

# Darko Marinov

Professor

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<b>Education</b>	<b>Massachusetts Institute of Technology</b> ..... Cambridge, MA
2005	Ph.D. in Computer Science, Dissertation: “Automatic Testing of Software with Structurally Complex Inputs”
2000	S.M. in Computer Science, Dissertation: “Credible Compilation”, Minor: Mathematics (Combinatorics)
	<b>School of Electrical Engineering, University of Belgrade</b> ..... Belgrade, Yugoslavia
1997	B.S. in Computer Science and Engineering
<b>Research Interests</b>	<b>Software Engineering</b> , in particular improving software quality; software testing; regression testing
<b>Experience</b>	<b>University of Illinois at Urbana-Champaign</b> ..... Urbana-Champaign, IL
01/05 – now	Identity Element, Software Testing and Analysis group, advising 5 PhD students, graduated 12 PhD+10 MS
	<b>Katana Graph, Inc.</b> ..... Austin, TX
03/22 – 09/22	Senior Scientist, CTO: Chris Rossbach, Manager: Milos Gligoric
	<b>[Anonymous] Law Office</b> ..... Chicago, IL
08/20 – 09/20	Software Expert for a Case in Federal Court, Lawyer: [Anonymous] – contact me for details
	<b>Runtime Verification, Inc.</b> ..... Urbana, IL
01/18 – 02/19	Chief Quality Officer, CEO: Grigore Rosu
	<b>Groupon, Inc.</b> ..... Chicago, IL
01/13 – 06/13	Temporary Applied Quality Engineering Researcher, Manager: Jeff Ayars
	<b>The University of Texas at Austin</b> ..... Austin, TX
09/12 – 12/12	Sabbatical Visitor, Hosts: Sarfraz Khurshid and Don Batory
	<b>Massachusetts Institute of Technology</b> ..... Cambridge, MA
09/98 – 12/04	Research and Teaching Assistant, Program Analysis and Compilation group, Advisor: Martin Rinard
	<b>Microsoft Research</b> ..... Redmond, WA
06/03 – 08/03	Intern, Foundations of Software Engineering group, Manager: Yuri Gurevich, Mentor: Wolfram Schulte
	<b>IBM T. J. Watson Research Center</b> ..... Hawthorne, NY
05/02 – 08/02	Intern, Advanced Programming Tools group, Manager: John Field, Mentor: Rob O’Callahan
<b>Awards&amp;Honors</b>	
Community Honor	
2023	Fellow of Automated Software Engineering, bestowed by the ASE Steering Committee
Test-of-Time Papers	
2019	ACM SIGSOFT <b>Impact Paper Award</b> for paper [C12] (ESEC/FSE 2005)
2015	ASE <b>Most Influential Paper Award</b> for paper [C2] (ASE 2001)
2012	ACM SIGSOFT <b>Impact Paper Award</b> for paper [C3] (ISSTA 2002)
More Paper Awards	
2021	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C100] (ISSTA 2021)
2017	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C74] (ESEC/FSE 2017)
2017	CHI <b>Best Paper Award</b> for paper [C73] (CHI 2017)
2016	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C70] (ASE 2016)
2015	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C61] (ISSTA 2015)
2010	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C31] (ICSE 2010)
2005	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C12] (ESEC/FSE 2005)
2002	ACM SIGSOFT <b>Distinguished Paper Award</b> for paper [C3] (ISSTA 2002)
Advising	
2022	CRA-E <b>Undergraduate Research Faculty Mentoring Award</b>

2020	Campus Award for <b>Excellence in Guiding Undergraduate Research</b> , UIUC
2014	Engineering Council Award for <b>Excellence in Advising</b> , University of Illinois at Urbana-Champaign
Teaching	
2021	UIUC “List of <b>Teachers Ranked as Excellent</b> by Their Students” for Fall 2021
2015	UIUC “List of <b>Teachers Ranked as Excellent</b> by Their Students” for Spring 2015
2006	UIUC “Incomplete List of <b>Teachers Ranked as Excellent</b> by Their Students” for Spring 2006
Reviewing	
2023	<b>Reliable Rapid Response Reviewer</b> for ESEC/FSE 2023
2022	<b>Distinguished Reviewer Award</b> for ESEC/FSE 2022
2022	<b>Reliable Rapid Response Reviewer</b> for ICSE SEIP 2022
2021	<b>Distinguished PC Member Award</b> for ASE 2021
2020	<b>Reliable Rapid Response Reviewer</b> for ASE 2020
2019	<b>Distinguished Reviewer Award</b> , Program Committee (PC) member for ICST 2019
2018	<b>Reliable Rapid Response Reviewer</b> for ICSE 2018
2017	<b>Distinguished Reviewer Award</b> , Expert-Review Panel (ERP) member for ASE 2017
More Awards&Honors	
2010	C.W. Gear <b>Outstanding Junior Faculty</b> Award, Department of Computer Science, UIUC
2010	<b>Beckman Fellow</b> , Center for Advanced Study, University of Illinois at Urbana-Champaign
2008	NSF Faculty Early Career Development ( <b>CAREER</b> ) Program Award

**Publications** 109 conference papers, 12 demo papers, 30 workshop papers, 10 journal papers, 1 book chapter, 2 articles (acceptance rates for conference and demo papers listed as per the university requirements)

Conference papers

- SCAM-et 2023 C109. Faustino Aguilar, Samuel Grayson, and Darko Marinov. Reproducing and Improving the BugsInPy Dataset. In *Proc. of the 23rd IEEE International Working Conference on Source Code Analysis and Manipulation, Engineering Track*, pages 260–264, Bogota, Colombia, Oct. 2023. (acceptance: 50%, 4/8)
- ISSTA 2023 C108. Yang Chen, Alperen Yildiz, Darko Marinov, and Reyhaneh Jabbarvand. Transforming Test Suites into Croissants. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 1080–1092, Seattle, WA, July 2023. (acceptance: 28%, 60/215)
- REP 2023 C107. Samuel Grayson, Darko Marinov, Daniel S. Katz, and Reed Milewicz. Automatic Reproduction of Workflows in the Snakemake Workflow Catalog and nf-core Registries. In *Proc. of the 1st ACM Conference on Reproducibility and Replicability*, pages 74–84, Santa Cruz, CA, June 2023. (acceptance: 53%, 9/17)
- ICSE 2023 C106. Chunqiu Steven Xia, Saikat Dutta, Sasa Misailovic, Darko Marinov, and Lingming Zhang. Balancing Effectiveness and Flakiness of Non-Deterministic Machine Learning Tests. In *Proc. of the 45th ACM/IEEE International Conference on Software Engineering*, pages 1805–1817, Melbourne, Australia, May 2023. (acceptance: 27%, 209/796)
- ICSE 2023 C105. Shuai Wang, Xinyu Lian, Darko Marinov, and Tianyin Xu. Test Selection for Unified Regression Testing. In *Proc. of the 45th ACM/IEEE International Conference on Software Engineering*, pages 1691–1703, Melbourne, Australia, May 2023. (acceptance: 27%, 209/796)
- ICSE 2022 C104. Anjiang Wei, Pu Yi, Zhengxi Li, Tao Xie, Darko Marinov, and Wing Lam. Preempting Flaky Tests via Non-Idempotent-Outcome Tests. In *Proc. of the 44th ACM/IEEE International Conference on Software Engineering*, pages 1730–1742, Pittsburgh, PA, May 2022. (acceptance: 27%, 197/751)
- TACAS 2022 C103. Pu Yi, Hao Wang, Tao Xie, Darko Marinov, and Wing Lam. A Theoretical Analysis of Random Regression Test Prioritization. In *Proc. of the 28th International Conference on Tools and Algorithms for the Construction and Analysis of Systems*, pages 217–235, Munich, Germany, Apr. 2022. (acc: 32%, 50/159)
- ASPLOS 2022 C102. Zirui Neil Zhao, Houxiang Ji, Adam Morrison, Darko Marinov, and Josep Torrellas. Pinned Loads: Taming Speculative Loads in Secure Processors. In *Proc. of the 27th International Conference on Architectural Support for Programming Languages and Operating Systems*, pages 314–328, Lausanne, Switzerland, Mar. 2022. (acceptance: 21%, 80/397)
- ICTSS-s 2021 C101. Wenxi Wang, Pu Yi, Sarfraz Khurshid, and Darko Marinov. Initial Results on Counting Test Orders for Order-Dependent Flaky Tests using Alloy. In *Proc. of the 33rd IFIP International Conference on Testing Software and Systems*, pages 123–130, Virtual Conference, Nov. 2021. (Short paper) (acc: 64%, 23/36)
- ISSTA 2021 C100. Runxiang Cheng, Lingming Zhang, Darko Marinov, and Tianyin Xu. Test-Case Prioritization for Configuration Testing. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 452–465, Virtual Conference, July 2021. (acceptance: 22%, 51/233) This paper **won an ACM SIGSOFT Distinguished Paper Award**.
- ICSE 2021 C99. Peilun Zhang, Yanjie Jiang, Anjiang Wei, Victoria Stodden, Darko Marinov, and August Shi. Domain-Specific Fixes for Flaky Tests with Wrong Assumptions on Underdetermined Specifications. In *Proc. of the 43rd ACM/IEEE International Conference on Software Engineering*, pages 50–61, Virtual Conference, May 2021. (acceptance: 23%, 138/602)

