

Dimitrios S. Nikolopoulos, Ph.D. ¹

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POSITION

Associate Professor of Computer Science. Virginia Tech.

ACTIVE RESEARCH INTERESTS

Software, hardware and tools for high-end computing systems:

- chip-scale multiprocessors
- computational accelerators
- programming models for ubiquitous parallelism
- scalable operating systems and hypervisors
- memory hierarchies for scalable systems
- embedded and low-power parallel processing

EDUCATION

Ph.D. in Computer Engineering. University of Patras. December 2000.
Diploma in Computer Engineering. University of Patras. July 1996.

ACADEMIC AND PROFESSIONAL EMPLOYMENT

Associate Professor. Department of Computer Science. Virginia Tech. August 2006 – present.

Assistant Professor. Department of Computer Science. College of William and Mary. August 2002 – August 2006.

Visiting Professor. Department d' Arquitectura de Computadors. Universitat Politecnica de Catalunya. May 2007, June 2008.

Visiting Assistant Professor². Department of Electrical and Computer Engineering. University of Illinois at Urbana-Champaign. January 2002 – August 2002.

Visiting Research Assistant Professor. Coordinated Science Laboratory. University of Illinois at Urbana-Champaign. January 2001 – August 2002.

Research Associate. European Center for Parallelism of Barcelona and Department d' Arquitectura de Computadors. Universitat Politecnica de Catalunya. September 1999 – December 1999.

Research Associate. High Performance Information Systems Laboratory. Department of Computer Engineering and Informatics. University of Patras. July 1994 – December 2000.

HONORS, PRIZES AND AWARDS

NSF CAREER Award. January 2004.

¹See <http://www.cs.vt.edu/~dsn> for up-to-date vitae.

²Full teaching responsibility.

DOE Early Career Principal Investigator Award. August 2005.

IBM Faculty Award. June 2007.

Best Paper Award. 12th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming. March 2007.

Best Paper Award. 1st International Workshop on OpenMP. June 2005.

Best Paper Award. 5th International Symposium on High Performance Computing. October 2003.

Best Paper Award. 2nd IEEE/ACM International Symposium on Cluster Computing and the Grid. May 2002.

Best Paper Award. 16th IEEE/ACM International Parallel and Distributed Processing Symposium – Computer Architecture Track. April 2002.

Best Paper Award. IEEE/ACM Supercomputing'2000: High Performance Networking and Computing Conference. November 2000.

Papers published at HPDC'2006, ICS'2001, ICS'1999 selected among **best papers** of the conferences and invited for journal publication.

First prize winner entry. 2006 Virginia Tech High End Computing Challenge.

Keynote Speaker. 7th Workshop on Parallel and Distributed Scientific and Engineering Computing.

Panelist. Key Challenges Presented by Next Generation Hardware Systems. 2007 Fall Creek Falls Conference.

Outstanding Academic Performance Award. Technical Chamber of Greece. 1996.

Outstanding Academic Performance Award. Greek Scholarship Foundation. 1992.

RESEARCH GRANTS

Coupled Models of Diffusion and Individual Behavior over Extremely Large Scale Social Networks. Sponsor: NSF OCI PetaApps Program. Funding amount: \$1,300,000. Dates of activity: 07/2009-07/2012. Responsibility: co-PI–25%.

VT-ASOS: Virtualization Technologies for Application-Specific Operating Systems on Many-Core HPC Systems. Sponsor: NSF Computer Systems Research Program, grant ID: CNS-0720673. Funding amount: \$300,000. Dates of activity: 07/2007 – 07/2010. Responsibility: PI–50% (Godmar Back co-PI–50%).

Thermal Conductors: Runtime Software Support for Proactive Heat Management in Advanced Execution Systems. Sponsor: NSF Computer Systems Research Program, grant ID: CNS-0720750. Funding amount: \$350,000. Dates of activity: 07/2007 – 07/2010. Responsibility: co-PI–50% (Kirk Cameron, PI–50%).

Models and Adaptive Runtime Systems for Accessible Parallel Programming on IBM Multi-Core Systems. IBM Faculty Award Program. Sponsor: IBM T. J. Watson Research Center, grant ID: VTF-874197. Funding amount: \$15,000. Dates of activity: 05/2007 – 05/2008. Responsibility: PI–100%.

MISER: A High-Performance, Power-Aware Cluster. Sponsor: NSF Computing Research Infrastructure Program, grant ID: CNS-0709025. Funding amount: \$500,000. Dates of activity: 07/2007 – 07/2008. Responsibility: co-PI–33% (Kirk Cameron PI–33%, Adrian Sandu co-PI–33%).

MELISSES: Liquid Services for Scalable Multithreaded and Multicore Execution on Emerging Supercomputers. Sponsor: DOE Early Career Principal Investigator Award Program, grant ID: DE-FG02-06ER25751, DE-FG02-05ER25689. Funding amount: \$299,907. Dates of activity: 08/2005 – 08/2008. Responsibility: PI–100%.

Acquisition of STEMS: A Laboratory for End-to-End Development of Software and Tools for Emerging Multigrain Supercomputers. Sponsor: NSF Major Research Instrumentation Program, grant ID: CNS-

0521381. Funding amount: \$228,134. Dates of activity: 05/2005 – 05/2008. Responsibility: PI–33% (Nikos Chrisochoides co-PI–33%, Bruce Lowekamp co-PI–33%).

A Unified Framework for Multilevel Parallelization on Deep Computing Systems. Sponsor: NSF Research Experiences for Undergraduates Program, grant ID: CCF-0531887. Funding amount: \$6,000. Dates of activity: 05/2005 – 08/2005. Responsibility: PI–100%.

A Unified Framework for Multilevel Parallelization on Deep Computing Systems. Sponsor: NSF CAREER Award Program, grant ID: CCF-0346867, CCF-0715051. Funding amount: \$419,835. Dates of activity: 01/2004 – 01/2009. Responsibility: PI–100%.

An Application-Driven Approach for Runtime Scheduling of Multigrain Adaptive Computations. Sponsor: NSF ITR Program, grant ID: ACI-0312980. Funding amount: \$450,000. Dates of activity: 09/2003 – 09/2006. Responsibility: co-PI–50% (Nikos Chrisochoides PI–50%).

PROFESSIONAL SERVICE

Proposal Reviewer

U.S. National Science Foundation. CISE Directorate. Panelist. October 2002, October 2003, May 2004, August 2004, December 2008.

Natural Science and Engineering Research Council of Canada. Reviewer. December 2007.

Maryland Industrial Partnerships Program. Reviewer. October 2007.

U.S. – Israel Binational Science Foundation. Reviewer February 2009.

