

# Kostadin Damevski

Curriculum Vitae  
*as of June 28<sup>th</sup>, 2024*

## Personal Information

Address: Department of Computer Science  
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Virginia Commonwealth University  
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Phone: (804) 827-3607

## Education

Ph.D.	2007	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
July 2020 to <i>present</i>	Associate Professor	Virginia Commonwealth University
August 2015 to July 2020	Assistant Professor	Virginia Commonwealth University
May 2015 to August 2015 & May 2014 to August 2014	Research Consultant	ABB Corporate Research
August 2013 to May 2015	Associate Professor	Virginia State University
August 2008 to May 2013	Assistant Professor	Virginia State University

## **Publications**

Graduate student<sup>Ⓔ</sup> and undergraduate student<sup>Ⓐ</sup> authors in Damevski's Lab are noted.

## **Refereed Journals (24)**

- [1] Y. Zhao, K. Damevski, H. Chen. "A Systematic Survey of Just-In-Time Software Defect Prediction" *ACM Computing Surveys*. 2022
- [2] M. M. Imran<sup>Ⓔ</sup>, K. Damevski. "Using Clarification Questions to Improve Software Developers' Web Search". *Journal of Information and Software Technology*. 2022
- [3] V. Sheth<sup>Ⓔ</sup>, K. Damevski. "Grouping Related Stack Overflow Comments for Software Developer Recommendation". *Journal of Automated Software Engineering*. 2022.
- [4] P. Chatterjee, K. Damevski, N. A. Kraft, and L. Pollock. "Automatically Identifying the Quality of Developer Chats for Post Hoc Use". *ACM Transactions on Software Engineering and Methodology*. 2021.
- [5] A. Ciborowska<sup>Ⓔ</sup>, K. Damevski. "Recognizing Developer Activity Based on Joint Modeling of Code and Command Interactions". *IEEE Access*. 2020.
- [6] M.A. Nishi<sup>Ⓔ</sup>, K. Damevski. "Automatically Identifying Valid API Versions for Software Development Tutorials on the Web". *Journal of Software: Evolution and Process*. 2019.
- [7] H. Chen, K. Damevski, D. Shepherd, N. A. Kraft. "Modeling Hierarchical Usage Context for Software Exceptions based on Interaction Data". *Journal of Automated Software Engineering*. 2019.
- [8] H. Chen, J. Coogle<sup>Ⓔ</sup>, K. Damevski. "Modeling Stack Overflow Tags and Topics as a Hierarchy of Concepts". *Journal of Systems and Software*. 2019.
- [9] C.S. Corley, K. Damevski, N.A. Kraft. "Changeset-Based Topic Modeling of Software Repositories". *IEEE Transactions on Software Engineering*. 2018.
- [10] M.A. Nishi<sup>Ⓔ</sup>, K. Damevski. "Scalable Code Clone Detection and Search based on Adaptive Prefix Filtering". *Journal of Systems and Software*. vol.137, pp.130-142, 2017.
- [11] K. Damevski, H. Chen, D.C. Shepherd, N.A. Kraft, L. Pollock. "Predicting Future Developer Behavior in the IDE Using Topic Models". *IEEE Transactions on Software Engineering*. 2017.
- [12] J. Schneider, A. Bernstein, J. vom Brocke, K. Damevski, D. C. Shepherd. "Detecting Plagiarism based on the Creation Process". *IEEE Transactions on Learning Technologies*. 2017.
- [13] S.M. Naim, K. Damevski, M.S. Hossain. "Reconstructing and Evolving Software Architectures Using a Coordinated Clustering Framework". *Journal of Automated Software Engineering*. vol.24(3), pp.543-572, 2017.
- [14] K. Damevski, D. Shepherd, J. Schneider, L. Pollock. "Mining Sequences of Developer Interactions in Visual Studio for Usage Smells", *IEEE Transactions on Software Engineering*. vol.43(4), pp.359-371, 2016.