- TACAS 2021 C98. Anjiang Wei, Pu Yi, Tao Xie, Darko Marinov, and Wing Lam. Probabilistic and Systematic Coverage of Consecutive Test-Method Pairs for Detecting Order-Dependent Flaky Tests. In *Proc. of the 27th International Conference on Tools and Algorithms for the Construction and Analysis of Systems*, pages 270–287, Virtual Conference, Mar. 2021. (acceptance: 34%, 47/141)
- OOPSLA 2020 C97. Wing Lam, Stefan Winter, Anjiang Wei, Tao Xie, Darko Marinov, and Jonathan Bell. A Large-Scale Longitudinal Study of Flaky Tests. In *Proc. of the 35th ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications*, pages 202:1–202:29, Virtual Conference, Nov. 2020. (acceptance: 37%, 109/302)
- ISSRE 2020 C96. Wing Lam, Stefan Winter, Angello Astorga, Victoria Stodden, and Darko Marinov. Understanding Reproducibility and Characteristics of Flaky Tests Through Test Reruns in Java Projects. In *Proc. of the 31st IEEE International Symposium on Software Reliability Engineering*, pages 403–413, Virtual Conference, Oct. 2020. (acceptance: 26%, 38/148)
- ISSRE 2020 C95. Kaiyuan Wang, Allison Sullivan, Darko Marinov, and Sarfraz Khurshid. Fault Localization for Declarative Models in Alloy. In *Proc. of the 31st IEEE International Symposium on Software Reliability Engineering*, pages 391–402, Virtual Conference, Oct. 2020. (acceptance: 26%, 38/148)
- MICRO 2020 C94. Zirui Neil Zhao, Houxiang Ji, Mengjia Yan, Jiyong Yu, Christopher W. Fletcher, Adam Morrison, Darko Marinov, and Josep Torrellas. Speculation Invariance (InvarSpec): Faster Safe Execution Through Program Analysis. In *Proc. of the 53rd Annual IEEE/ACM International Symposium on Microarchitecture*, pages 1138–1152, Virtual Conference, Oct. 2020. (acceptance: 20%, 82/422)
- CHI 2020 C93. Emily M. Hastings, Albatool Alamri, Andrew Kuznetsov, Christine Pisarczyk, Karrie Karahalios, Darko Marinov, and Brian P. Bailey. LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation. In *Proc. of the ACM Conference on Human Factors in Computing System*, pages 13, paper 668, Canceled Conference, Apr. 2020. (acceptance: 25%, 760/3126)
- ICFEM 2019 C92. Allison Sullivan, Darko Marinov, and Sarfraz Khurshid. Solution Enumeration Abstraction: A Modeling Idiom to Enhance a Lightweight Formal Method. In *Proc. of the 21st International Conference on Formal Engineering Methods*, pages 336–352, Shenzhen, China, Nov. 2019. (acceptance: 30%, 28/94)
- ISSRE-per 2019 C91. August Shi, Peiyuan Zhao, and Darko Marinov. Understanding and Improving Regression Test Selection in Continuous Integration. In *Proc. of the 30th IEEE International Symposium on Software Reliability Engineering*, pages 228–238, Berlin, Germany, Oct. 2019. (Practical experience report) (acc: 32%, 42/134)
- OOPSLA 2019 C90. August Shi, Milica Hadzi-Tanovic, Lingming Zhang, Darko Marinov, and Owolabi Legunsen. Reflection-Aware Static Regression Test Selection. In *Proc. of the 34th ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications*, pages 187:1–187:29, Athens, Greece, Oct. 2019. (acceptance: 36%, 72/201)
- ESEC/FSE 2019 C89. August Shi, Wing Lam, Reed Oei, Tao Xie, and Darko Marinov. iFixFlakies: A Framework for Automatically Fixing Order-Dependent Flaky Tests. In *Proc. of the 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering*, pages 545–555, Tallinn, Estonia, Aug. 2019. (acceptance: 25%, 74/303)
- ISSTA 2019 C88. August Shi, Jonathan Bell, and Darko Marinov. Mitigating the Effects of Flaky Tests on Mutation Testing. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 112–122, Beijing, China, July 2019. (acceptance: 23%, 32/142)
- OSS-i 2019 C87. Brandon Carlson, Kevin Leach, Darko Marinov, Meiyappan Nagappan, and Atul Prakash. Open Source Vulnerability Notification. In *Proc. of the 15th International Conference on Open Source Systems*, pages 12–23, Montreal, Canada, May 2019. (Industry report) (acceptance: 43%, 15/35)
- ICST 2019 C86. Wing Lam, Reed Oei, August Shi, Darko Marinov, and Tao Xie. iDFlakies: A Framework for Detecting and Partially Classifying Flaky Tests. In *Proc. of the 12th IEEE International Conference on Software Testing, Verification and Validation*, pages 312–322, Xi’an, China, Apr. 2019. (acceptance: 29%, 31/110)
- ICST 2019 C85. Owolabi Legunsen, Yi Zhang, Milica Hadzi-Tanovic, Grigore Rosu, and Darko Marinov. Techniques for Evolution-Aware Runtime Verification. In *Proc. of the 12th IEEE International Conference on Software Testing, Verification and Validation*, pages 300–311, Xi’an, China, Apr. 2019. (acceptance: 29%, 31/110)
- ICST 2019 C84. Farah Hariri, August Shi, Vimuth Fernando, Suleman Mahmood, and Darko Marinov. Comparing Mutation Testing at the Levels of Source Code and Compiler Intermediate Representation. In *Proc. of the 12th IEEE International Conference on Software Testing, Verification and Validation*, pages 114–124, Xi’an, China, Apr. 2019. (acceptance: 29%, 31/110)
- ASPLOS 2019 C83. Abdulrahman Mahmoud, Radha Venkatagiri, Khaliq Ahmed, Sasa Misailovic, Darko Marinov, Christopher W. Fletcher, and Sarita V. Adve. Minotaur: Adapting Software Testing Techniques for Hardware Errors. In *Proc. of the 24th International Conference on Architectural Support for Programming Languages and Operating Systems*, pages 1087–1103, Providence, RI, Apr. 2019. (acceptance: 22%, 74/350)
- CSCW 2018 C82. Emily M. Hastings, Farnaz Jahanbakhsh, Karrie Karahalios, Darko Marinov, and Brian P. Bailey. Structure or Nurture? The Effects of Team-Building Activities and Team Composition on Team Outcomes. In *Proc. of the 21st ACM Conference on Computer-Supported Cooperative Work and Social Computing*, pages 68:1–