Editorial Activities

Member of the editorial board. *Journal of Autonomic and Trusted Computing*. 2006–present.

Conference Service

Program Chair/Co-Chair

First Workshop on Parallel Programming on Accelerator-Based Clusters, to be held in conjunction with the 2009 IEEE Conference on Cluster Computing.

4th International Conference on Autonomic and Trusted Computing. Program Vice-Chair.

36th International Conference on Parallel Processing. Program Vice-Chair. Operating Systems and Resource Management Track.

Workshop and Tutorials Chair

21st ACM International Conference on Supercomputing. Tutorials and Workshops Chair.

Finance Chair

23rd ACM International Conference on Supercomputing

General Chair

2010 IEEE International Conference on Cluster Computing.

12th SIAM Conference on Parallel Processing for Scientific Computing. Minisymposium Organizer.

11th SIAM Conference on Parallel Processing for Scientific Computing. Minisymposium Organizer.

Session Chair

2008 International Conference on High-Performance Embedded Architectures and Compilers.

Program Committee Member (31 conferences)

International Conference on Architecture of Computing Systems (2010)
IEEE International Conference on Parallel Architectures and Compilation Techniques (2009)
Symposium on Application Accelerators in HPC (2009)
IEEE International Conference on Computational Science and Engineering (2009)
IEEE International Conference on Cloud Computing (2009)
IEEE International Conference on Networking, Architecture, and Storage (2009)
IEEE International Conference on Scalable Computing and Communications (2009)
Second Mini-symposium on Cell/B.E. Technologies (2009)
Workshop on Programming Models for Emerging Architectures (2009)
International Forum on Next-Generation Multicore/Manycore Technologies (2008)
IEEE International Conference on High-Performance Computing and Communications (2008, 2009)
Workshop on System-Level Virtualization for High-Performance Computing (2008, 2009)
High-Performance Power-Aware Computing Workshop (2008, 2009)
International Conference on Intelligent Pervasive Computing (2007)
ACM International Conference on Supercomputing (2007, 2009)
Balkan Conference on Informatics (2007)
International Conference on Autonomic and Trusted Computing (2006, 2008)
ACM SIGMETRICS (2006)
IEEE International Conference on Parallel and Distributed Systems (2004, 2006)
International Conference on Pervasive Services (2005)
International Conference on Parallel Processing (2003, 2004, 2008)
International Symposium on High-Performance Computing (2003)
International Conference on Computational Science (2001)

Reviewer for Scientific Journals and Conferences

Journals: *IEEE Transactions on Computers* (1999, 2005, 2007, 2008), *IEEE Transactions on Parallel and Distributed Systems* (2002, 2004, 2005, 2006, 2007, 2009), *Journal of Parallel and Distributed Computing* (2003, 2004, 2005, 2006, 2007), *Parallel Computing* (2008, 2009), *Computer Architecture Letters* (2008), *Journal of Systems and Software* (2003, 2004, 2005, 2006), *IBM Journal of Research and Development* (2008), *Simulation: Transactions of the International Society for Modeling and Simulation* (2003), *Computer Journal* (2004, 2005, 2006, 2007), *Software Practice and Experience* (2005), *IET Computers and Digital Techniques Journal* (2006, 2008), *IEEE Spectrum* (2006), *Transactions on High-Performance Embedded Architectures and Compilers* (2007), *Electronics and Telecommunications Research Institute Journal* (2007).

Conferences: *ICS* (1999, 2000, 2002, 2005, 2006), *PACT* (1999, 2004), *ICPP* (2002, 2003, 2004, 2009), *IPDPS* (2002, 2003, 2006, 2007), *SIGMETRICS* (2003, 2005, 2006), *SC* (2003, 2004, 2006, 2008), *HPCA* (2004, 2008), *QEST* (2004), *IASTED PDCN* (2005), *ISCC* (2005), *MICRO* (2005), *MASCOTS* (2005), *LCPC* (2005,2007), *CCGRID* (2006), *HiPC* (2006), *PPoPP* (2007), *ATC* (2007), *SAMOS* (2009), *EuroPar* (2009), *Cluster* (2009).

Professional Organizations:

ACM, 1995 – present. ACM-SIGARCH, 2000 – present.
IEEE Computer Society 1997 – present. IEEE TCPP, 1997 – present.

Technical Chamber of Greece. 1996 – present.

PEER REVIEWED PUBLICATIONS^{3, 4}

- 83. (J.16)** Nikos Chrisochoides, Christos D. Antonopoulos, Filip Blagojevic, Andrey Chernikov, and Dimitrios S. Nikolopoulos. A Multi-grain Delaunay Mesh Generation Method for Multicore SMT-based Architectures. *Journal of Parallel and Distributed Computing*, Vol. 69(7), pp. 589–600, July 2009. Elsevier.
- 82. (J.15)** Christos D. Antonopoulos, Filip Blagojevic, Andrey Chernikov, Dimitrios S. Nikolopoulos and Nikos Chrisochoides. Algorithm, Software, and Hardware Optimizations for Delaunay Mesh Generation on Simultaneous Multithreaded Architectures. *Journal of Parallel and Distributed Computing*, Vol. 69(7), pp. 601–612, July 2009. Elsevier.
- 81. (C.51)** Filip Blagojevic, Costin Iancu, Katherine A. Yelick, Dimitrios S. Nikolopoulos, Benjamin Rose* and Matthew Curtis-Maury. Scheduling Dynamic Parallelism on Accelerators. *Proc. of the 6th ACM Conference on Computing Frontiers*, pp. 161–170, Ischia, Italy, May 2009. Acceptance ratio: 23%.
- 80. (C.50)** Filip Blagojevic, Costin Iancu, Katherine A. Yelick, Dimitrios S. Nikolopoulos, Benjamin Rose*, and Matthew Curtis-Maury. Scheduling Dynamic Parallelism on the Cell BE. *Proc. of the 15th Meeting of the IBM HPC Systems Scientific Computing User Group (ScicomP)*, Barcelona, Spain, May 2009.
- 79. (J.14)** Muhammad Mustafa Rafique*, Benjamin Rose*, Ali R. Butt, and Dimitrios S. Nikolopoulos. Supporting MapReduce on Asymmetric Multi-core Clusters. *ACM Operating Systems Review*, Vol. 43(2), pp. 25–34, 2009.
- 78. (C.49)** Muhammad Mustafa Rafique*, Benjamin Rose*, Ali R. Butt, and Dimitrios S. Nikolopoulos. CellMR: A Framework for Supporting MapReduce on Asymmetric Cell-based Clusters In *Proceedings of the 23rd IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, Rome, Italy, May 2009. IEEE Computer Society. Acceptance ratio: 23%.
- 77. (C.48)** Scott Schneider*, Jae-seung Yeom*, Benjamin Rose*, John C. Linford*, Adrian Sandu and Dimitrios S. Nikolopoulos. A Comparison of Programming Models for Multiprocessors with Explicitly Managed Memory Hierarchies In *Proceedings of the 14th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP)*, Raleigh, NC, February 2009. Association for Computing Machinery. Acceptance ratio: 20%.
- 76. (C.47)** Matthew Curtis-Maury*, Ankur Shah*, Filip Blagojevic*, Dimitrios S. Nikolopoulos, Bronis R. de Supinski, and Martin Schulz. Prediction Models for Multi-dimensional Power-Performance Optimization on Many Cores. In *Proceedings of the 17th International Conference on Parallel Architectures and Compilation Techniques (PACT)*, pages 250–259, Toronto, Canada, September 2008. IEEE Computer Society. Acceptance ratio: 19%.
- 75. (J.13)** Matthew Curtis-Maury*, Filip Blagojevic*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. Prediction-Based Power-Performance Adaptation of Multithreaded Scientific Codes. *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 19(10):1396–1410, October 2008.