- [15] X. Ge, D. Shepherd, K. Damevski, E. Murphy-Hill. “Design and Evaluation of a Multi-Recommendation System for Local Code Search”. *Journal of Visual Languages and Computing*. 2016.
- [16] J-S. Lee, K. Damevski, H. Chen. “Exploring Computer Science Students’ Learning of Sensor-Driven Mobile App Design: A Case Study”. *International Journal of Teaching and Case Studies*. vol.7(3-4), pp.187-206, 2016.
- [17] K. Damevski, D. Shepherd, L. Pollock. “A Field Study of How Developers Locate Features in Source Code”, *Journal of Empirical Software Engineering*, vol.21, pp.724-747, 2015.
- [18] J. Wang, K. Damevski, H. Chen. “Sensor Data Modeling and Validating for Wireless Soil Sensor Networks”, *Journal of Computers and Electronics in Agriculture*, vol.112, pp.75-82, 2015.
- [19] B. Altayeb<sup>®</sup>, K. Damevski. “Utilizing and Enhancing Software Modeling Environments to Teach Mobile Application Design”, *Journal of Computing Sciences in Colleges*, vol.28(6), pp.57-64, 2013.
- [20] H. Chen, K. Damevski, W. Edwards<sup>®</sup>. “Infusing Cyber-Physical Systems Concepts into Introductory Computer Science Courses”, *Journal of Computing Sciences in Colleges*, vol.28(6), pp.26-34, 2013.
- [21] K. Damevski, “Offline Contract Enforcement for High Performance Computing”, *Journal of Concurrency and Computation: Practice and Experience*, vol.23(13), pp.1465-1473, 2010.
- [22] 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*, vol.66(7), pp.931-946, 2006.
- [23] Benjamin A. Allan, Robert Armstrong, David E. Bernholdt, Felipe Bertrand, Kenneth Chiu, Tamara L. Dahlgren, Kostadin Damevski, Wael R. Elwasif, Thomas G. W. Epperly, Madhusudhan Govindaraju, Daniel S. Katz, James A. Kohl, Manoj 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*, vol.20(2), pp.163-202, 2006.
- [24] K. Damevski and S. Parker. “M-by-N Data Redistribution through Parallel Remote Method Invocation”. *International Journal of High-Performance Computing Applications*, vol.19(4), pp.389-399, 2005.

## **Refereed Conferences (39)**

- [1] M. Frazier, K. Damevski, L. Pollock. “Customizing ChatGPT to Help Computer Science Principles”. Proceedings of the 29th Annual ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE), Milan, Italy, 2024.
- [2] R. Ehsani, M. M. Imran<sup>®</sup>, R. Zita<sup>®</sup>, K. Damevski, P. Chatterjee. “Incivility in Open Source Projects: A Comprehensive Annotated Dataset of Locked GitHub Issue Threads”. Proceedings of the 18th International Conference on Mining Software Repositories (MSR’24), Data Showcase Track, Lisbon, Portugal, 2024.