68:21, Jersey City, NJ, Nov. 2018. (acceptance: 26%, 185/722)

- ISSRE 2018 C81. Alex Gyori, Owolabi Legunsen, Farah Hariri, and Darko Marinov. Evaluating Regression Test Selection Opportunities in a Very Large Open-Source Ecosystem. In *Proc. of the 29th IEEE International Symposium on Software Reliability Engineering*, pages 112–122, Memphis, TN, Oct. 2018. (acceptance: 24%, 23/96)
- ASE 2018 C80. Michael Hilton, Jonathan Bell, and Darko Marinov. A Large-Scale Study of Test Coverage Evolution. In *Proc. of the 33rd IEEE/ACM Conference on Automated Software Engineering*, pages 53–63, Montpellier, France, Sept. 2018. (acceptance: 20%, 69/346)
- ISSTA 2018 C79. August Shi, Alex Gyori, Suleman Mahmood, Peiyuan Zhao, and Darko Marinov. Evaluating Test-Suite Reduction in Real-World Software Evolution. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 84–94, Amsterdam, Netherlands, July 2018. (acceptance: 24%, 31/130)
- ABZ 2018 C78. Kaiyuan Wang, Allison Sullivan, Darko Marinov, and Sarfraz Khurshid. Solver-based Sketching of Alloy Models using Test Valuations. In *Proc. of the 6th International ABZ Conference on ASM, Alloy, B, TLA, VDM, and Z*, pages 121–136, Southampton, UK, June 2018. (acceptance: 39%, 13/34)
- ABZ 2018 C77. Kaiyuan Wang, Allison Sullivan, Manos Koukoutos, Darko Marinov, and Sarfraz Khurshid. Systematic Generation of Non-Equivalent Expressions for Relational Algebra. In *Proc. of the 6th International ABZ on Conference ASM, Alloy, B, TLA, VDM, and Z*, pages 105–120, Southampton, UK, June 2018. (acceptance: 39%, 13/34)
- ICSE 2018 C76. Jonathan Bell, Owolabi Legunsen, Michael Hilton, Lamyaa Eloussi, Tiffany Yung, and Darko Marinov. DeFlaker: Automatically Detecting Flaky Tests. In *Proc. of the 40th ACM/IEEE International Conference on Software Engineering*, pages 433–444, Gothenburg, Sweden, May 2018. (acceptance: 21%, 105/502)
- ICSE NIER 2018 C75. Tianyin Xu and Darko Marinov. Mining Container Image Repositories for Software Configurations and Beyond. In *Proc. of the 40th ACM/IEEE International Conference on Software Engineering, New Ideas and Emerging Results*, pages 49–52, Gothenburg, Sweden, May 2018. (acceptance: 27%, 25/95)
- ESEC/FSE 2017 C74. Michael Hilton, Nicholas Nelson, Timothy Tunnell, Darko Marinov, and Danny Dig. Trade-Offs in Continuous Integration: Assurance, Security, and Flexibility. In *Proc. of the 11th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 197–207, Paderborn, Germany, Sept. 2017. (acceptance: 25%, 72/294) This paper **won an ACM SIGSOFT Distinguished Paper Award**.
- CHI 2017 C73. Farnaz Jahanbakhsh, Wai-Tat Fu, Karrie Karahalios, Darko Marinov, and Brian Bailey. You Want Me to Work with Who? Stakeholder Perceptions of Automated Team Formation in Project-based Courses. In *Proc. of the 35th Annual ACM Conference on Human Factors in Computing System*, pages 3201–3212, Denver, CO, May 2017. (acceptance: ~25% of 2,424 submissions) This paper **won a CHI Best Paper Award**.
- FSE 2016 C72. Owolabi Legunsen, Farah Hariri, August Shi, Yafeng Lu, Lingming Zhang, and Darko Marinov. An Extensive Study of Static Regression Test Selection in Modern Software Evolution. In *Proc. of the 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering*, pages 583–594, Seattle, WA, Nov. 2016. (acceptance: 28%, 74/273)
- ISSRE 2016 C71. Farah Hariri, August Shi, Hayes Converse, Darko Marinov, and Sarfraz Khurshid. Evaluating the Effects of Compiler Optimizations on Mutation Testing at the Compiler IR Level. In *Proc. of the 27th IEEE International Symposium on Software Reliability Engineering*, pages 105–115, Ottawa, Canada, Oct. 2016. (acceptance: 35%, 45/130)
- ASE 2016 C70. Owolabi Legunsen, Wajih Ul Hassan, Xinyue Xu, Grigore Roşu, and Darko Marinov. How Good are the Specs? A Study of the Bug-Finding Effectiveness of Existing Java API Specifications. In *Proc. of the 31st IEEE/ACM Conference on Automated Software Engineering*, pages 602–613, Singapore, Singapore, Sept. 2016. (acceptance: 20%, 57/298) This paper **won an ACM SIGSOFT Distinguished Paper Award**.
- ASE 2016 C69. Michael Hilton, Timothy Tunnell, Kai Huang, Darko Marinov, and Danny Dig. Usage, Costs, and Benefits of Continuous Integration in Open-Source Projects. In *Proc. of the 31st IEEE/ACM Conference on Automated Software Engineering*, pages 426–437, Singapore, Singapore, Sept. 2016. (acc: 20%, 57/298)
- ASE 2016 C68. Mohammad Amin Alipour, August Shi, Rahul Gopinath, Darko Marinov, and Alex Groce. Evaluating Non-Adequate Test-Case Reduction. In *Proc. of the 31st IEEE/ACM Conference on Automated Software Engineering*, pages 16–26, Singapore, Singapore, Sept. 2016. (acceptance: 20%, 57/298)
- ICSE 2016 V2025 C67. Danny Dig, Ralph Johnson, Darko Marinov, Brian Bailey, and Don Batory. COPE: Vision for a Change-Oriented Programming Environment. In *Proc. of the 38th ACM/IEEE International Conference on Software Engineering, Visions of 2025 and Beyond*, pages 773–776, Austin, TX, May 2016. (acceptance: 48%, 9/19)
- ICST 2016 C66. August Shi, Alex Gyori, Owolabi Legunsen, and Darko Marinov. Detecting Assumptions on Deterministic Implementations of Non-deterministic Specifications. In *Proc. of the Ninth IEEE International Conference on Software Testing, Verification and Validation*, pages 80–90, Chicago, IL, Apr. 2016. (acc: 27%, 34/130)
- ASE 2015 C65. Ziyi Lin, Darko Marinov, Hao Zhong, Yuting Chen, and Jianjun Zhao. JaConTeBe: A Benchmark Suite of Real-World Java Concurrency Bugs. In *Proc. of the 30th IEEE/ACM Conference on Automated Software Engineering*, pages 178–189, Lincoln, NE, Nov. 2015. (acceptance: 21%, 60/289)
- ESEC/FSE 2015 C64. August Shi, Tiffany Yung, Alex Gyori, and Darko Marinov. Comparing and Combining Test-Suite Reduction

and Regression Test Selection. In *Proc. of the 10th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 237–247, Bergamo, Italy, Sept. 2015. (acceptance: 26%, 74/291)