³In reverse chronological order, accepted on the basis of peer review of full paper. Journal publications labeled by **J**, conference and workshop publications labeled by **C**. Student co-authors in publications following first tenure-track faculty appointment are marked with an asterisk. In experimental computer systems research, premier conference papers are preferred to journal articles (see CRA best practices memo http://www.cra.org/reports/tenure_review.html). Premier conferences typically require more peer evaluations (4-5 rather than 2-3), are more selective and have shorter turnaround times. Representative acceptance rates included.

⁴Citation metrics: 531 non-self & non-co-author citations, h-index=12. Source: Google Scholar

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74. (C.46) Filip Blagojevic*, Matthew Curtis-Maury*, Jae-Seung Yeom*, Scott Schneider*, and Dimitrios S. Nikolopoulos. Scheduling Asymmetric Parallelism on a PlayStation3 Cluster. In *Proceedings of the 8th IEEE International Symposium on Cluster Computing and the Grid (CCGrid)*, pages 146–153, Lyon, France, May 2008. IEEE Computer Society. Acceptance ratio: 32%.
 73. (C.45) Muhammad Mustafa Rafique*, Ali R. Butt, and Dimitrios S. Nikolopoulos. DMA-based Prefetching for I/O-Intensive Workloads on the Cell Architecture. In *Proceedings of the 5th ACM International Conference on Computing Frontiers*, pages 23–32, Ischia, Italy, May 2008. Association for Computing Machinery. Acceptance ratio: 27%.
 72. (C.44) Ashwin Aji*, Filip Blagojevic*, Wu chun Feng, and Dimitrios S. Nikolopoulos. Cell-SWat: Modeling and Scheduling Wavefront Computations on the Cell B/E. In *Proceedings of the 5th ACM International Conference on Computing Frontiers*, pages 13–22, Ischia, Italy, May 2008. Association for Computing Machinery. Acceptance ratio: 27%.
 71. (W.15) Dimitrios S. Nikolopoulos, Godmar Back, Jyotirmaya Tripathi*, and Matthew Curtis-Maury*. VT-ASOS: Holistic System Software Customization for Many Cores. In *Proceedings of the Workshop on the NSF Next Generation Software Program, held in conjunction with the 22nd IEEE International Parallel and Distributed Processing Symposium*, pages 1–5, Miami, FL, April 2008. IEEE Computer Society.
 70. (C.43) Muhammad Mustafa Rafique*, Ali R. Butt, and Dimitrios S. Nikolopoulos. Supporting I/O-intensive Workloads on the Cell Architecture. In *Proceedings of the 6th USENIX Conference on File and Storage Systems (FAST)*, abstract, pages 1–2, San Jose, CA, February 2008. USENIX: The Advanced Computing Systems Association.
 69. (C.42) Filip Blagojevic*, Xizhou Feng, Kirk Cameron, and Dimitrios S. Nikolopoulos. Modeling Multi-grain Parallelism on Heterogeneous Multicore Processors: A Case Study of the Cell BE. In *Proceedings of the 3rd International Conference on High-Performance Embedded Architectures and Compilers (HiPEAC), Lecture Notes in Computer Science Volume 4917*, pages 38–52, Göteborg, Sweden, January 2008. Springer. Acceptance ratio: 29%.
 68. (J.12) Filip Blagojevic*, Dimitrios S. Nikolopoulos, Alexandros Stamatakis, Christos D. Antonopoulos, and Matthew Curtis-Maury*. Runtime Scheduling of Dynamic Parallelism on Accelerator-Based Multi-core Systems. *Parallel Computing*, 33(10-11):700–719, November 2007. Elsevier.
 67. (W.14) Matthew Curtis-Maury*, Karan Singh*, Sally A. McKee, Filip Blagojevic*, Dimitrios S. Nikolopoulos, Bronis R. de Supinski, and Martin Schulz. Identifying Energy-Efficient Concurrency Levels using Machine Learning. In *First International Workshop on Green Computing (Green-Com), Proceedings of the 2007 IEEE International Conference on Cluster Computing*, pages 488–495, Austin, TX, September 2007. IEEE Computer Society.
 66. (C.41) Andrey Chernikov*, Christos D. Antonopoulos, Nikos Chrisochoides, Scott Schneider*, and Dimitrios S. Nikolopoulos. Experience with Memory Allocators for Parallel Mesh Generation on Multi-core Architectures. In *Proceedings of the 10th ISGG Conference on Numerical Grid Generation*, pages 1–10, Heraklion, Greece, September 2007. International Society of Grid Generation.
 65. (W.13) Dimitrios S. Nikolopoulos and Kirk W. Cameron. Synthesizing Parallel Programming Models for Asymmetric Multi-Core Systems. In *Abstracts of the Eleventh Workshop on High Performance Embedded Computing*, pages 1–1, Lexington, MA, September 2007.
 64. (J.11) Alexandros Stamatakis, Filip Blagojevic*, Dimitrios S. Nikolopoulos, and Christos D. Antonopoulos. Exploring new Search Algorithms and Hardware for Phylogenetics: RAXML meets the IBM Cell. *Journal of VLSI Signal Processing*, 48(3):271–286, August 2007. Springer.
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63. (J.10) Richard Tran Mills, Chuan Yue*, Andreas Stathopoulos, and Dimitrios S. Nikolopoulos. Runtime and Programming Support for Memory Adaptation in Scientific Applications via Local Disk and Remote Memory. *Journal of Grid Computing*, 5(2):213–234, June 2007. Springer.
 62. (C.40) Filip Blagojevic*, Alexandros Stamatakis, Christos Antonopoulos, and Dimitrios S. Nikolopoulos. RAXML-CELL: Parallel Phylogenetic Tree Construction on the Cell Broadband Engine. In *Proceedings of the 21st IEEE/ACM International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–10, Long Beach, CA, March 2007. IEEE Computer Society. Acceptance ratio: 26%.
 61. (C.39) Filip Blagojevic*, Dimitrios S. Nikolopoulos, Alexandros Stamatakis, and Christos Antonopoulos. Dynamic Multigrain Parallelization on the Cell Broadband Engine. In *Proceedings of the 12th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP)*, pages 90–100, San Jose, CA, March 2007. Association for Computing Machinery. **Best Paper Award**. Acceptance ratio: 33%.
 60. (C.38) Matthew Curtis-Maury*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. A Comparison of Online and Offline Strategies for Program Adaptation. In *Proceedings of the 45th Annual ACM Southeast Conference*, pages 162–167, Winston-Salem, NC, March 2007. Association for Computing Machinery.
 59. (W.12) Godmar Back and Dimitrios S. Nikolopoulos. Application-Specific Customization on Many-Core Platforms: The VT-ASOS Framework. In *Proceedings of the Second Workshop on Software and Tools for Multi-Core Systems (STMCS), held in conjunction with the 2007 International Symposium on Code Generation and Optimization (CGO)*, pages 1–6, San Jose, CA, March 2007.
 58. (W.11) Matthew Curtis-Maury*, Dimitrios S. Nikolopoulos, and Christos D. Antonopoulos. Dynamic Program Stirring on Multiple Cores: How Hardware Performance Monitors Can Help Regulate Performance, Power, and Temperature Simultaneously. In *Proceedings of the Second Workshop on Functionality of Hardware Performance Monitors, held in conjunction with the 39th IEEE/ACM International Symposium on Microarchitecture*, pages 1–2, Orlando, FL, December 2006.
 57. (C.37) Matthew Curtis-Maury*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. PACMAN: A Performance Counters Manager for Intel Hyperthreaded Processors. In *Proceedings of the 3rd International Conference on the Quantitative Evaluation of Systems (QEST)*, pages 141–144, Riverside, CA, September 2006. IEEE Computer Society.
 56. (C.36) Matthew Curtis-Maury*, James Dzierwa*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. Online Power-Performance Adaptation of Multithreaded Programs using Event-Based Prediction. In *Proceedings of the 20th ACM International Conference on Supercomputing (ICS)*, pages 157–166, Queensland, Australia, June 2006. ACM Press. Acceptance ratio: 26%.
 55. (C.35) Chuan Yue*, Richard Tran Mills, Andreas Stathopoulos, and Dimitrios S. Nikolopoulos. Runtime Support for Memory Adaptation in Scientific Workloads via Local Disk and Remote Memory. In *Proceedings of the 15th IEEE International Symposium on High Performance Distributed Computing (HPDC)*, pages 183–194, Paris, France, June 2006. IEEE Computer Society. Nominated for **Best Paper Award** (one of five papers). Acceptance ratio: 15%.
 54. (C.34) Scott Schneider*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. Scalable Locality-Conscious Multithreaded Memory Allocation. In *Proceedings of the 2006 ACM SIGPLAN International Symposium on Memory Management (ISMM)*, pages 84–94, Ottawa, Canada, June 2006. Association for Computing Machinery.