- [3] M.M. Imran<sup>®</sup>, P. Chatterjee, K. Damevski. “Shedding Light on Software Engineering-specific Metaphors and Idioms”. The 46th International Conference on Software Engineering (ICSE 2024), Technical Track, Lisbon, Portugal, 2024.
- [4] M.M. Imran<sup>®</sup>, P. Chatterjee, K. Damevski. “Uncovering the Causes of Emotions in Software Developer Communication Using Zero-shot LLMs”. The 46th International Conference on Software Engineering (ICSE 2024), Technical Track, Lisbon, Portugal, 2024.
- [5] A. Sajadi, K. Damevski, P. Chatterjee. “Towards Understanding Emotions in Informal Developer Interactions: A Gitter Chat Study”. The 31st ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE 2023) - New Ideas and Emerging Results Track, San Francisco, USA, 2023.
- [6] A. Sajadi, K. Damevski, P. Chatterjee. “Interpersonal trust in OSS: Exploring dimensions of trust in GitHub pull requests”. The 45th International Conference on Software Engineering (ICSE 2023) - New Ideas and Emerging Results Track, Melbourne, Australia, 2023.
- [7] M.M. Imran<sup>®</sup>, Y. Jain, P. Chatterjee, K. Damevski. “Data Augmentation for Improving Emotion Recognition in Software Engineering Communication”. The 37th IEEE/ACM International Conference on Automated Software Engineering (ASE 2022), Technical Track, Ann Arbor, MI, 2022.
- [8] A. Ciborowska<sup>®</sup>, K. Damevski. “Fast Changeset-based Bug Localization Using BERT”. The 44th International Conference on Software Engineering (ICSE 2022) - Technical Track, Pittsburgh, 2022.
- [9] M. Frazier, S. Kumar, K. Damevski, L. Pollock. “Investigating User Perceptions of Conversational Agents for Software-related Exploratory Web Search”. The 44th International Conference on Software Engineering (ICSE 2022) - New Ideas and Emerging Results Track, Pittsburgh, 2022.
- [10] M. M. Imran<sup>®</sup>, A. Ciborowska<sup>®</sup>, K. Damevski. “Automatically Selecting Follow-up Questions for Deficient Bug Reports”. Proceedings of the 18th International Conference on Mining Software Repositories (MSR’21), Technical Track, Madrid, Spain, 2021.
- [11] P. Chatterjee, K. Damevski, L. Pollock. “Automatic Extraction of Opinion-based Q&A from Online Developer Chats”. The 43rd International Conference on Software Engineering (ICSE 2021) - Technical Track, Madrid, Spain, 2021.
- [12] P. Chatterjee, K. Damevski, N. A. Kraft, L. Pollock. “Software-related Slack Chats with Disentangled Conversations”. In Proceedings of the 17th International Conference on Mining Software Repositories (MSR’20) - Data Showcase Track, Seoul, Korea, 2020.
- [13] H. Chen, A. Ciborowska<sup>®</sup>, K. Damevski. “Using Automated Prompts for Student Reflection on Computer Security Concepts”. In Proceedings of the 24th Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE’19), Aberdeen, UK, 2019.
- [14] P. Chatterjee, K. Damevski, L. Pollock, V. Augustine, N.A. Kraft. “Exploratory Study of Slack Q&A Chats as a Mining Source for Software Engineering Tools”. In Proceedings of the 16th International Conference on Mining Software Repositories (MSR’19), Montreal, Canada, 2019.

- [15] M.A. Nishi<sup>Ⓔ</sup>, A. Ciborowska<sup>Ⓔ</sup>, K. Damevski. “Characterizing Duplicate Code Snippets between Stack Overflow and Tutorials”. In Proceedings of the 16th International Conference on Mining Software Repositories (MSR’19) - Mining Challenge, Montreal, Canada, 2019.
- [16] A. Ciborowska<sup>Ⓔ</sup>, N. Kraft, K. Damevski. “Detecting and Characterizing Developer Behavior Following Opportunistic Reuse of Code Snippets from the Web”. In Proceedings of the 15th International Conference on Mining Software Repositories (MSR’18), Gothenburg, Sweden, 2018. **MSR’18 Mining Challenge Winner**
- [17] C. Greco<sup>Ⓔ</sup>, T. Haden<sup>Ⓔ</sup>, K. Damevski. “StackInTheFlow: Behavior-Driven Recommendation System for Stack Overflow Posts”. In Proceedings of the International Conference on Software Engineering (ICSE 2018) – Tool Demo Track, Gothenburg, Sweden, 2018.
- [18] Z. Coker, K. Damevski, C. Le Goues, N. A. Kraft, D. Shepherd, L. Pollock. “Behavior Metrics for Prioritizing Investigations of Exceptions”. In Proceedings of the IEEE International Conference on Software Maintenance and Evolution (ICSME 2017) – Industry Track, Shanghai, China, 2017.
- [19] P. Chatterjee, M.A. Nishi<sup>Ⓔ</sup>, K. Damevski, V. Augustine, L. Pollock, N. Kraft. “What Information about Code Snippets Is Available in Different Software-Related Documents? An Exploratory Study”. In Proceedings of the 24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2017) – Early Research Achievements (ERA) Track, Klagenfurt, Austria, 2017.
- [20] K. Damevski, H. Chen, D. Shepherd, L. Pollock. “Interactive Exploration of Developer Interaction Traces using a Hidden Markov Model”. *Proceedings of the 13th International Conference on Mining Software Repositories (MSR’16)*, Austin, Texas, 2016.
- [21] C. Corley, K. Damevski, N. Kraft. “Exploring the Use of Deep Learning for Feature Location”. *Proceedings of the International Conference on Software Maintenance and Evolution (ICSME 2015) – Early Research Achievements (ERA) Track*, Bremen, Germany, 2015.
- [22] D. Shepherd, K. Damevski, L. Pollock, “How and When to Transfer Software Engineering Research via Extensions”. *Proceedings of the International Conference on Software Engineering (ICSE 2015) – Software Engineering in Practice (SEIP) Track*, Florence, Italy, 2015.
- [23] K. Damevski, D. Shepherd, L. Pollock. “Scaling up Evaluation of Code Search Tools through Developer Usage Metrics”. *Proceedings of the 22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2015)*, Montreal, Canada, 2015.
- [24] X. Ge, D. Shepherd, K. Damevski, E. Murphy-Hill. “How Developers Use Multi-Recommendation System in Local Code Search”. *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2014)*, Melbourne, Australia, 2014. (Acceptance Rate = 30%). **Best Long Paper Award**
- [25] H. Chen, K. Damevski. “A Teaching Model for Development of Sensor-Driven Mobile Applications”. *Proceedings of the ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE 2014)*, Uppsala, Sweden, 2014.
- [26] K. Damevski, D. Shepherd, L. Pollock. “A Case Study of Paired Interleaving for Evaluating Code Search Techniques”. *Proceedings of the IEEE Conference on Software Maintenance and Reengineering and Working Conference on Reverse Engineering (CSMR-WCRE 2014)*, Antwerp, Belgium. 2014.

