

Kostadin Damevski

Vita
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Personal Information

Name: Kostadin Damevski
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Education

Ph.D.	2006	University of Utah	Computer Science
M.S.	2002	University of Utah	Computer Science
B.S.	2000	University of Central Oklahoma	Computer Science

Professional Employment

Date	Position	Institution
2008–present	Assistant Professor	Virginia State University
2006–2008	Postdoctoral Research Associate	SCI Institute, University of Utah
2007–2008	Adjunct Professor	Virginia Commonwealth University
2002–2006	Research Assistant	University of Utah
2001–2002	Teaching Assistant	University of Utah
2000–2001	Software Engineer	Grub.org

Publications — Book chapters

- Steven G. Parker, Kostadin Damevski, Ayla Khan, Ashwin Swaminathan, Chris R. Johnson. The SCIJump Framework for Parallel and Distributed Scientific Computing. In *Advanced Computational Infrastructures for Parallel/Distributed Adaptive Applications*. Edited by Manish Parashar, Xiaolin Li, and Sumir Chandra, Wiley Press, 2007
- Steven G. Parker, Keming Zhang, Kostadin Damevski, and Chris R. Johnson. Integrating Component-Based Scientific Computing Software. In *Parallel Processing For Scientific Computing*. SIAM book series in Software, Environments, and Tools 2005. Edited by Michael A. Heroux, Padma Raghavan, and Horst D. Simon

Publications — Refereed Journals

- K. Damevski, "Offline Contract Enforcement for High Performance Computing", *Concurrency and Computation: Practice and Experience*, volume 23, issue 13, pp: 1465-1473. 2010.
- F. Bertrand, R. Bramley, D. Bernholdt, J. Kohl, J. Larson, A. Sussman and K. Damevski, "Data Redistribution and Remote Method Invocation for Coupled Components", *Journal of Parallel and Distributed Computing*, volume 66, issue 7, pp: 931-946, 2006.
- David E. Bernholdt, Benjamin A. Allan, Robert Armstrong, Felipe Bertrand, Kenneth Chiu, Tamara L. Dahlgren, Kostadin Damevski, Wael R. Elwasif, Thomas G. W. Epperly, Madhusudhan Govindaraju, Daniel S. Katz, James A. Kohl, M anoj Krishnan, Gary Kumfert, J. Walter Larson, Sophia Lefantzi, Michael J. Lewis, Allen D. Malony, Lois C. McInnes, Jarek Nieplocha, Boyana Norris, Steven G. Parker, Jaideep Ray, Sameer Shende, Therisa L. Windus, and Shujia Zhou, "A Component Architecture for High Performance Scientific Computing" *International Journal of High-Performance Computing Applications* (2004) ACTS Collection special issue.
- K. Damevski and S. Parker. "M-by-N Data Redistribution through Parallel Remote Method Invocation". *International Journal of High-Performance Computing Applications* 2005.

Publications — Refereed Conferences

- J. Wang, K. Damevski, H. Chen. "Model Refinement and Data Filtering in High-Tunnel Greenhouse Sensor Network," *Proceedings of 7th ACM International Symposium on QoS and Security for Wireless and Mobile Networks (Q2SWINET 2011)*, Miami Beach, Florida, 2011.
- K. Damevski, M. Muralimanohar. "A Refactoring Tool to Extract GPU Kernels". *Proceedings of the 2011 Workshop on Refactoring Tools (WRT 2011)*, in conjunction with the *International Conference on Software Engineering (ICSE 2011)*, Honolulu, Hawaii, 2011.