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53. (W.10) Matthew Curtis-Maury*, James Dzierwa*, Christos D. Antonopoulos and Dimitrios S. Nikolopoulos. Online Strategies for High-Performance Power-Aware Thread Execution on Emerging Multiprocessors. In *Proceedings of the Second Workshop on High-Performance Power-Aware Computing (HP-PAC)*, pages 1–8, Rhodes, Greece, April 2006. IEEE Computer Society.
 52. (C.33) Xiaoning Ding*, Dimitrios S. Nikolopoulos, Song Jiang, and Xiaodong Zhang. MESA: Reducing Cache Conflicts by Integrating Static and Run-Time Methods. In *Proceedings of the 2006 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS)*, pages 189–198, Austin, TX, March 2006. IEEE Computer Society. Acceptance ratio: 29%.
 51. (B.1) Christos D. Antonopoulos, Dimitrios S. Nikolopoulos, and Theodore S. Papatheodorou. Scheduling Algorithms with Bus Bandwidth Considerations for SMPs. In *High Performance Computing: Paradigm and Infrastructure*, pages 313–332. Wiley, October 2005.
 50. (C.32) Scott Schneider*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. Factory: An Object-Oriented Parallel Programming Substrate for Deep Multiprocessors. In *Proceedings of the Seventh IEEE International Conference on High Performance Computing and Communications (HPCC), Lecture Notes in Computer Science Volume 3726*, pages 223–232, Sorrento, Italy, September 2005. Springer. Acceptance ratio: 28%.
 49. (C.31) Matthew Curtis-Maury*, Tanping Wang*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. Integrating Multiple Forms of Multithreaded Execution on SMT Processors: A Quantitative Study with Scientific Workloads. In *Proceedings of the Second International Conference on the Quantitative Evaluation of Systems (QEST)*, pages 199–209, Torino, Italy, September 2005. IEEE Computer Society. Acceptance ratio: 28%.
 48. (W.9) Barry Lawson, Chuan Yue*, Evgenia Smirni, and Dimitrios S. Nikolopoulos. Power-Aware Resource Allocation via Online Simulation with Multiple-Queue Backfilling. In *Proceedings of the 7th Workshop on Performability Modeling of Computer and Communication Systems (PM-CCS), held in conjunction with the Second International Conference on the Quantitative Evaluation of Systems (QEST)*, pages 1–7, Torino, Italy, September 2005.
 47. (C.30) Tanping Wang*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. smt-SPRINTS: Software Precomputation with Intelligent Streaming for Resource-Constrained SMTs. In *Proceedings of EuroPar'2005, Lecture Notes in Computer Science Volume 3648*, pages 710–719, Lisbon, Portugal, August 2005. Springer. Acceptance ratio: 31%.
 46. (C.29) Christos D. Antonopoulos, Xiaoning Ding*, Andrey Chernikov*, Filip Blagojevic*, Dimitrios S. Nikolopoulos, and Nikos Chrisochoides. Multigrain Parallel Delaunay Mesh Generation: Challenges and Opportunities for Multithreaded Architectures. In *Proceedings of the 19th ACM International Conference on Supercomputing (ICS)*, pages 367–376, Cambridge, MA, June 2005. Association for Computing Machinery. Acceptance ratio: 27%.
 45. (W.8) Matthew Curtis-Maury*, Xiaoning Ding*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. An Evaluation of OpenMP on Current and Emerging Multithreaded Processors. In *Proceedings of the First International Workshop on OpenMP (IWOMP), Lecture Notes in Computer Science Volume 4315*, pages 133–142, Eugene, OR, June 2005. Springer. **Best Paper Award**.
 44. (C.28) Robert L. McGregor*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. Scheduling Algorithms for Effective Thread Pairing on Hybrid Multiprocessors. In *Proceedings of the 19th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–10, Denver, CO, April 2005. IEEE Computer Society. Acceptance ratio: 33%.
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43. (W.7) Christos D. Antonopoulos and Dimitrios S. Nikolopoulos. Using Hardware Counters for Continuous Online Optimization: Lessons and Challenges. In *Proceedings of the First Workshop on Hardware Performance Monitor Design and Functionality, held in conjunction with the 11th International Symposium on High Performance Computer Architecture*, pages 1–5, San Francisco, CA, February 2005.
42. (C.27) Christos D. Antonopoulos, Dimitrios S. Nikolopoulos, and Theodore S. Papatheodorou. Realistic Workload Scheduling Policies for Taming the Memory Bandwidth Bottleneck of SMPs. In *Proceedings of the 11th International Conference on High Performance Computing (HiPC), Lecture Notes in Computer Science Volume 3296*, pages 286–296, Bangalore, India, December 2004. Springer. Acceptance ratio: 22%.
41. (W.6) Tanping Wang*, Filip Blagojevic*, and Dimitrios S. Nikolopoulos. Runtime Support for Integrating Precomputation and Thread-Level Parallelism on Simultaneous Multithreaded Processors. In *Proceedings of the 7th ACM SIGPLAN Workshop on Languages, Compilers and Runtime Support for Scalable Systems (LCR), volume 81 of ACM International Conference Proceedings Series*, pages 1–12, Houston, TX, October 2004. Association for Computing Machinery.
40. (C.26) Richard Tran Mills*, Andreas Stathopoulos, and Dimitrios S. Nikolopoulos. Adapting to Memory Pressure from within Scientific Applications on Multiprogrammed COWs. In *Proceedings of the 18th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–10, Santa Fe, NM, April 2004. IEEE Computer Society. Acceptance ratio: 31%.
39. (J.9) Dimitrios S. Nikolopoulos. Dynamic Tiling for Effective Use of Shared Caches on Multithreaded Processors. *International Journal of High Performance Computing and Networking*, 2(1):22–35, 2004. Inderscience Publishers.
38. (C.25) Dimitrios S. Nikolopoulos. Code and Data Transformations for Improving Shared Cache Performance on SMT Processors. In *Proceedings of the 5th International Symposium on High Performance Computing (ISHPC), Lecture Notes in Computer Science Volume 2858*, pages 54–69, Tokyo-Odaiba, Japan, October 2003. Springer. **Best Paper Award**. Acceptance ratio: 24%.
37. (C.24) Christos D. Antonopoulos, Dimitrios S. Nikolopoulos, and Theodore S. Papatheodorou. Scheduling Algorithms with Bus Bandwidth Considerations for SMPs. In *Proceedings of the 32nd International Conference on Parallel Processing (ICPP)*, pages 547–554, Kaohsiung, Taiwan, October 2003. IEEE Computer Society.
36. (J.8) Dimitrios S. Nikolopoulos. Quantifying Contention and Balancing Memory Load on Hardware DSM Multiprocessors. *Journal of Parallel and Distributed Computing (JPDC)*, 63(9):866–886, September 2003. Elsevier.
35. (J.7) Dimitrios S. Nikolopoulos, Ernest Artiaga, Eduard Ayguadé, and Jesús Labarta. Scaling Non-Regular Shared-Memory Codes by Reusing Custom Loop Schedules. *Scientific Programming*, 11(2):143–158, August 2003. IOS Press.
34. (J.6) Dimitrios S. Nikolopoulos and Constantine D. Polychronopoulos. Adaptive Scheduling under Memory Constraints on Non-Dedicated Computational Farms. *Future Generation Computer Systems*, 19(4):505–519, May 2003. Elsevier.
33. (C.23) Dimitrios S. Nikolopoulos. Malleable Memory Mapping: User-Level Control of Memory Bounds for Effective Program Adaptation. In *Proceedings of the 17th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–8, Nice, France, April 2003. IEEE Computer Society. Acceptance ratio: 29%.