- [27] X. Ge, D. Shepherd, K. Damevski, E. Murphy-Hill. "How the Sando Search Tool Recommends Queries", *Proceedings of the IEEE Conference on Software Maintenance and Reengineering - Working Conference on Reverse Engineering (CSMR-WCRE 2014), Tool Demonstration Track*, Antwerp, Belgium, 2014.
- [28] K. Damevski, B. Altayeb<sup>Ⓔ</sup>, H. Chen, D. Walter. "Teaching Cyber-Physical Systems to Computer Scientists via Modeling and Verification". *Proceeding of 44th Annual SIGCSE Technical Symposium on Computer Science Education (SIGCSE 2013)*, Denver, CO. 2013.
- [29] D. Shepherd, K. Damevski, B. Ropski, T. Fritz. "Sando: An Extensible Local Code Search Framework". *Proceedings of the 20th International Symposium on the Foundations of Software Engineering (FSE 2012), Tool Demonstration Track*, Raleigh, North Carolina, 2012.
- [30] 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.
- [31] 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.
- [32] 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.
- [33] 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.
- [34] 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.
- [35] 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.
- [36] 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) (Short Paper)*, Monterey, California, 2007.
- [37] 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)*, Denver, Colorado, 2005. **Best Paper Award**
- [38] 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.
- [39] 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.

## **Refereed Workshops (10)**

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- [1] K. Damevski, D. Shepherd, N. Kraft, L. Pollock. “Supporting Developers in Porting Software via Combined Textual and Structural Analysis of Software Artifacts”. Computational Science and Engineering Software Sustainability and Productivity Challenges (CSESSP Challenges) - Position Paper, Rockville, MD, 2015.
- [2] K. Damevski, D. Shepherd, L. Pollock. “An Implicit Feedback-based Approach to the Evaluation of Text Analysis Techniques for Software Engineering”. *Proceedings of the 1st International Workshop on on the Next Five Years of Text Analysis in Software Maintenance (TAinSM2012)*, Riva de Garda, Italy, 2012.
- [3] K. Damevski, M. Muralimanohar<sup>®</sup>. “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.
- [4] 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.
- [5] 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.
- [6] 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.
- [7] 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.
- [8] 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
- [9] K. Damevski. “Generating Bridges Between Heterogeneous Component Models”. *Proceedings of the 7th Generative Programming and Component Engineering (GPCE) Young Researchers Workshop*, Talinn, Estonia, 2005.
- [10] K. Damevski, 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.

