculty Recruiting Committee, 2006–2008

Committee member, Department Vision Task Force, 2006–2007

Member, The Space Committee, 2005–2006

Member, Promotions, Computer Engineering graduate program, 2004–2005

Member, Computer Science Department Annual Research Competition Committee, 2003–2004

Member, Graduate Admission and Financial Aid Committee, 2003–2005

Department Web Master, Outreach Committee, 2000–2003

Member, Computer Science Department Annual Research Competition Committee, 2001–2002

Editorship, Editorial Board and Conference Chair

Associate Editor, IEEE Transactions on Computers, 2019–present

Member of the Editorial Advisory Board, Journal of Computer Languages, Elsevier (formerly, Computer Languages, Systems and Structures Journal), 2010–present

Steering committee member, Int'l. Conf. on Managed Programming Languages and Runtimes (formerly Int'l. Conf. on Principles and Practices of Programming on the Java Platform: Virtual Machines, Languages, and Tools), 2014–2021

ACM Task Force on Data, Software and Replicability in Publication, 2015–2018

Guest Co-Editor, Computer Languages, Systems and Structures, Special Issue on Embedded Systems: Compiler-Architecture Interaction, Elsevier, March 2007

Guest Editorial Board, Int'l. Journal on Embedded Systems, Special Issue on Power-Aware Real-Time Computing, Elsevier, 2006

Guest Co-Editor, IEEE Transactions on Computers, Special Issue on Parallel Architectures and Compilation Techniques, August 2001

Track program co-chair, Computer Systems Architecture track, Int'l. Conf. on Computer Design, Orlando, Florida, 2018

Area program chair, ESS3 area, ACM Design Automation Conf., Austin, Texas, 2016

Area program chair, ESS3 area, ACM Design Automation Conf., San Francisco, California, 2015

Lead organizer, Schloss Dagstuhl Perspectives Workshop on Artifact Evaluation for Publications, Warden, Germany, 2015

Steering committee chairperson, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers and Tools for Embedded Systems, 2012–2015

Co-organizer, Supercomputing Bird of a Feather Defining Interfaces for Interoperable Simulation and Modeling Tools, New Orleans, Louisiana, 2014

Program chair, Int'l. Conf. on Principles and Practices of Programming on the Java Platform: Virtual Machines, Languages, and Tools, Cracow, Poland, 2014

Co-organizer, TRUST: Int'l. Workshop on Reproducible Research Methodologies and new Publication Models (held at PLDI'14), Edinburgh, Scotland, 2014

Co-organizer, REPRODUCE: Workshop on Reproducible Research Methodologies, Orlando, Florida, 2014

Co-organizer, Supercomputing Bird of a Feather Architecture and Systems Simulators, Denver, Colorado, 2013

Steering committee, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers and Tools for Embedded Systems, 2010-2012

Organizer, NSF Workshop on Community Supported Computer Architecture Design and Evaluation Framework, `http://csa.cs.pitt.edu`, Arlington, Virginia, 2012

Co-organizer, Supercomputing Bird of a Feather Architecture and Systems Simulators, Salt Lake City, Utah, 2012

Program chair, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers and Tools for Embedded Systems, Stockholm, Sweden, 2010

Steering committee, 14th Annual Workshop on the Interaction between Compilers and Computer Architecture, Pittsburgh, Pennsylvania, 2010

General chair, 12th Annual Workshop on the Interaction between Compilers and Computer Architecture, Salt Lake City, Utah, 2008

Lead organizer, Schloss Dagstuhl Seminar on Emerging Uses and Paradigms for Binary Translation, Warden, Germany, 2008

Program committee chair, 11th Annual Workshop on the Interaction between Compilers and Computer Architecture, Phoenix, Arizona, 2007

Co-organizer, Workshop on Constraint-Aware Embedded Systems, Cancun, Mexico, 2003