32. (J.5) Dimitrios S. Nikolopoulos, Eduard Ayguadé, and Constantine D. Polychronopoulos. Runtime vs. Manual Data Distribution for Architecture-Agnostic Shared-Memory Programming Models. *International Journal of Parallel Programming (IJPP)*, 30(4):225–254, August 2002. Springer Verlag.
31. (J.4) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. Scheduler-Activated Dynamic Page Migration for Multiprogrammed DSM Multiprocessors. *Journal of Parallel and Distributed Computing (JPDC)*, 62(6):1069–1103, June 2002. Elsevier.
30. (C.22) Dimitrios S. Nikolopoulos and Constantine D. Polychronopoulos. Adaptive Scheduling under Memory Pressure on Multiprogrammed Clusters. In *Proceedings of the Second IEEE/ACM International Symposium on Cluster Computer and the Grid (CCGrid)*, pages 22–29, Berlin, Germany, May 2002. IEEE Computer Society. **Best Paper Award**. Acceptance ratio: 25%.
29. (C.21) Dimitrios S. Nikolopoulos. Quantifying Contention and Resolving Remote Memory Access Contention on Hardware DSM Multiprocessors. In *Proceedings of the 16th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–10, Fort Lauderdale, FL, April 2002. IEEE Computer Society. **Best Paper Award**.
28. (C.20) Dimitrios S. Nikolopoulos and Constantine D. Polychronopoulos. Adaptive Scheduling under Memory Pressure on Multiprogrammed SMPs. In *Proceedings of the 16th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–6, Fort Lauderdale, FL, April 2002. IEEE Computer Society.
27. (W.5) Walden Ko, Mark Yankelevsky, Dimitrios S. Nikolopoulos, and Constantine D. Polychronopoulos. Effective Cross-Platform Multilevel Parallelization via Dynamic Adaptive Execution. In *Proceedings of the 7th International Workshop on High-Level Programming Models and Supportive Environments (HIPS), held in conjunction with the 16th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 1–8, Fort Lauderdale, FL, April 2002. IEEE Computer Society.
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25. (C.19) Dimitrios S. Nikolopoulos, Eduard Ayguadé, and Constantine D. Polychronopoulos. Scaling Irregular Parallel Codes with Minimal Programming Effort. In *Proceedings of Supercomputing'2001: High Performance Computing and Networking Conference (SC)*, pages 1–11, Denver, CO, November 2001. Association for Computing Machinery. Nominated for **Best Paper Award**. Acceptance ratio: 25%.
24. (C.18) Mark Yankelevsky, Walden Ko, Dimitrios S. Nikolopoulos, and Constantine D. Polychronopoulos. Using Machine Descriptors to Select Parallelization Models and Strategies on Hierarchical Systems. In *Proceedings of Supercomputing'2001: High Performance Networking and Computing Conference (SC)*, poster session, pages 1–1, Denver, CO, November 2001. Association for Computing Machinery. Acceptance ratio: 24%.
23. (C.17) Christos D. Antonopoulos, Dimitrios S. Nikolopoulos, and Theodore S. Papatheodorou. Informing Algorithms for Efficient Scheduling of Synchronizing Threads on Multiprogrammed SMPs. In *Proceedings of the 2001 International Conference on Parallel Processing (ICPP)*, pages 123–130, Valencia, Spain, September 2001. IEEE Computer Society.
22. (W.4) Dimitrios S. Nikolopoulos and Eduard Ayguadé. A Study of Transparent Implicit Data Distribution Mechanisms for OpenMP using the SPEC Benchmarks. In *Proceedings of the Second*