## **Book Chapters (4)**

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- [1] Will Snipes, Emerson Murphy-Hill, Thomas Fritz, Mohsen Vakilian Kostadin Damevski, Anil R. Nair, David Shepherd. *A Practical Guide to Analyzing IDE Usage Data*. The Art and Science of Analyzing Software Data. Edited by Christian Bird, Tim Menzies, and Thomas Zimmermann. Elsevier, 2015

- [2] Kostadin Damevski. *Tool Support for Efficient Programming of Graphics Processing Units*. Bridging Mathematics, Statistics, Engineering and Technology. Edited by Bourama Toni, Keith Williamson, Nasser Ghariban, Dawit Haile, and Zhifu Xie. Springer Proceedings in Mathematics and Statistics 24.
- [3] Steven G. Parker, Kostadin Damevski, Ayla Khan, Ashwin Swaminathan, Chris R. Johnson. *The SCJump 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
- [4] 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

## **Thesis**

- K. Damevski. “Component Model Interoperability for Scientific Computing” , *PhD Thesis*, University of Utah, 2007.
- K. Damevski. “Parallel Component Interaction using an IDL Compiler” , *MS Thesis*, University of Utah, 2002.

## **Courses Taught**

### At Virginia Commonwealth University

- *Software as a Service* – Fall 2020, 2021, 2022, 2023, 2024
- *Introduction to Software Analysis and Testing* – Spring 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
- *Fundamentals of Software Engineering* – Fall 2015, 2016, 2017, 2018

### At Virginia State University

- *Software Engineering (graduate & undergraduate)* – Fall 2009,2010,2011,2013, Spring 2014
- *Senior Project* – Fall 2011,2012, Spring 2013,2014,2015
- *Introduction to Computer Science* – Fall 2008,2009,2010, Spring 2009,2010
- *Embedded Systems (graduate & undergraduate)* – Spring 2009,2010,2011, Fall 2012
- *Operating Systems* – Spring 2008, 2013, 2014
- *Parallel Algorithms* – Fall 2010, 2012, 2014



- *Object Oriented Programming* – Spring 2009,2010
- *Advanced Algorithms and Data Structures* – Fall 2011
- *Computer Graphics* – Spring 2011
- *Data Structures* – Spring 2013, 2014
- *Introduction to Programming in C++* – Fall 2009
- *Introduction to Problem Solving using Computers* – Fall 2008
- *Introduction to Programming for Chemical and Life Science Engineers* – Fall 2007

## **Research Grants and Contracts**

Damevski has served as PI or Co-PI on grants totaling over \$5.4 million from agencies such as NSF, DHS, DOE, DARPA, NASA, and private industry. Over the course of his career, he has secured more than \$5 million in grants.

### **Current Support**

Supporting Agency:	Commonwealth of Virginia – Commonwealth Cyber Initiative
Total Costs:	\$100,000 (VCU share \$45,000)
Title of Project:	Epistemic Human-Robot Interaction for Every-day Collaborative Operations
Duration:	12 months
Start Date:	08/01/2024
Principal Investigator:	Kostadin Damevski (co-PI) (with Nicola Bezzo (University of Virginia, PI))
Supporting Agency:	Commonwealth of Virginia – Commonwealth Cyber Initiative
Total Costs:	\$50,000 (VCU share \$35,000)
Title of Project:	CyberDevOps: Empowering the Future Cybersecurity Workforce in Virginia through Hands-On DevOps Training
Duration:	12 months
Start Date:	08/01/2024
Principal Investigator:	Kostadin Damevski (PI) (with Denise Daniels (Virginia State University, co-PI))
Supporting Agency:	Korea Creative Content Agency
Total Costs:	\$259,987 (VCU share)
Title of Project:	Cross Reality (XR) Arts & Technology Empowered by Generative and Emotion AI
Duration:	30 months
Start Date:	06/01/2024
Principal Investigator:	Kostadin Damevski (co-PI) (with Semi Ryu (VCU Arts, co-PI), Alberto Cano (PI))

Supporting Agency: National Science Foundation  
Total Costs: \$1,997,177  
Title of Project: Leveraging Scholarships and Vertically Integrated Projects to Increase Transfer Undergraduates Engagement, Capacity, and Continuity in Computer Science  
Duration: 5 years  
Start Date: 10/01/2024  
Principal Investigator: Kostadin Damevski (co-PI)  
(with Rodrigo Spinola (PI), John Leonard (co-PI),  
Barbara Boyan (co-PI) and Gary Tepper (co-PI))