Co-organizer, Workshop on Exploring the Trace Space for Dynamic Optimization Techniques, San Francisco, California, 2003

Co-organizer, IEEE Workshop on Power Management for Real-Time and Embedded Systems, Taipei, Taiwan ROC, 2001

Organizing and Standing Committees

Organizing committee, DOE/DoD/NSF Workshop on Modeling and Simulation of Systems and Applications, 2015–present

ACM Digital Library Committee, 2019–2020

ACM Task Force on Data, Software and Replicability in Publication, 2015–2018

Co-organizer, Artifact Evaluation for Int'l. Symp. on Code Generation and Optimization, 2019

Co-organizer, Artifact Evaluation for Int'l. Conf. on Parallel Compilation and Architecture Techniques, 2017

ACM SIG Governing Board Replication Taskforce, 2016–2017

Co-organizer, Artifact Evaluation for Int'l. Symp. on Code Generation and Optimization, 2016

Co-organizer, Artifact Evaluation for ACM SIGPLAN Symp. on Principles and Practice of Parallel Programming, 2016

Co-organizer, Artifact Evaluation for Int'l. Symp. on Code Generation and Optimization, 2015

Co-organizer, Artifact Evaluation for ACM SIGPLAN Symp. on Principles and Practice of Parallel Programming, 2015

Tutorial Chair, ACM Symp. on Code Generation and Optimization, 2013

Student travel grants, Int'l. Conf. on Parallel Architectures and Compilation Techniques, Edinburgh, Scotland, 2013

Americas Publication Chair, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers and Tools for Embedded Systems, 2006

Student poster chair, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers, and Tools for Embedded Systems, 2005

Session chair, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers, and Tools for Embedded Systems, 2005

Session chair, ACM SIGPLAN and SIGBED Conf. on Languages, Compilers, and Tools for Embedded Systems, 2004

Publications chair, Int'l. Conf. on Parallel Architectures and Compilation Techniques, New Orleans, Louisiana, 2003

Local Arrangements Co-chair, Int'l. Conf. on Parallel Architectures and Compilation Techniques, Charlottesville, Virginia, 2002

Session chair, Int'l. Conf. on Parallel Architectures and Compilation Techniques, Charlottesville, Virginia, 2002

Co-organizer Work in Progress, Int'l. Conf. on High-Performance Computer Architecture, Boston, Massachusetts, 2002

Co-organizer Work in Progress, Int'l. Conf. on Parallel Architectures and Compilation Techniques, Barcelona, Spain, 2001

Program Web Master, Int'l. Conf. on Parallel Architectures and Compilation Techniques, Philadelphia, Pennsylvania, 2000