International Workshop on OpenMP Applications and Tools (WOMPAT), Lecture Notes in Computer Science Volume 2104, pages 115–129, West Lafayette, IN, July 2001. Springer.

21. (C.16) Dimitrios S. Nikolopoulos, Eduard Ayguadé, Jesús Labarta, Theodore S. Papatheodorou, and Constantine D. Polychronopoulos. The Trade-Off Between Implicit and Explicit Data Distribution in Shared-Memory Programming Paradigms. In *Proceedings of the 15th ACM International Conference on Supercomputing (ICS)*, pages 23–37, Sorrento, Italy, June 2001. Association for Computing Machinery.
20. (J.2) Dimitrios S. Nikolopoulos and Theodore S. Papatheodorou. The Architectural and Operating System Implications on the Performance of Synchronization on ccNUMA Multiprocessors. *International Journal of Parallel Programming (IJPP)*, 29(3):249–282, June 2001. Springer Verlag.
19. (C.15) David Craig, Fabian Breg, Steven Carroll, Dimitrios S. Nikolopoulos, and Constantine D. Polychronopoulos. Improving Java Server Performance with Interruptlets. In *Proceedings of the First International Conference on Computational Science (ICCS), Lecture Notes in Computer Science Volume 2073*, pages 223–232, San Francisco, CA, May 2001. Springer.
18. (J.1) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. A Transparent Runtime Data Distribution Engine for OpenMP. *Scientific Programming*, 8(3):143–162, December 2000. IOS Press.
17. (C.14) Ioannis E. Venetis, Dimitrios S. Nikolopoulos, and Theodore S. Papatheodorou. A Transparent Operating System Infrastructure for Embedding Adaptability to Thread-Based Programming Models. In *Proceedings of EuroPar’2001, Lecture Notes in Computer Science Volume 2150*, pages 504–513, Manchester, UK, August 2001. Springer. Acceptance ratio: 33%.
16. (C.13) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. Is Data Distribution Necessary in OpenMP? In *Proceedings of Supercomputing’2000: High Performance Computing and Networking Conference (SC)*, pages 1–14, Dallas, TX, November 2000. IEEE Computer Society. **Best Technical Paper Award**. Acceptance ratio: 35%.
15. (C.12) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. Leveraging Transparent Data Distribution in OpenMP via User-Level Dynamic Page Migration. In *Proceedings of the 3rd International Symposium on High Performance Computing (ISHPC), Lecture Notes in Computer Science Volume 1940*, pages 415–427, October 2000. Springer. Acceptance ratio: 28%.
14. (C.11) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. User-Level Dynamic Page Migration for Multiprogrammed Shared-Memory Multiprocessors. In *Proceedings of the 29th International Conference on Parallel Processing (ICPP)*, pages 95–103, Toronto, Canada, August 2000. IEEE Computer Society.
13. (C.10) Christos D. Antonopoulos, Ioannis E. Venetis, Dimitrios S. Nikolopoulos, and Theodore S. Papatheodorou. Efficient Dynamic Parallelism with OpenMP on Linux-Based SMPs. In *Proceedings of the 6th International Conference on Parallel and Distributed Processing Techniques and Applications*, pages 2507–2514, Las Vegas, NV, July 2000. CSREA Press.
12. (C.9) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. A Case for User-Level Page Migration. In *Proceedings of the 14th ACM International Conference on Supercomputing (ICS)*, pages 119–130, Santa Fe, NM, May 2000. Association for Computing Machinery. Acceptance ratio: 27%.