Supporting Agency: National Science Foundation  
Total Costs: \$750,000  
Title of Project: Enhancing Multidisciplinary STEM Undergraduate Education through Living Labs  
Duration: 36 months  
Start Date: 06/01/2024  
Principal Investigator: Kostadin Damevski (co-PI)  
(with Rodrigo Spinola (PI), Alberto Cano (co-PI),  
Daniel Falcao and Kristin Betterman (VCU Neurology))

Supporting Agency: National Science Foundation  
Total Costs: \$300,000 (VCU share)  
Title of Project: Collaborative Research: Towards Engaged, Personalized and Transferable Learning of Secure Programming by Leveraging Real-World Security Vulnerabilities  
Duration: 36 months  
Start Date: 02/01/2023  
Principal Investigator: Kostadin Damevski (PI)  
(with Hui Chen, CUNY Brooklyn College)

Supporting Agency: DHS  
Total Costs: \$200,000 (VCU share)  
Title of Project: Data Science-integrated Experiential Digital Forensics Training based-on Real-world Case Studies of Cybercrime Artifacts  
Duration: 24 months  
Start Date: 08/15/2022  
Principal Investigator: Kostadin Damevski (Co-PI)  
(with Irfan Ahmed (PI))

Supporting Agency: NSF  
Total Costs: \$396,942 (VCU share)  
Title of Project: REU Site: End-User Programming of Cyber-Physical Systems  
Duration: 36 months  
Start Date: 03/15/2021  
Principal Investigator: Kostadin Damevski (PI, former co-PI)  
(with David Shepherd, VCU (former PI))

#### Past Support

Supporting Agency: Commonwealth of Virginia – Commonwealth Cyber Initiative  
 Total Costs: \$100,000 (VCU share \$33,333)  
 Title of Project: Voice Control and Motion Planning of Smart UAVs for Public Safety  
 Duration: 12 months  
 Start Date: 09/01/2022  
 Principal Investigator: Kostadin Damevski (PI)  
 (with Nicola Bezzo, UVA and Ju Wang, VSU)

Supporting Agency: NSF  
 Total Costs: \$250,000 (VCU share)  
 Title of Project: SHF: Small: Collaborative Research: Automatically Enhancing  
 Quality of Social Communication Channels to Support  
 Software Developers and Improve Tool Reliability  
 Duration: 36 months  
 Start Date: 10/01/2018  
 Principal Investigators: Kostadin Damevski (PI)  
 (with Lori Pollock, University of Delaware)

Supporting Agency: DARPA  
 Total Costs: \$100,000 (VCU share)  
 Title of Project: Mining Developer Communications to Create a Web-Scale Repository  
 of Documented and Analyzable Snippets  
 Duration: 14 months  
 Start Date: 01/01/2017  
 Principal Investigators: Kostadin Damevski (PI) (with ABB, Inc.  
 and University of Delaware)

Supporting Agency: ABB, Inc.  
 Total Costs: \$25,000  
 Title of Project: Mining ABB RobotStudio's Field Usage Data  
 Duration: 12 months  
 Start Date: 02/01/2016  
 Principal Investigators: Kostadin Damevski (PI)

Supporting Agency: Google, Inc.  
 Total Costs: \$35,000  
 Title of Project: CS4HS: Launching CS Principles in Southside and Central Virginia's  
 Resource Constrained School Districts  
 Duration: 12 months  
 Start Date: 05/01/2016  
 Principal Investigators: Kostadin Damevski (PI)

Past Support at Virginia State University

Supporting Agency: Commonwealth Center for Advanced Manufacturing  
 Total Costs: \$140,000  
 Title of Project: G010 – Automated Defect Detection in Radiography  
 Duration: 6 months  
 Start Date: 04/21/2014  
 Principal Investigators: Dawit Haile (PI), Hui Chen (Co-PI), Wei-Bang Chen (Co-PI),  
 Pallant Ramsundar (Co-PI), Kostadin Damevski (Co-PI)