- SPLC 2015 C63. Sabrina Souto, Divya Gopinath, Marcelo d’Amorim, Darko Marinov, Sarfraz Khurshid, and Don Batory. Faster Bug Detection for Software Product Lines with Incomplete Feature Models. In *Proc. of the 19th International Software Product Line Conference*, pages 151–160, Nashville, TN, July 2015. (acceptance: 32%, 17/54)
- ISSTA 2015 C62. Alex Gyori, August Shi, Farah Hariri, and Darko Marinov. Reliable Testing: Detecting State-Polluting Tests to Prevent Test Dependency. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 223–233, Baltimore, MD, July 2015. (acceptance: 28%, 33/119)
- ISSTA 2015 C61. Milos Gligoric, Lamyaa Eloussi, and Darko Marinov. Practical Regression Test Selection with Dynamic File Dependencies. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 211–222, Baltimore, MD, July 2015. (acceptance: 28%, 33/119) This paper **won an ACM SIGSOFT Distinguished Paper Award**.
- ICSE NIER 2015 C60. Owolabi Legunsen, Darko Marinov, and Grigore Roşu. Evolution-Aware Monitoring-Oriented Programming. In *Proc. of the 37th ACM/IEEE International Conference on Software Engineering, New Ideas and Emerging Results*, pages 615–618, Florence, Italy, May 2015. (acceptance: 19%, 25/135)
- ICSE 2015 C59. Yun Young Lee, Darko Marinov, and Ralph Johnson. Tempura: Temporal Dimension for IDEs. In *Proc. of the 37th ACM/IEEE International Conference on Software Engineering*, pages 212–222, Florence, Italy, May 2015. (acceptance: 19%, 84/452)
- FSE 2014 C58. Qingzhou Luo, Farah Hariri, Lamyaa Eloussi, and Darko Marinov. An Empirical Analysis of Flaky Tests. In *Proc. of the 22nd ACM SIGSOFT International Symposium on the Foundations of Software Engineering*, pages 643–653, Hong Kong, China, Nov. 2014. (acceptance: 23%, 61/273) This paper was **nominated** for ACM SIGSOFT **Distinguished Paper award**.
- FSE 2014 C57. August Shi, Alex Gyori, Milos Gligoric, Andrey Zaytsev, and Darko Marinov. Balancing Trade-offs in Test-suite Reduction. In *Proc. of the 22nd ACM SIGSOFT International Symposium on the Foundations of Software Engineering*, pages 246–256, Hong Kong, China, Nov. 2014. (acceptance: 23%, 61/273)
- ASE 2014 C56. Milos Gligoric, Stas Negara, Owolabi Legunsen, and Darko Marinov. An Empirical Evaluation and Comparison of Manual and Automated Test Selection. In *Proc. of the 29th IEEE/ACM Conference on Automated Software Engineering*, pages 361–372, Vasteras, Sweden, Sept. 2014. (acceptance: 20%, 55/276)
- CAV 2014 C55. Milos Gligoric, Rupak Majumdar, Rohan Sharma, Lamyaa Eloussi, and Darko Marinov. Regression Test Selection for Distributed Software Histories. In *Proc. of the 26th International Conference on Computer Aided Verification*, pages 293–309, Vienna, Austria, July 2014. (acceptance: 27%, 46/175)
- ASE 2013 C54. Lingming Zhang, Milos Gligoric, Darko Marinov, and Sarfraz Khurshid. Operator-based and Random Mutant Selection: Better Together. In *Proc. of the 28th IEEE/ACM Conference on Automated Software Engineering*, pages 92–102, Palo Alto, CA, Nov. 2013. (acceptance: 17%, 43/258)
- Onward! 2013 C53. Aleksandar Milicevic, Daniel Jackson, Milos Gligoric, and Darko Marinov. Model-Based, Event-Driven Programming Paradigm for Interactive Web Applications. In *Proc. of the Fourth Annual ACM International Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH), Onward! Research Papers*, pages 17–36, Indianapolis, IN, Oct. 2013. (acceptance: 41%, 11/27)
- ESEC/FSE 2013 C52. Chang Hwan Peter Kim, Darko Marinov, Sarfraz Khurshid, Don Batory, Sabrina Souto, Paulo Barros, and Marcelo d’Amorim. SPLat: Lightweight Dynamic Analysis for Reducing Combinatorics in Testing Configurable Systems. In *Proc. of the 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 257–267, St. Petersburg, Russia, Aug. 2013. (acceptance: 21%, 51/251)
- ISSTA 2013 C51. Milos Gligoric, Alex Groce, Chaoqiang Zhang, Rohan Sharma, Mohammad Amin Alipour, and Darko Marinov. Comparing Non-Adequate Test Suites using Coverage Criteria. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 302–313, Lugano, Switzerland, July 2013. (acceptance: 26%, 32/124) This paper was **invited for journal submission**.
- ISSTA 2013 C50. Lingming Zhang, Darko Marinov, and Sarfraz Khurshid. Faster Mutation Testing Inspired by Test Prioritization and Reduction. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 235–245, Lugano, Switzerland, July 2013. (acceptance: 26%, 32/124)
- ECOOP 2013 C49. Milos Gligoric, Farnaz Behrang, Yilong Li, Jeffrey Overbey, Munawar Hafiz, and Darko Marinov. Systematic Testing of Refactoring Engines on Real Software Projects. In *Proc. of the 27th European Conference on Object-Oriented Programming*, pages 629–653, Montpellier, France, July 2013. (acceptance: 25%, 29/116)
- ICSE NIER 2013 C48. Yun Young Lee, Sam Harwell, Sarfraz Khurshid, and Darko Marinov. Temporal Code Completion and Navigation. In *Proc. of the 35th ACM/IEEE International Conference on Software Engineering, New Ideas and Emerging Results*, pages 1181–1184, San Francisco, CA, May 2013. (acceptance: 22%, 31/143)
- ICSE 2013 C47. Adrian Nistor, Linhai Song, Darko Marinov, and Shan Lu. Toddler: Detecting Performance Problems via Similar Memory-Access Patterns. In *Proc. of the 35th ACM/IEEE International Conference on Software*

*Engineering*, pages 562–571, San Francisco, CA, May 2013. (acceptance: 19%, 85/461)

- ISSTA 2012 C46. Lingming Zhang, Darko Marinov, Lu Zhang, and Sarfraz Khurshid. Regression Mutation Testing. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 331–341, Minneapolis, MN, July 2012. (acceptance: 29%, 31/108)
- FMOODS & FORTE 2012 C45. Samira Tasharofi, Rajesh K. Karmani, Steven Lauterburg, Axel Legay, Darko Marinov, and Gul Agha. TransDPOR: A Novel Dynamic Partial-Order Reduction for Testing Actor Programs. In *Proc. of the joint international conference Formal Methods for Open Object-Based Distributed Systems and Formal Techniques for Networked and Distributed Systems*, volume 7273 of *LNCS*, pages 219–234, Stockholm, Sweden, June 2012. (acceptance: 39%, 16/42)
- ICSE 2012 C44. Adrian Nistor, Qingzhou Luo, Michael Pradel, Thomas R. Gross, and Darko Marinov. Ballerina: Automatic Generation and Clustering of Efficient Random Unit Tests for Multithreaded Code. In *Proc. of the 34th ACM/IEEE International Conference on Software Engineering*, pages 727–737, Zurich, Switzerland, June 2012. (acceptance: 22%, 87/408)
- TAP 2012 C43. Valeria Bengolea, Nazareno Aguirre, Darko Marinov, and Marcelo F. Frias. Using Coverage Criteria on RepOK to Reduce Bounded-Exhaustive Test Suites. In *the 6th International Conference on Tests & Proofs*, volume 7305 of *LNCS*, pages 19–34, Prague, Czech Republic, May 2012. (acceptance: 45%, 13/29)
- ICST 2012 C42. Vilas Jagannath, Matt Kirn, Yu Lin, and Darko Marinov. Evaluating Machine-Independent Metrics for State-Space Exploration. In *Proc. of the Fifth IEEE International Conference on Software Testing, Verification and Validation*, pages 320–329, Montreal, Canada, Apr. 2012. (acceptance: 27%, 39/145)
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- TSE 2008 J3. Marcelo d’ Amorim, Steven Lauterburg, and Darko Marinov. Delta Execution for Efficient State-Space Exploration of Object-Oriented Programs. *IEEE Transactions on Software Engineering*, 34(5):597–613, Sep./Oct. 2008
- JASE 2004 J2. Sarfraz Khurshid and Darko Marinov. TestEra: Specification-Based Testing of Java Programs Using SAT. *Automated Software Engineering Journal*, 11(4):403–434, Oct. 2004
- EJC 2003 J1. Darko Marinov and Rados Radoicic. Counting 1324-avoiding Permutations. *Electronic Journal of Combinatorics*, 9(2):Research Paper 13, 9 pp. (electronic), 2003