- J. Wang, H. Chen, K. Damevski, J. Liu, “Mobility-tolerant, Efficient Multicast in Mobile Cloud Applications,” *Proceedings of the 4th International ICST Conference on Mobile Wireless Middleware, Operating Systems, and Applications (MOBILWARE 2011)*, London, UK, 2011.
- K. Damevski, T. Dahlgren. “Parallel Object Contracts for High Performance Computing”. *Proceedings of the 2011 Workshop on High-Level Programming Models and Supportive Environments (HIPS 2011)*, in conjunction with the *IEEE International Parallel and Distributed Processing Symposium (IPDPS 2011)*, Anchorage, Alaska, 2011.
- K. Damevski. “Expressing Measurement Units in Interfaces for Scientific Component Software”. *Proceedings of the 2009 Workshop on Component-Based High Performance Computing, in conjunction with the 22nd Supercomputing Conference (SC09)*, Portland, Oregon, 2009.
- K. Damevski, H. Chen, T. Dahlgren. “Reducing Component Contract Overhead by Offloading Enforcement”. *Proceedings of the 2009 Workshop on Component-Based High Performance Computing, in conjunction with the 22nd Supercomputing Conference (SC09)*, Portland, Oregon, 2009.
- K. Damevski, H. Chen. “Automated Provenance Collection for CCA Component Assemblies”. *Proceedings of the 9th International Conference on Computational Science (ICCS 2009) (main track)*, Baton Rouge, Louisiana, 2009.
- S. Yau, K. Damevski, V. Karamcheti, S. Parker, D. Zorin. “Application-Aware Management of Parallel Simulation Collections”. *Proceedings of the 14th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPOPP 2009)*, Raleigh, North Carolina, 2009.
- K. Damevski, A. Khan, S. Parker. “Scientific Workflows and Components: Together at Last”. *Proceedings of 3rd Workshop on Component-Based High Performance Computing (CBHPC 2008)*, Karlsruhe, Germany, 2008.
- S. Yau, K. Damevski, D. Zorin, V. Karamcheti, S. Parker. “Result Reuse in Design Space Exploration: A Study in System Support for Interactive Parallel Computing”. *Proceedings of the 22 International Parallel and Distributed Processing Symposium (IPDPS 2008)*, Miami, Florida, 2008.
- K. Damevski, K. Zhang, S. Parker. “Practical Parallel Remote Method Invocation for the Babel Compiler”. *Proceedings of the joint HPC-GECO/CompFrame Workshop*, Montreal, Canada, 2007
- K. Damevski, A. Swaminathan, S. Parker. “Highly Scalable Distributed Component Framework for Scientific Computing”. *Proceedings of the 3rd International Conference on High Performance Computing and Communication (HPCC 2007)*, Houston, Texas, 2007.
- K. Damevski, A. Swaminathan, S. Parker. “CCALoop: Scalable Design of a Distributed Component Framework”. *Proceedings of the 16th IEEE International Symposium on High Performance Distributed Computing (HPDC 2007) (poster/short paper)*, Monterey, California, 2007.
- K. Damevski. “Generating Bridges Between Heterogeneous Component Models”. *Proceedings of the 7th Generative Programming and Component Engineering (GPCE) Young Researchers Workshop*, Tallinn, Estonia, 2005.
- F. Bertrand, R. Bramley, K. Damevski, D. Bernholdt, J. Kohl, J. Larson and A. Sussman ”Data Redistribution and Remote Method Invocation in Parallel Component Architectures”. *Proceedings of the 19th International Parallel and Distributed Processing Symposium (IPDPS 2005) (Best Paper Award)*, Denver, Colorado, 2005.

- K. Damevski and S. Parker. "Imprecise Exceptions in Distributed Parallel Components". *Proceedings of the 9th European Conference on Parallel Computing (EURO-PAR 2004)*, Piza, Italy, 2004.
- K. Zhang, K. Damevski, V. Venkatachalapathy, and S. Parker. "SCIRun2: A CCA Framework for High Performance Computing". *Proceedings of the 9th International Workshop on High-Level Parallel Programming Models and Supportive Environments (HIPS 2004)*, 2004.
- K. Damevski, and S. Parker. "Parallel Remote Method Invocation and M-by-N Data Redistribution". *Proceedings of the 4th Los Alamos Computer Science Institute Symposium (LACSI 2003)*, Santa Fe, New Mexico, 2003.

Thesis

- K. Damevski. "Component Model Interoperability for Scientific Computing" , *PhD Thesis*, 2006.
- K. Damevski. "Parallel Component Interaction using an IDL Compiler" , *MS Thesis*, 2002.