Supporting Agency: Google, Inc.  
 Total Costs: \$10,000  
 Title of Project: CS4HS: Teaching Computer Science using the Android Platform  
 Duration: 1 year  
 Start Date: 03/12/2013  
 Principal Investigators: David Walter (PI), Kostadin Damevski (Co-PI), Hui Chen (Co-PI),

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: 4 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: \$199,231  
 Title of Project: TUES: Longevity-Oriented Curriculum Enhancement for Cyber-Physical Systems  
 Duration: 3 years  
 Start Date: 10/01/2011  
 Principal Investigators: Hui Chen (PI), Kostadin Damevski (Co-PI), Ju Wang (Co-PI),  
 David Walter (Co-PI)

Supporting Agency: Department of Energy  
 Total Costs: \$322,936 (VSU share)  
 Title of Project: Center for Technology for Advanced Scientific Component Software (TASCS)  
 Start Date: 05/15/2010 – 05/15/2012  
 Principal Investigators: Kostadin Damevski (Institutional PI) (with 4 other universities, 5 national labs,  
 and a private company)

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)

## **Doctoral Students, Thesis Advisor**

- Rahat Rizvi Rahman, *in progress, since Fall 2024*
- Charlie Dil, *in progress, since Fall 2023*
- Denise Daniels, *in progress, since Fall 2023*
- Viral Sheth, *in progress, since Spring 2020*
- Mia Mohammad Imran, “Towards Effective Developer Communication in Open Source Software via Emotional Awareness”, Summer 2024, Missouri University of Science and Technology
- Agnieszka Ciborowska, “Changeset-based Retrieval of Source Code Artifacts for Bug Localization”, Spring 2022, Hewlett Packard Enterprise
- Manziba Akanda Nishi, “Assessing the Quality of Software Development Tutorials Available on the Web”, Fall 2019, LayerFive

## **Doctoral Students, Committee Member**

- Gabriel Aguiar, Virginia Commonwealth University, *in progress*
- Luiz Felipe Franchetti Diaz, Virginia Commonwealth University, Summer 2024
- Amirahmad Chapnevis, Virginia Commonwealth University, Spring 2024
- Martha Roseberry, Virginia Commonwealth University, Spring 2024
- Matthew Frazier, University of Delaware, Spring 2024
- Enoch Solomon, Virginia Commonwealth University, Fall 2023
- Paolo Cachi Delgado, Virginia Commonwealth University, Fall 2023
- Douglas Lusa Krug, Virginia Commonwealth University, Spring 2023
- Lukasz Korycki, Virginia Commonwealth University, Spring 2022
- Amy Olex, Virginia Commonwealth University, Spring 2022
- William Sleeman, Virginia Commonwealth University, Spring 2022
- Ali Panahi, Virginia Commonwealth University, Fall 2021
- Preetha Chatterjee, University of Delaware, Spring 2021
- Jose Maria Moyano, University of Cordoba, Spain, Fall 2020

- Aashish Dhungana, Virginia Commonwealth University, Fall 2020

### **Masters Students, Thesis Advisor**

- John Coogle, “Applying Hierarchical Tag-Topic Models to Stack Overflow”, Spring 2019
- Chase Greco, “A Behavior-Driven Recommendation System for Stack Overflow Posts”, Spring 2018

### **At Virginia State University**

- Marco Peterson, “Metamorphic Testing of Android Apps”. M.S. Thesis Advisor, Summer 2015.
- Sudip Chakravorthy, “Automatic Generation of Human Readable Text Summaries Of C# Source Code in Natural Language”. M.S. Thesis Advisor, Spring 2014.
- Badreldin Altayeb, “Introducing Cyber-Physical Systems to CS Majors Using Modeling”. M.S. Thesis Advisor, Spring 2013.
- Benjamin Brown, “Characterization of Plants using Wireless Network Signal Strenght”. M.S. Thesis Advisor, Summer 2012.
- Alkema Woods, “Trojan SmartFarm: Utilizing Sensing Capabilities of Smart Phones to Enhance Yield of High Value Crops”. M.S. Thesis Advisor, Fall 2011
- Madhan Muralimanohar, “Static GPU Profitability Analysis of Loop Nests”. M.S. Thesis Advisor, Fall 2011
- Ayodele Ogunnika, “An Evaluation of Gaussian Models for Data Acquisition in Sensor Networks”. M.S. Thesis Advisor, Summer 2011
- 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**