Program Committee

Int'l. Symp. on Memory Systems, 2023

ACM and SIGMICRO Int'l. Symp. on Code Generation and Optimization, 2023

Int'l. Symp. on Memory Systems, 2022

5th Int'l. Workshop on Practical Reproducible Evaluation of Systems, 2022

Int'l. Symp. on Memory Systems, 2021

Int'l. Conf. on Computer Design, 2021

ACM Int'l. Conf. on Supercomputing, 2021

ACM and SIGMICRO Int'l. Symp. on Code Generation and Optimization, 2021

4th Int'l. Workshop on Practical Reproducible Evaluation of Systems, 2021

ACM and SIGMICRO Int'l. Symp. on Code Generation and Optimization, 2020

IEEE Int'l. Parallel and Distributed Processing Symp., 2020

3rd Int'l. Workshop on Practical Reproducible Evaluation of Systems, 2020

Design Automation Conf., 2019

Int'l. Conf. on Supercomputing, 2019

Int'l. Conf. on Computer Design, 2019

Int'l. Symp. on Memory Systems, 2019

The 7th IEEE Non-Volatile Memory Systems and Applications Symp., 2018

The 6th IEEE Non-Volatile Memory Systems and Applications Symp., 2017

Int'l. Conf. on Supercomputing, 2017

Int'l. Symp. on Memory Systems, 2016

Int'l. Conf. on Supercomputing, 2016

Int'l. Conf. on Parallel Processing, 2016
Design Automation Conf., 2016
6th Annual Non-Volatile Memories Workshop, 2016
IEEE Int'l. Conf. on Parallel and Distributed Systems, 2015
IEEE Int'l. Symp. on Workload Characterization, 2015
Design Automation Conf., 2015
5th Annual Non-Volatile Memories Workshop, 2015
IEEE Int' l. Parallel and Distributed Processing Symp., 2015
5th Int'l. Workshop on Adaptive Self-tuning Computing Systems, 2015
Int'l. Conf. on the Principles and Practice of Programming in Java, 2015
Design Automation Conf., 2014
Int' l. Conf. on Compilers, Architecture and Synthesis for Embedded Systems, 2014
4th Int'l. Workshop on Adaptive Self-tuning Computing Systems, 2014
Int'l. Conf. on High Performance Embedded Architectures and Compilers, 2014
Int' l. Conf. on Compilers, Architecture and Synthesis for Embedded Systems, 2013
4th Annual Non-Volatile Memories Workshop, 2013
IEEE Int'l. Symp. on Performance Analysis of Systems and Software, 2013
Int'l. Conf. on High Performance Embedded Architectures and Compilers, 2013
Power, Energy and Temperature Aware Real-time Systems, 2012
Int' l. Conf. on Compilers, Architecture and Synthesis for Embedded Systems, 2012
Int'l. Conf. on the Principles and Practice of Programming in Java, 2012
IEEE Int'l. Symp. on Workload Characterization, 2011
Int' l. Conf. on Compilers, Architecture and Synthesis for Embedded Systems, 2011
Int'l. Conf. on the Principles and Practice of Programming in Java, 2011
IEEE Int' l. Parallel and Distributed Processing Symp., computer architecture track, 2010
Int' l. Conf. on Compilers, Architecture and Synthesis for Embedded Systems, 2010
Int'l. Conf. on the Principles and Practice of Programming in Java, 2010
Parallel Architectures and Compilation Techniques, 2009
ACM SIGPLAN and SIGBED Conf. on Languages, Compilers, and Tools for Embedded Systems, 2009
ACM Int'l. Conf. on the Principles and Practice of Programming in Java, 2009
IEEE Int'l. Conf. on Embedded Software and Systems, 2009
Testing: Academic and Industrial Conf. - Practice and Research Techniques, 2009
6th IEEE Int'l. Conf. on Embedded Software and Systems, 2009
ACM Symp. on Code Generation and Optimization, 2008
Virtual Machines and Intermediate Languages for Emerging Modularization Mechanisms, 2007
Workshop on Integrating System Environments into Software Testing, 2007
Int'l. Conf. on High Performance Embedded Architectures and Compilers, 2007
10th IEEE Workshop on the Interaction between Compilers and Computer Architecture, 2006
12th IEEE Real-Time and Embedded Technology and Applications Symp., 2006
Int'l. Conf. on Autonomic Computing, 2006
Second Int'l. Workshop on Power-Aware Real-Time Computing, 2005
2nd Workshop on High-Performance Fault-Adaptive Large-Scale Embedded Real-Time Systems, 2005
Int'l. Conf. on Autonomic Computing, 2005
11th IEEE Real-Time and Embedded Technology and Applications Symp., 2005

First Int'l. Workshop on Power-Aware Real-Time Computing, 2004

ACM SIGPLAN and SIGBED Conf. on Languages, Compilers, and Tools for Embedded Systems, 2004

Workshop on Compilers and Operating Systems for Low Power, 2003

IEEE Workshop on Large Scale Real-Time and Embedded Systems, 2002

Workshop on Compilers and Operating Systems for Low Power, 2001

Int'l. Conf. on Parallel Architectures and Compilation Techniques, 2000