#### Book chapter

- B1. Darko Marinov, Davor Magdic, Aleksandar Milenkovic, Jelica Protic, Igor Tartalja, and Veljko Milutinovic. The Scowl Tool for PC-Based Characterization of Parallel Applications. In Veljko Milutinovic, author, *Surviving the Design of Microprocessor and Multimicroprocessor Systems: Lessons Learned*, appendix C, pages 260–283. John Wiley and Sons, 2000 (a longer version of [C1])

#### Articles

- TCCA 1999 A2. Milos Prvulovic, Darko Marinov, Zoran Dimitrijevic, and Veljko Milutinovic. The Split Spatial/Non-Spatial Cache: A Performance and Complexity Evaluation. *IEEE TCCA Newsletter*, pages 18–25, July 1999
- TCCA 1999 A1. Milos Prvulovic, Darko Marinov, Zoran Dimitrijevic, and Veljko Milutinovic. Split Temporal/Spatial Cache: A Survey and Reevaluation of Performance. *IEEE TCCA Newsletter*, pages 8–17, July 1999

#### Service

PC/PB/ERP member for 54 conferences, 17 tracks & 31 workshops; co-organizer 21 events; 18 NSF panels

#### Conference SC

- 2019 – now Steering Committee Member, International Conference on Automated Software Engineering (ASE)
- 2017 – 2023 Steering Committee Member, International Conference on Software Engineering (ICSE)
- 2015 – 2018 Steering Comm. Member, International Conference on Software Testing, Verification, and Validation (ICST)
- 2014 – 2021 Steering Committee Member, International Symposium on Software Testing and Analysis (ISSTA)

#### Conf. Co-Organizer

- 2021 Joint meeting of International Symposium on Software Testing and Analysis (ISSTA 2021) and 35th European Conference on Object-Oriented Programming (ECOOP 2021), **Sponsorship Co-Chair**
- 2020 42nd ACM/IEEE International Conference on Software Engineering (ICSE 2020), **PC Co-Chair**
- 2019 34th IEEE/ACM International Conference on Automated Software Engineering (ASE 2019), **PC Co-Chair**
- 2018 Tool Demo Track at 33rd Conference on Automated Software Engineering (ASE Demo 2018), **PC Co-Chair**
- 2017 32nd IEEE/ACM International Conference on Automated Software Engineering (ASE 2017), **Finance Chair**
- 2016 Visions and Reflections Track at 24th ACM SIGSOFT Symposium on FSE (FSE VaR 2016), **PC Co-Chair**
- 2015 8th International Conference on Software Testing, Verification, and Validation (ICST 2015), **PC Co-Chair**
- 2014 Tool Demonstration Track at 22nd ACM SIGSOFT Symposium on FSE (FSE Demo 2014), **PC Co-Chair**
- 2014 International Symposium on Software Testing and Analysis (ISSTA 2014), **PC Chair**
- 2012 27th Conference on Automated Software Engineering (ASE 2012), **Workshops and Tutorials Co-Chair**

#### Conference PC

- 2024 39th IEEE/ACM International Conference on Automated Software Engineering (ASE 2024)
- 2024 46th ACM/IEEE International Conference on Software Engineering (ICSE 2024)
- 2023 ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2023)
- 2022 37th IEEE/ACM International Conference on Automated Software Engineering (ASE 2022)
- 2022 ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022)
- 2021 36th IEEE/ACM International Conference on Automated Software Engineering (ASE 2021)
- 2021 International Symposium on Software Testing and Analysis (ISSTA 2021)
- 2021 42nd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2021)
- 2020 35th IEEE/ACM International Conference on Automated Software Engineering (ASE 2020)

2020 International Symposium on Software Testing and Analysis (ISSTA 2020)

2019 Programming Language Design and Implementation (PLDI 2019), External Review Committee

2019 41st ACM/IEEE International Conference on Software Engineering (ICSE 2019), Program Board (PB)

2019 12th International Conference on Software Testing, Verification, and Validation (ICST 2019)

2018 40th ACM/IEEE International Conference on Software Engineering (ICSE 2018)

2017 32nd IEEE/ACM Conference on Automated Software Engineering (ASE 2017), Expert-Review Panel

2017 39th ACM/IEEE International Conference on Software Engineering (ICSE 2017), Program Board (PB)

2017 23rd Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2017)

2016 31st IEEE/ACM Conference on Automated Software Engineering (ASE 2016)

2016 9th International Conference on Software Testing, Verification, and Validation (ICST 2016)

2015 30th IEEE/ACM Conference on Automated Software Engineering (ASE 2015)

2015 27th International Conference on Computer Aided Verification (CAV 2015)

2014 Tenth Haifa Verification Conference (HVC 2014)

2014 29th IEEE/ACM Conference on Automated Software Engineering (ASE 2014), Expert-Review Panel

2014 36th International Conference on Software Engineering (ICSE 2014)

2014 7th International Conference on Software Testing, Verification, and Validation (ICST 2014)

2013 28th IEEE/ACM Conference on Automated Software Engineering (ASE 2013)

2013 4th International Conference on Runtime Verification (RV 2013)

2013 International Symposium on Software Testing and Analysis (ISSTA 2013)

2012 20th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 2012)

2012 Object-oriented Programming, Systems, Languages, and Applications (OOPSLA 2012)

2012 27th IEEE/ACM Conference on Automated Software Engineering (ASE 2012), Expert-Review Panel

2012 International Symposium on Software Testing and Analysis (ISSTA 2012)

2012 ABZ Conference on Abstract State Machines (ASM), Alloy, B and Z (ABZ 2012), Alloy Track

2012 34th International Conference on Software Engineering (ICSE 2012)

2012 5th International Conference on Software Testing, Verification, and Validation (ICST 2012)

2011 26th IEEE/ACM Conference on Automated Software Engineering (ASE 2011)

2011 9th International Symposium on Automated Technology for Verification and Analysis (ATVA 2011)

2011 33rd International Conference on Software Engineering (ICSE 2011)

2011 4th International Conference on Software Testing, Verification, and Validation (ICST 2011)

2010 25th IEEE/ACM Conference on Automated Software Engineering (ASE 2010)

2010 International Symposium on Software Testing and Analysis (ISSTA 2010)

2010 ABZ Conference on Abstract State Machines (ASM), Alloy, B and Z (ABZ 2010), Alloy Track

2009 24th IEEE/ACM Conference on Automated Software Engineering (ASE 2009)

2009 20th IEEE International Symposium on Software Reliability Engineering (ISSRE 2009)

2009 3rd IEEE International Symposium on Theoretical Aspects of Software Engineering (TASE 2009)

2009 International Symposium on Software Testing and Analysis (ISSTA 2009)

2009 Programming Language Design and Implementation (PLDI 2009), External Review Committee

2009 2nd International Conference on Software Testing, Verification, and Validation (ICST 2009)

2008 19th IEEE International Symposium on Software Reliability Engineering (ISSRE 2008)

2008 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 2008)

2008 23rd IEEE/ACM Conference on Automated Software Engineering (ASE 2008)

2007 22nd IEEE/ACM Conference on Automated Software Engineering (ASE 2007), Expert-Review Panel

2007 18th IEEE International Symposium on Software Reliability Engineering (ISSRE 2007)