11. (C.8) Dimitrios S. Nikolopoulos and Theodore S. Papatheodorou. Fast Synchronization on Scalable Cache-Coherent Multiprocessors using Hybrid Primitives. In *Proceedings of the 14th International Parallel and Distributed Processing Symposium (IPDPS)*, pages 711–719, Cancun, Mexico, May 2000. IEEE Computer Society.
10. (W.3) Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Constantine D. Polychronopoulos, Jesús Labarta, and Eduard Ayguadé. UPLib: A Runtime System for Tuning the Memory Performance of OpenMP Programs on Distributed Shared Memory Multiprocessors. In *Proceedings of the 5th ACM SIGPLAN Workshop on Languages, Compilers and Runtime Systems for Scalable Computers (LCR), Lecture Notes in Computer Science Volume 1915*, pages 85–99, Rochester, NY, May 2000. Springer.
9. (W.2) Xavier Martorell, Julita Corbalan, Dimitrios S. Nikolopoulos, Nacho Navarro, Eleftherios D. Polychronopoulos, and Theodore S. Papatheodorou. A Tool to Schedule Parallel Applications on Multiprocessors: The NANOS CPU Manager. In *Proceedings of the 6th International Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP), Lecture Notes in Computer Science Volume 1911*, pages 87–112, Cancun, Mexico, May 2000. Springer.
8. (C.7) Dimitrios S. Nikolopoulos, Christos D. Antonopoulos, Ioannis E. Venetis, Panagiotis E. Hadji-doukas, Eleftherios D. Polychronopoulos, and Theodore S. Papatheodorou. Achieving Multiprogramming Scalability of Parallel Programs on Intel SMP Platforms: Nanothreading in the Linux Kernel. In *Parallel Computing Fundamentals and Applications: Proceedings of the International Conference ParCo'99*, pages 623–630, Delft, The Netherlands, August 1999. Imperial College Press.
7. (C.6) Eleftherios D. Polychronopoulos, Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Xavier Martorell, Nacho Navarro, and Jesús Labarta. An Efficient Kernel-Level Scheduling Methodology for Multiprogrammed Shared Memory Multiprocessors. In *Proceedings of the 12th International Conference on Parallel and Distributed Computing Systems (PDCS)*, pages 148–155, Fort Lauderdale, FL, August 1999. International Society for Computers and their Applications.
6. (C.5) Dimitrios S. Nikolopoulos and Theodore S. Papatheodorou. System Software Support for Reducing Memory Latency on Distributed Shared-Memory Multiprocessors. In *Proceedings of the 7th Hellenic Conference on Informatics*, volume 4, pages 61–68, Ioannina, Greece, August 1999.
5. (C.4) Dimitrios S. Nikolopoulos, Eleftherios D. Polychronopoulos, and Theodore S. Papatheodorou. Fine-Grain and Multiprogramming-Conscious Nanothreading with the Solaris Operating System. In *Proceedings of the 5th International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA)*, pages 1797–1803, Las Vegas, NV, July 1999. CSREA Press.
4. (C.3) Dimitrios S. Nikolopoulos and Theodore S. Papatheodorou. A Quantitative Evaluation of Synchronization Algorithms and Disciplines on ccNUMA Systems: The Case of the SGI Origin2000. In *Proceedings of the 13th ACM International Conference on Supercomputing (ICS)*, pages 319–328, Rhodes, Greece, June 1999. Association for Computing Machinery. Acceptance ratio: 32%.
3. (C.2) Dimitrios S. Nikolopoulos, Eleftherios D. Polychronopoulos, and Theodore S. Papatheodorou. Enhancing the Performance of Autoscheduling with Locality-Based Partitioning on Distributed Shared Memory Multiprocessors. In *Proceedings of EuroPar'98, Lecture Notes in Computer Science Volume 1470*, pages 491–501, Southampton, UK, August 1998. Springer. Acceptance ratio: 29%.
2. (C.1) Eleftherios D. Polychronopoulos, Xavier Martorell, Dimitrios S. Nikolopoulos, Theodore S. Papatheodorou, Jesús Labarta, and Nacho Navarro. Kernel-Level Scheduling for the Nano-Threads Programming Model. In *Proceedings of the 12th ACM International Conference on Supercomputing (ICS)*, pages 337–344, Melbourne, Australia, July 1998. Association for Computing Machinery.

1. **(W.1)** Dimitrios S. Nikolopoulos, Eleftherios D. Polychronopoulos, and Theodore S. Papatheodorou. Efficient Runtime Thread Management for the Nano-Threads Programming Model. In *Proceedings of the Second International Workshop on Runtime Systems for Parallel Programming (RTSPP), Lecture Notes in Computer Science, Volume 1388*, pages 183–194, Orlando, FL, April 1998. Springer Verlag. Acceptance ratio: 33%.

Other publications:

11. **(INVITED ABSTRACT)** Dimitrios S. Nikolopoulos. Unified Scheduling of Polymorphic Parallelism on the Cell Processor. *Abstracts of the 2008 SIAM Conference on Parallel Processing for Scientific Computing – Mini-workshop on the Cell Processor*, pages 1–1, Atlanta, GA, March 12–14 2008. Society for Industrial and Applied Mathematics.
10. **(INVITED ABSTRACT)** Dimitrios S. Nikolopoulos. System Software Challenges and Opportunities on Asymmetric Multi-core Processors. In *Proceedings of the 2007 Fall Creek Falls Conference – Panel on Key Challenges Presented by Next Generation Hardware Systems*, pages 1–1, Nashville, TN, September 24–26 2007. Oak Ridge National Laboratory.
9. **(TECHNICAL REPORT)** Filip Blagojevic and Dimitrios S. Nikolopoulos. Exploring Programming Models and Optimizations for the Cell Broadband Engine using RAXML. *Abstracts of the 2006 Virginia Tech High-End Computing Challenge Entries*, pages 1–14, First Prize Winner, September 2006.
8. **(INVITED ABSTRACT)** Dimitrios S. Nikolopoulos. Facing the Challenges of Multicore Processor Technologies using Autonomic System Software. In *Proceedings of the 7th Workshop on Parallel and Distributed Scientific and Engineering Computing with Applications, held in conjunction with the 20th IEEE/ACM International Parallel and Distributed Processing Symposium*, Rhodes, Greece, April 2006. IEEE Computer Society. Keynote talk.
7. **(INVITED ARTICLE)** Matthew Curtis-Maury*, James Dzierwa*, Christos D. Antonopoulos, and Dimitrios S. Nikolopoulos. On the Design of Online Predictors for Autonomic Power-Performance Adaptation of Multithreaded Programs. *Journal of Autonomic and Trusted Computing*. American Scientific Publishers. April 2006.
6. **(INVITED ABSTRACT)** Christos D. Antonopoulos, Nikos Chrisochoides, and Dimitrios S. Nikolopoulos. 2-D Parallel Constrained Delaunay Mesh Generation: A Multigrain Approach on Deep Multiprocessors. In *Workshop in Programming Models for HPCS Ultra-Scale Applications, held in conjunction with the 19th ACM International Conference on Supercomputing*, pages 1–1, Cambridge, MA, June 2005. Invited abstract.
5. **(INVITED ABSTRACT)** Christos D. Antonopoulos, Nikos Chrisochoides, and Dimitrios S. Nikolopoulos. Exploiting Simultaneous Multithreading for Parallel Mesh Generation: A Multigrain Approach on Deep Multiprocessors. In *Poster abstracts of the 13th International Meshing Roundtable*, pages 1–1, Williamsburg, VA, September 2004.
4. **(INVITED ABSTRACT)** Dimitrios S. Nikolopoulos and Andreas Stathopoulos. Application Awareness in Adaptation Middleware: Balancing Transparency with Performance and Adaptivity. In *Abstracts of the 2004 SIAM Conference on Parallel Processing for Scientific Computing, Miniworkshop on Adaptivity in Parallel and Distributed Computing through Interoperating Systems and Applications*, pages 1–1, San Francisco, CA, February 2004.
3. **(INVITED ABSTRACT)** Dimitrios S. Nikolopoulos. Programming Environments for Multigrain Parallelization. In *Abstracts of the 2003 EURESCO Conference on Advanced Environments and Tools for High-Performance Computing*, pages 1–1, Albufeira, Portugal, June 2003. European Science Foundation.

2. (PHD THESIS) Dimitrios S. Nikolopoulos. System Software Support for Reducing Memory Latency on CC-NUMA Architectures. Ph.D. Dissertation. Department of Computer Engineering and Informatics. University of Patras. December 2000.