Courses Taught

- *Introduction to Computer Science* – Fall 2008,2009,2010, Spring 2009,2010
- *Parallel Algorithms* – Fall 2010
- *Software Engineering (graduate & undergraduate)* – Fall 2009,2010
- *Object Oriented Programming* – Spring 2009,2010
- *Embedded Systems (graduate)* – Spring 2009,2010
- *Introduction to Programming in C++* – Fall 2009
- *Introduction to Problem Solving using Computers (using Alice)* – Fall 2008
- *Operating Systems* – Spring 2008
- *Introduction to Programming for Chemical and Life Science Engineers* – Fall 2007

Research Grants and Contracts

Current Support

Supporting Agency: Department of Energy
Total Costs: \$322,936 (VSU Share)
Title of Project: Center for Technology for Advanced Scientific Component Software (TASCS)
Duration: 2 years
Start Date: 05/15/2010
Principal Investigators: Kostadin Damevski (Insitutional PI) (with 4 other universities, 5 national labs, and a private company)

Supporting Agency: National Science Foundation
Total Costs: \$230,662
Title of Project: MRI: Acquisition of Sensing and Computing Equipment for Smart High-Tunnel Greenhouses
Duration: 3 years
Start Date: 09/15/2010
Principal Investigators: Hui Chen (PI), Kostadin Damevski (Co-PI), Ju Wang (Co-PI), Ahmad Rafie (Co-PI), and Christopher Mullins (Co-PI)

Supporting Agency: National Science Foundation
Total Costs: \$16,000
Title of Project: Research Experience for Undergraduates (REU) Supplement to NSF MRI Grant
Start Date: 03/01/2011
Principal Investigators: Hui Chen (PI), Kostadin Damevski (Co-PI), Ju Wang (Co-PI), Ahmad Rafie (Co-PI), and Christopher Mullins (Co-PI))

Supporting Agency: National Science Foundation
Total Costs: \$199,231
Title of Project: TUES: Longevity-Oriented Curriculum Enhancement for Cyber-Physical Systems
Duration: 2 years
Start Date: 10/01/2011
Principal Investigators: Hui Chen (PI), Kostadin Damevski (Co-PI), Ju Wang (Co-PI), David Walter (Co-PI))

Past Support

Supporting Agency: NASA / Thurgood Marshall College Fund
Total Costs: \$130,000
Title of Project: Developing High-Level Programming Abstractions for Hybrid Hardware Platforms
Dates: 09/01/2010 – 09/01/2011
Principal Investigators: Kostadin Damevski (PI)

Student Research, Current Advising

- Alkema Woods, M.S. Thesis Advisor
- Madhan Muralimanohar, M.S. Thesis Advisor
- Nevil Kabrawala, Undergraduate Research Advisor
- Christine Saywack, Undergraduate Research Advisor

Masters Students, Thesis Advisor and Committee Member

- Ayodele Ogunnika, “An Evaluation of Gaussian Models for Data Acquisition in Sensor Networks”. M.S. Thesis Advisor, Summer 2010
- Shawn McEnhimer, M.S. Thesis Committee Member, Fall 2010
- Byron Lowens, M.S. Thesis Committee Member, Fall 2010
- Hassan Abraham, M.S. Thesis Committee Member, Spring 2010
- Ashwin Swaminathan, “CCALoop - A Scalable Distributed Component Framework for Scientific Computing”. MS Thesis Mentor, University of Utah, School of Computing, 2007

Undergraduate Students, Research Advisor

- Keyouna Pierce, “Evaluation of the Collection Tree Protocol in a High Tunnel Greenhouse”, Senior Project Advisor
- Vanja Milosevski, “Classifying Spam E-mail Using Social Networks”. Senior Capstone Project Advisor, University of London, Computing and Information Systems (External Programme). 2006

Professional Service

- Workshop on Component-Based High Performance Computing
 - Technical Program Committee Member (2009, 2010)
- DOE Proposal Reviewer (2010)
- NSF Panelist (2010)
- Common Component Architecture (CCA) Forum
 - Voting Member (since 2002)
 - Event Service Specification Committee Chair
- *goHazel.com* External Advisory Board Member (2009–2010)