2007 International Symposium on Software Testing and Analysis (ISSTA 2007)

Specialized Tracks

2024 Doctoral Symposium at International Conference on Software Engineering (ICSE DS 2024)

2023 International Conference on Software Engineering, Software Engineering in Practice (ICSE SEIP 2023)

2023 International Conference on Software Engineering, New Ideas and Emerging Results (ICSE NIER 2023)

2022 Doctoral Symposium at International Symposium on Software Testing and Analysis (ISSTA DS 2022)

2022 International Conference on Software Engineering, Software Engineering in Practice (ICSE SEIP 2022)

2017 Doctoral Symposium at 32nd IEEE/ACM Conference on Automated Software Engineering (ASE DS 2017)

2017 Doctoral Symposium at International Symposium on Software Testing and Analysis (ISSTA DS 2017)

2017 International Conference on Software Engineering, New Ideas and Emerging Results (ICSE NIER 2017)

2016 Doctoral Symposium at 24th ACM SIGSOFT Symposium on FSE (FSE DS 2016)

2015 Doctoral Symposium at the 10th joint meeting of ESEC and FSE (ESEC/FSE DS 2015)

2015 International Symposium on Software Testing and Analysis, Demo track (ISSTA Demo 2015)

2013 Doctoral Symposium at 28th IEEE/ACM Conference on Automated Software Engineering (ASE DS 2013)

2013 35th International Conference on Software Engineering, Mentoring Program (ICSE MP 2013)

2010 Doctoral Symposium at 25th IEEE/ACM Conference on Automated Software Engineering (ASE DS 2010)

2008	IEEE International Symposium on Software Reliability Engineering (ISSRE 2008), Student Papers Track
2008	International Conference on Software Testing, Verification and Validation (ICST 2008), Student Papers Track
2006	International Conference on Software Engineering, Research Demonstrations (ICSE Demo 2006)
Work. Co-organizer	
2017	Java PathFinder Workshop (JPF 2017)
2017	Workshop on Testing Embedded and Cyber-Physical Systems (TECPS 2017)
2016	Testing: Academia-Industry Collaboration, Practice and Research Techniques (TAIC PART 2016)
2016	38th International Conference on Software Engineering (ICSE 2016), Workshops Committee member
2011	Working Session on Parallel Programming Tools at the UPCRRC Symposium, Intel, Santa Clara, CA
2011	Workshop on State-space Exploration for Automated Testing (SSEAT 2011)
2011	Workshop on the State of the Art in Automated Software Engineering Research (SOTA 2011)
2010	Workshop on State-space Exploration for Automated Testing (SSEAT 2010)
2009	Workshop on State-space Exploration for Automated Testing (SSEAT 2009)
2009	Software Testing Education Workshop (STEW 2009)
2008	Workshop on State-space Exploration for Automated Testing (SSEAT 2008)
Workshop PC	
2024	The 1st International Workshop on Test Flakiness (FTW 2024)
2023	Java PathFinder Workshop (JPF 2023)
2020	Synergy between Software Engineering and Programming Languages Communities (SySEPL 2020)
2019	Workshop on Benchmark Engineering for Software Engineering (BESE 2019)
2019	Workshop on Verification and Validation of Internet of Things (VVIoT 2019)
2018	Java PathFinder Workshop (JPF 2018)
2018	Workshop on Verification and Validation of Internet of Things (VVIoT 2018)
2018	Testing: Academia-Industry Collaboration, Practice and Research Techniques (TAIC PART 2018)
2017	Testing: Academia-Industry Collaboration, Practice and Research Techniques (TAIC PART 2017)
2013	5th Workshop on Constraints in Software Testing, Verification and Analysis (CSTVA 2013)
2012	Java PathFinder Workshop (JPF 2012)
2012	4th Workshop on Constraints in Software Testing, Verification and Analysis (CSTVA 2012)
2011	Ninth International Workshop on Dynamic Analysis (WODA 2011)
2011	End-to-end Test Script Engineering Workshop (ETSE 2011)
2011	18th International SPIN Workshop on Model Checking Software (SPIN 2011)
2011	3rd Workshop on Constraints in Software Testing, Verification and Analysis (CSTVA 2011)
2010	4th International Workshop on Advances and Innovations in Systems Testing (STEP 2010)
2010	2nd Workshop on Constraints in Software Testing, Verification and Analysis (CSTVA 2010)
2010	6th Workshop on Model Based Testing (MBT 2010)
2009	Workshop on Specification and Verification of Component Based Systems (SAVCBS 2009)
2009	3rd International Workshop on Advances and Innovations in Systems Testing (STEP 2009)
2009	5th Workshop on Model Based Testing (MBT 2009)
2008	Workshop on Specification and Verification of Component Based Systems (SAVCBS 2008)
2008	2nd International Workshop on Advances and Innovations in Systems Testing (STEP 2008)
2008	4th Workshop on Model Based Testing (MBT 2008)
2007	5th International Workshop on Dynamic Analysis (WODA 2007)
2007	3rd Workshop on Model Based Testing (MBT 2007)
2006	3rd International Workshop on Software Quality Assurance (SOQUA 2006)
2006	4th International Workshop on Dynamic Analysis (WODA 2006)
2006	2nd Workshop on Model Based Testing (MBT 2006)
2004	4th MIT Student Oxygen Workshop (MIT SOW 2004)
Funding Evaluation	
2021	2 panels at the National Science Foundation (NSF), via Zoom
2021	1 proposal for the Natural Sciences and Engineering Research Council of Canada (NSERC), remotely
2021	1 proposal for the National Research Fund (FNR), Luxembourg, remotely
2020	4 proposals for the National Science Foundation (NSF), remotely
2020	2 proposals for the National Research Fund (FNR), Luxembourg, remotely
2020	1 proposal for University Grants Committee Research Grants Council (UGC/RGC), Hong Kong, remotely
2019	2 panels at the National Science Foundation (NSF), Alexandria, VA
2019	1 proposal for the Qatar National Research Fund (QNRF), Qatar, remotely
2018	1 panel at the National Science Foundation (NSF), Alexandria, VA
2018	1 proposal for the National Research Fund (FNR), Luxembourg, remotely
2017	2 panels at the National Science Foundation (NSF), Arlington, VA
2017	1 proposal for the National Research Fund (FNR), Luxembourg, remotely