- Rebekah Copeland, “Detecting Conversational Derailment on GitHub”, REU 2024
- Bobby Zita, “Detecting Conversational Derailment on GitHub”, REU 2024
- Audrey Lewis, “GitHub Project Health Newsletter”, 2024
- Christian Novalski, “GitHub Project Health Newsletter”, 2024
- Steven Bui, “GitHub Project Health Newsletter”, REU 2024

- Sienna Sterling, “Voice Control of Smart UAVs for Public Safety”, 2023-2024
- Sydney Nguyen, “Voice Control of Smart UAVs for Public Safety”, 2023-2024
- Allyson Smith, “Understanding Software Vulnerability Patches”, REU 2023
- Trisha Taparia, “Understanding Software Vulnerability Patches”, REU 2023
- Xander Cole, “Proactive Moderation on GitHub”, REU 2023
- Bobby Zita, “Proactive Moderation on GitHub”, REU 2023
- Adrian Lackey, “Understanding Software Vulnerability Patches”, REU 2023
- Nathan Goehring, “Voice Control of Smart UAVs for Public Safety”, 2023
- Ashfin Enayet, “Quantifying the Uncertainty in Software Vulnerability Patch Data”, 2023
- Chris Egersdoerfer, “Testing Chatbots”, REU 2022
- Aparna Roy, “Testing Chatbots”, REU 2022
- Tyler Haden, “StackInTheFlow: A Behavior-Driven Recommendation System for Stack Overflow Posts”, 2018

### **High School Students, Research Advisor**

- Vidhi Shah, Deep Run High School, Summer 2023
- Srikar Karra, Deep Run High School, Summer 2023
- Eliza Tan, Deep Run High School, Summer 2023
- Anjelica Wang, Clover Hill High School, Summer 2023
- Anish Gutha, Midlothian High School, 2021/2022
- Carson Krahe, Deep Run High School, Summer 2021
- James Hall, Maggie Walker Governor’s School, 2020/2021
- Sudeep Dharanikota, Deep Run High School, Summer 2020
- Jared Beller, Deep Run High School, Summer 2018
- Kevin Ngo, Deep Run High School, Summer 2017
- Lindsey Showalter, St. Gertrude High School, 2017/2028

## **Professional Service**

### **Associate Editor**

- IEEE Software, 2020, 2021, 2022, 2023, 2024

### **Editorial Board Member**

- Journal of Systems and Software, 2018, 2019, 2020

### **Program Committee Member**

- International Conference on Software Engineering (ICSE) - Technical Track, 2023, 2025
- International Conference on the Foundations of Software Engineering (FSE) - Technical Track, 2025
- International Conference on Software Maintenance and Evolution (ICSME), Technical Track, 2023, 2024
- International Conference on Software Analysis, Evolution and Reengineering (SANER) - Technical Track, 2018, 2023, 2024
- International Conference on Program Comprehension (ICPC) - Technical Track, 2018, 2020, 2022, 2023, 2024
- International Conference on Mining Software Repositories (MSR) - Technical Track, 2020, 2021, 2022
- Symposium on the Foundations of Software Engineering (FSE) - Journal First Track, 2021
- International Conference on Software Maintenance and Evolution (ICSME), NIER Track, 2021
- International Conference on Software Engineering (ICSE) - Tools Track, 2021
- International Conference on Software Engineering (ICSE) - Student Research Competition, 2020
- Foundations of Software Engineering (FSE) - Student Research Competition, 2020
- International Conference on Software Engineering (ICSE) - Workshops Track, 2020
- International Conference on Software Maintenance and Evolution (ICSME), Industry Track, 2019
- International Workshop on Mining and Analyzing Interaction Histories (MAINT), 2018, 2019
- International Conference on Software Maintenance and Evolution (ICSME), Artifacts Track, 2017
- European Conference on Software Maintenance and Reengineering – Working Conference on Reverse Engineering (CSMR-WCRE), Tools Track 2014
- International Workshop on Sensor Networks, 2012, 2013
- Workshop on Component-Based High Performance Computing, 2009, 2010