1. (DIPLOMA THESIS) Dimitrios S. Nikolopoulos and Ioannis Tsolakis. A Multithreaded System for Dynamic Load Distribution on Networks of Workstations. Diploma of Engineering Thesis. Department of Computer Engineering and Informatics. University of Patras. July 1996.

INVITED SCHOLARLY TALKS (30)

ORNL (11/07), LLNL (10/07), ORNL Falls Creek Fall Conference (09/07), IBM T. J. Watson (12/06, 05/03), CS-NCSU (09/06), ECE-TUC (06/07, 07/06), PDSEC-7 (04/06), CSE-ASU (03/06), ECE-UBC (03/06), CS-UCR (03/06, 05/04), CS-VT (02/06), ICS-FORTH (12/05, 06/04), CEID-U. Patras (12/05, 01/01), ECE-NTUA (06/04), ECE-Northwestern U. (03/04), CS-AUEB (06/03), DAC-UPC (07/03, 11/99), CS-TAMU (03/03), ICS-UCI (04/02), CS-W&M(03/02, 10/01), CS-UH (11/01), CSRD-UIUC (05/00), HiPEAC Systems Week (06/08).

CONFERENCE TALKS (30)

PACT (2008), CCGrid (2002, 2008), SIAM PP (2004, 2008), HiPEAC (2008), SC (2000, 2001, 2007), HPEC (2007), STMCS (2007), HP-PAC (2006), Euro-Par (1998, 2005), LCR (2000, 2004), ISHPC (2003), IPDPS (2000, 2002, 2002, 2003), WOMPAT (2001), ICS (1999, 2000, 2001, 2001), ICPP (2000), ParCo (1999), Hellenic CI (1999), RTSPP (1998).

COURSES TAUGHT

UPC-DAC-16088: Multi-core Systems Programming and Optimization. Department d' Arquitectura de Computadors. Universitat Politecnica de Catalunya. Ph.D. Seminar Course (2 weeks) taught by invitation.

Spring 2007, Spring 2008, Spring 2009

CS2504: Introduction to Computer Organization. Department of Computer Science. Virginia Tech.

Fall'2007, Spring'2007

CS5234: Advanced Parallel Computation. Department of Computer Science. Virginia Tech

Fall'2007

CS4234: Parallel Computation. Department of Computer Science. Virginia Tech.

Fall'2006

CSCI654: Advanced Computer Architecture. Department of Computer Science. College of William and Mary.

Spring'2003, Spring'2004, Spring'2005, Spring'2006

CSCI444: Principles of Operating Systems. Department of Computer Science. College of William and Mary.

Fall'2002, Fall'2003, Fall'2004, Fall'2005

CSCI544: Principles of Operating Systems (cross-listed graduate course). Department of Computer Science. College of William and Mary.

Fall'2002, Fall'2003, Fall'2004, Fall'2005

CSCI690: Graduate Reading Course on Multithreaded Architectures and Software. Department of Computer Science. College of William and Mary.

Spring'2004

ECE291: Computer Engineering II. Department of Electrical and Computer Engineering. University of Illinois, Urbana-Champaign.

Spring'2002

ADVISEES – GRADUATED

Matthew Curtis-Maury. Ph.D. Virginia Tech. May 2008.

Outstanding Ph.D. Dissertation Award.

Placement: NetApp.

Filip Blagojevic. Ph.D. Virginia Tech, graduating December 2008.

Placement: Lawrence Berkeley National Laboratory.

Finalist. IBM Ph.D. Fellowship.

Christos Antonopoulos. Postdoctoral researcher, College of William and Mary. 2004–2006.

Placement: Tenure-track Faculty, University of Thessaly.

Benjamin Rose. M.Sc. Virginia Tech, May 2009.

Placement: Cisco.

Ankur Shah. M.Sc. Virginia Tech, May 2008.

Placement: Cisco.

Jyotirmaya Tripathi. M.Sc. Virginia Tech, May 2008.

Placement: Microsoft.

Beran Nova Bryant. M.Sc. Virginia Tech, May 2008.

Placement: Lockheed Martin.

Harshil Shah. M.Sc. Virginia Tech, May 2008.

Placement: Cisco.

Scott Schneider. M.Sc. College of William and Mary. August 2005.

Placement: Virginia Tech Ph.D. Candidate

Robert L. McGregor. M.Sc. College of William and Mary. December 2004.

Placement: Defense Security Agency.

James Dzierwa. Undergraduate. Highest Honors. College of William and Mary. June 2006.

Placement: Unknown.

Evan S. McCreedy. Undergraduate. High Honors. College of William and Mary. May 2004.

Placement: National Institutes of Health.

CURRENT RESEARCH ADVISEES – PRIMARY RESEARCH ADVISOR

Scott Schneider. Virginia Tech. Ph.D. candidate, expected May 2010.

Jae-seung Yeom. Virginia Tech. Ph.D. student, in progress.

Aleksandr Khasymski. Virginia Tech. Ph.D. student, in progress.

Dong Li. Virginia Tech. Ph.D. student, co-advised, in progress.

GRADUATED RESEARCH ADVISEES – CO-ADVISED

Richard T. Mills. Ph.D. College of William and Mary. May 2004.

Chuan Yue. M.Sc. College of William and Mary. May 2006.

ACADEMIC SERVICE

CS Department Course Coordinator, CS 2506 (VT). 2008–2009.

CS Department Junior Faculty Mentor (VT). 2008–2009.

CS Department Ph.D. Qualifying Exam Committee (VT). 2007–2009.

CS Department Computing Resources Committee (VT). 2006 – 2008.

Design of Graduate course in Programming Massively Parallel Hardware (VT). 2007–2008.

Design of Graduate course in Advanced Parallel Computation (VT). 2006–2007.

CS Graduate Admissions Committee (W&M). 2005 – 2006.

CS Graduate Curriculum Committee. (W&M) 2005 – 2006.

CS Faculty Recruiting Committee (W&M). 2002 – 2003, 2003 – 2004, 2004 – 2005.

CS Equipment Committee (W&M). 2003 – 2004, 2004 – 2005.

Freshman Academic Advisor (W&M). 2004 – 2005, 2005 – 2006.

Ph.D. Examination Committee Member:

Song Huang, John Linford, Matthew Tolentino, Kumaresh Singh, Guanying Wang, Hung-ching Chang, Muhamad Mustafa Rafique (VT), Qi Zhang, Andrey Chernikov, Richard Tran Mills, Songqing Chen, Kevin Barker, Zhichun Zhu (W&M).

Master's Examination Committee Member:

Paul Eller, Ashwin Aji, Ganesh Narayanaswamy (VT), Ling Liu, Andriy Kot, Andriy Fedorov, Brian Lamprecht (W&M).

Honors Examination Committee Member

William Cline, Samuel Small (W&M).