2017	1 proposal for University Grants Committee Research Grants Council (UGC/RGC), Hong Kong, remotely
2016	1 panel at the National Science Foundation (NSF), Arlington, VA
2016	1 proposal for the Natural Sciences and Engineering Research Council of Canada (NSERC), remotely
2016	1 proposal for the National Research Fund (FNR), Luxembourg, remotely
2015	1 panel at the National Science Foundation (NSF), Arlington, VA
2015	1 proposal for the National Research Fund (FNR), Luxembourg, remotely
2015	1 proposal for the Qatar National Research Fund (QNRF), Qatar, remotely
2014	2 panels at the National Science Foundation (NSF), Arlington, VA
2014	1 proposal for the Qatar National Research Fund (QNRF), Qatar, remotely
2013	1 proposal for the University Research Board of the American University of Beirut, Lebanon, remotely
2013	1 post-doc proposal for the Swiss National Science Foundation (SNF), Switzerland, remotely
2012	1 proposal for the University Research Board of the American University of Beirut, Lebanon, remotely
2010	2 panels at the National Science Foundation (NSF), Arlington, VA
2009	1 proposal for the Air Force Office of Scientific Research (AFOSR), remotely
2008	2 panels at the National Science Foundation (NSF), Arlington, VA
2007	2 panels at the National Science Foundation (NSF), Arlington, VA
2005	1 panel at the National Science Foundation (NSF), Arlington, VA
<b>Award Evaluation</b>	
2023	ACM SRC Graduate Students Panel at ACM Tapia 2023 conference, judge
2022	ESEC/FSE 2022 Test of Time Award, committee member
2021	ASE Most Influential Paper Award Committee, committee member
2021	ACM SIGSOFT Impact Paper Award Committee, committee <b>Chair</b>
2020	IEEE Computer Science TCSE New Directions Award Committee, committee member
2020	ACM SIGSOFT Impact Paper Award Committee, committee member
2018	ICST 2008 Most Influential Paper Committee, committee <b>Chair</b>
2015	ACM SIGSOFT Impact Paper Award Committee, committee <b>Chair</b>
2014	Award Selection Committee, Haifa Verification Conference (HVC 2014), committee member
2013	Award Selection Committee, Haifa Verification Conference (HVC 2013), committee member
<b>Program Evaluation</b>	
2021	Texas Higher Ed NRUF Review, Computer Science Department, UT San Antonio, expert reviewer, via Zoom
<b>Journal Editor</b>	
2015 – 2017	Guest Co-Editor, special issue of Software Testing, Verification and Reliability (STVR) journal
<b>University (Selected)</b>	
2023 – now	Director of Graduate Studies, 2,600+ students in 8 graduate programs, Dept. of Computer Science, UIUC
2021 – now	PhD Job Search Seminar, Dept. of Computer Science, UIUC, Organizer
2021 – now	Promotions & Tenure Committee, Dept. of Computer Science, UIUC, Member
2020 – 2023	Associate Director of Graduate Studies, Dept. of Computer Science, UIUC
2020 – now	Management Team, Dept. of Computer Science, UIUC, Member
2018 – now	Senate Committee on Admissions, UIUC, Member
2018 – 2020	Senate of the Urbana-Champaign Campus, UIUC, Senator
2018 – 2019	Big Research Initiatives Committee (BRIC), Dept. of Computer Science, UIUC, Member
2018	Summer Research Program for Undergraduates, 50+ students, Computer Science, UIUC, Co-organizer
2016 – 2018	Fellowships, Assistantships & Admissions (FAA) Committee, Dept. of Computer Science, UIUC, <b>Chair</b>
2014 – now	PILOT Seminar for practice academic job talks, Dept. of Computer Science, UIUC, Co-organizer
2014 – 2015	Graduate College Fellowship Board Executive Committee, UIUC, Member
2014 – 2015	Graduate College Area 1 (Engineering & Physical Sciences) Fellowship Committee, UIUC, <b>Chair</b>
2013 – 2016	Graduate College Area 1 (Engineering & Physical Sciences) Fellowship Committee, UIUC, Member
2011 – 2017	Coaching for the ACM International Collegiate Programming Contest (ICPC), UIUC, Faculty Liaison
<b>Presentations</b>	
Invited/visit/job	55 conference and workshop talks, 39 <b>invited</b> talks, 31 visit+remote talks, 9 job talks, 7 panels, 3 posters
04/22	“Combating Flaky Tests”, ISR Distinguished Speaker, UC Irvine, CA
01/21	—, Remote Talk for Students from Serbia, via Zoom
07/20	“Ask me Anything (AMA)”, 35th Conference on Automated Software Engineering (ASE 2020), via Zoom
07/20	“Combating Flaky Tests”, The First Conference on Automation of Software Test (AST 2020), via Zoom
03/20	—, Online Guest Lecture, University of Kragujevac, Serbia, via Zoom
02/20	“Open Source Vulnerability Notification”, Purdue University, West Lafayette, IN
12/19	“Combating Flaky Tests”, Virginia Tech, Blacksburg, VA
11/19	“Progress on Being Proactive in ATAFistic World”, TAV Challenge Winners, Facebook, London, UK
11/19	“Combating Flaky Tests”, Imperial College London, London, UK

05/19 “iFixFlakies: A Framework for Automatically Fixing Order-Dependent Flaky Tests”, U. of Notre Dame, IN  
05/19 “Combating Flaky Tests”, LIP6, Paris, France  
11/18 “Being Proactive in ATAFistic World”, Facebook TAV Challenge Winners, Facebook, London, UK  
09/18 “Improving Reliability of Regression Testing”, Guest Lecture in EE382C-3, UT Austin, TX  
09/18 —, Futurewei Academia Test Forum, Plano, TX  
10/17 “Applying Math and CS for Systematic Software Testing”, University of Missouri–St. Louis, St. Louis, MO  
05/17 “Applying Software Testing for Hardware Resiliency Analysis”, UT ECE Dept. Colloquia, Austin, TX  
09/16 “Flaky Tests Be Gone”, UW PLSE Research Retreat, Leavenworth, WA  
12/15 “Some Software Engineering Research at UIUC”, University of California, Irvine, Irvine, CA  
05/15 “Tempura: Temporal Dimension for IDEs”, “Politehnica” University of Bucharest, Bucharest, Romania  
05/15 —, “Politehnica” University, Timisoara, Romania  
11/14 “Important Challenges in (Regression) Testing”, EPFL, Lausanne, Switzerland  
03/14 “Why Is Mutation Testing Controversial and What Can We Do About It?”, Mutation 2014, Cleveland, OH  
01/13 “ReAssert: Suggesting Repairs for Broken Unit Tests”, Geekfest, Groupon, Chicago, IL  
11/12 “Systematic Software Testing: The Korat Approach”, ACM SIGSOFT Impact Paper Award, 2012, Cary, NC  
11/12 “Detecting Performance Problems via Similar Memory-Access Patterns”, The University of Texas at Austin  
11/12 —, University of Lugano, Lugano, Switzerland  
11/12 —, Google, Zurich, Switzerland  
11/12 —, EPFL, Lausanne, Switzerland  
02/12 “IMUnit: Improved Multithreaded Unit Testing”, Imperial College London, London, UK  
01/12 —, CREST Open Workshop (COW 17), London, UK  
12/11 “Brief Overview of Research on Testing Parallel Code in the I2PC Center”, Intel, Santa Clara, CA  
12/11 —, Intel, Jones Farms, OR  
06/11 “IMUnit: Improved Multithreaded Unit Testing”, University of Lugano, Lugano, Switzerland  
06/11 —, EPFL Summer Research Institute, Lausanne, Switzerland  
03/11 —, Karlsruhe Institute of Technology, Karlsruhe, Germany  
03/11 “Systematic Software Testing Using Test Abstractions”, Saarland University, Saarbrücken, Germany  
03/11 —, SVARM 2011, Saarbrücken, Germany  
03/11 “ReAssert: Suggesting Repairs for Broken Unit Tests”, University of Belgrade, Belgrade, Serbia  
02/11 —, University of Buenos Aires, Buenos Aires, Argentina  
09/10 “Systematic Software Testing Using Test Abstractions”, Purdue University, West Lafayette, IN  
08/10 “Java PathFinder in Research and Teaching at Illinois”, NASA Ames, Moffett Field, CA  
08/10 “ReAssert: Suggesting Repairs for Broken Unit Tests”, Google, Mountain View, CA  
08/10 —, IBM Research - Almaden, San Jose, CA  
08/10 “Systematic Software Testing Using Test Abstractions”, Microsoft Research, Mountain View, CA  
07/10 —, University of Wisconsin-Madison, Madison, WI  
07/10 —, University of Milano-Bicocca, Milan, Italy  
07/10 —, “Politehnica” University, Timisoara, Romania  
02/10 “Model-Based Testing Using Test Abstractions”, Accenture Labs, Chicago, IL  
07/09 “UDITA: Unified Declarative and Imperative Test Abstractions”, SAP Research, Darmstadt, Germany  
03/09 “Model-Based Testing Using Test Abstractions”, EPFL, Lausanne, Switzerland  
03/09 —, Model Based Testing workshop (MBT 2009), York, UK  
11/08 “Automated Testing of Refactoring Engines Using Test Abstractions”, Microsoft Research, Redmond, WA  
07/08 —, North Carolina State University, Raleigh, NC  
01/08 “Systematic Software Testing with Test Abstractions”, Agitar, Mountain View, CA  
01/08 —, Google, Mountain View, CA  
11/07 “Parallel Test Generation and Execution with Korat”, University of Michigan, Ann Arbor, MI  
03/06 “Generating Object-Oriented Unit Tests by Symbolic Execution”, University of Arizona, Tucson, AZ  
11/05 —, University of Warwick, Warwick, UK  
06/05 —, University of Bucharest, Bucharest, Romania  
06/05 “Compiling Declarative Models into Boolean Formulas”, University of Belgrade, Belgrade, Serbia-Montenegro  
06/05 —, University of Novi Sad, Novi Sad, Serbia-Montenegro  
03/05 “Detecting Redundant Object-Oriented Unit Tests”, Parasoft, San Diego, CA  
05/04 “Automatic Testing of Software with Structurally Complex Inputs”, IBM Research, Hawthorne, NY  
04/04 —, University of Illinois at Urbana-Champaign, Urbana-Champaign, IL  
04/04 —, University of Washington, Seattle, WA  
04/04 —, Cornell University, Ithaca, NY  
04/04 —, Rice University, Houston, TX  
04/04 —, University of Chicago, Chicago, IL  
03/04 —, University of Texas at Austin, Austin, TX

02/04 —, Microsoft Research, Redmond, WA

02/04 —, Northwestern University, Evanston, IL

11/03 “Testing Based on a Solver for Executable Predicates”, University of Southern California, Los Angeles, CA

11/03 —, University of California Los Angeles, Los Angeles, CA

04/03 “The MulSaw Approach to Automated Specification-Based Testing”, Stanford University, Stanford, CA

04/03 “Object Equality Profiling”, University of California Berkeley, Berkeley, CA

11/02 “The MulSaw Approach to Automated Specification-Based Testing”, Microsoft Research, Redmond, WA

10/02 —, Nokia Research Center, Burlington, MA

05/01 “Credible Compilation”, Guest Lecturer, Object-Oriented Dynamic Languages course, MIT, Cambridge, MA

01/01 —, Dynamic Languages Seminar, MIT, Cambridge, MA

Conference/workshop

09/23 “Challenges in Teaching Software Engineering Classes”, ASE 2023 New Faculty Symposium, Luxembourg

09/22 “Flaky Tests in Continuous Integration”, 14th JLESC Workshop, Urbana-Champaign, IL

12/20 “Flaky Tests: Some Results and Research Challenges”, Workshop on Research Highlights in Programming Languages at FSTTCS 2020, via Zoom

10/19 “IoT-Flows: Lightweight Policy Enforcement of Information Flows in IoT Infrastructures”, Alexandria, VA

09/19 “Overview of Flaky Tests”, NII Shonan Seminar No.160, Shonan, Japan

05/19 [C87] at USBRCCR Workshop, Ann Arbor, MI

03/19 “Holistic Intelligent Testing: The Test Quality Topic”, Huawei’s Research Summit, Champaign, IL

10/18 “IoT-Flows: Lightweight Policy Enforcement of Information Flows in IoT Infrastructures”, Natal, Brazil

10/18 [C81] at ISSRE 2018, Memphis, TN

08/18 [W27] at SQAMIA 2018, Novi Sad, Serbia

05/18 [C75] at ICSE NIER 2018, Gothenburg, Sweden

11/17 “Support for Security and Safety of Programmable IoT Systems”, NSF CPS PI meeting, Alexandria, VA

09/17 [W26] at SQAMIA 2017, Belgrade, Serbia

07/17 “Support for Security and Safety of Programmable IoT Systems”, DHS Workshop, Washington, DC

09/16 [C69] at ASE 2016 (joint talk with Danny Dig), Singapore, Singapore

06/16 “A Proactive Approach to Detecting Flaky Tests” at ASE 2016 Pre-PC-Meeting Workshop, Passau, Germany

07/15 [C63] at SPLC 2015, Nashville, TN

07/15 “Important Challenges in (Regression) Testing” at ASE 2015 Emerging Ideas Workshop, Baltimore, MD

05/15 [C60] at ICSE 2015 NIER track, Florence, Italy

05/15 [C59] at ICSE 2015, Florence, Italy

12/14 “Evolution-Aware Monitoring-Oriented Programming”, NII Shonan Seminar No.048, Shonan, Japan

09/14 [C56] at ASE 2014, Vasteras, Sweden

07/13 [C51] at ISSTA 2013, Lugano, Switzerland

07/13 [C49] at ECOOP 2013, Montpellier, France

07/12 “Parallel Testing Tools from Illinois”, UPCRRC Workshop, Microsoft Research, Redmond, WA

07/12 [C37] at I2PC Summer School, Urbana, IL

06/12 [C41] at OOPSLA 2012 Pre-PC-Meeting, Orlando, FL

04/12 [C39] at ICST 2012, Montreal, Canada

07/11 [C37] at ASE 2011 Pre-PC-Meeting Workshop, Moffett Field, CA

05/11 [D4] at ICSE Demonstrations Track 2011, Waikiki, HI

08/10 “Verifying X10 Applications”, JPF Summer Project Summit 2010, Mountain View, CA

07/10 [C32] at ISSTA 2010, Trento, Italy

05/10 [C31] at ASE 2010 Pre-PC-Meeting Workshop, Milan, Italy

05/10 [W19] at IWMSE 2010, Cape Town, South Africa

04/10 [C30] at ISSTA 2010 Pre-PC-Meeting Workshop, Milan, Italy

08/09 “Incremental Testing of Parallel Code”, UPCRRC Correctness Workshop, Intel, Hillsboro, OR

07/09 [C31] at ASE 2009 Pre-PC-Meeting Workshop, Marburg, Germany

04/09 [C24] at ICST 2009, Denver, CO

03/09 [C23] at ISSTA 2009 Pre-PC-Meeting Workshop, Raleigh, NC

06/08 [C21] at ASE 2008 Post-PC-Meeting Workshop, Mountain View, CA

05/08 [D2] at JPF Workshop 2008, Sunnyvale, CA

05/07 [W12] at STEP 2007, Memphis, TN

04/06 [W9] at LDTA 2006, Vienna, Austria

06/05 [C11] at SAT 2005, St. Andrews, UK

12/03 “Automated Test Generation”, Seminar 03491 “Understanding Program Dynamics”, Dagstuhl, Germany

10/03 [C8] at OOPSLA 2003, Anaheim, CA

10/03 [C8] at the New England Programming Languages Seminar (NEPLS), Brandeis University, Waltham, MA

05/03 [C7] at RelMiCS 7, Malente, Germany



05/03 [C6] at SAT 2003, Santa Margherita Ligure, Italy  
07/02 [C4] at FME 2002, Copenhagen, Denmark  
05/02 [C5] at the IBM Programming Languages Day, IBM Research, Hawthorne, NY  
11/01 [C2] at ASE 2001, San Diego, CA  
04/00 [W4] at the Masterworks 2000, MIT, Cambridge, MA  
01/99 [W3] at WCAE 1999, Orlando, FL  
01/98 [W1] at the Workshop on Distributed Shared Memory, HICSS 1998, Kohala Coast, HI  
Panels  
07/22 After Graduation: Academia vs Industry, Doctoral Symposium at ISSTA 2022, via Zoom  
11/18 CPS Start-Ups Panel at NSF CPS PI meeting, Alexandria, VA  
11/15 30 ASE and Industry: Match made in Heaven, ASE 2015, Lincoln, NE  
09/12 Benchmarks in Automated Software Engineering, ASE 2012, Essen, Germany  
09/12 Doctoral Symposium, ASE 2012, Essen, Germany  
03/10 “Code-Based Test Data Generation”, Seminar 10111, Dagstuhl, Germany  
04/06 “Formal Methods: It’s not too Much to Ask”, Affiliates Conference, UIUC, Urbana-Champaign, IL  
Posters  
05/15 [C60] at Poster Session, ICSE NIER 2015, Florence, Italy  
08/02 “Object Equality Profiling”, Poster Presentation, IBM T. J. Watson Research Center, Hawthorne, NY  
05/99 “Credible Compilation with Pointers”, Student Poster Session, PLDI 1999, Atlanta, GA

**Released Code**  
<http://mir.cs.illinois.edu/marinov/software.html>  
ASTGen <http://mir.cs.illinois.edu/astgen>, Test generation (using imperative test abstractions)  
Basset <http://mir.cs.illinois.edu/basset>, Systematic testing of actor programs  
CoCo <http://mir.cs.illinois.edu/coco>, Comparing non-adequate test suites using coverage criteria  
CoDeSe <http://mir.cs.illinois.edu/codese>, Dataset for fast deserialization via code generation  
Coverage <http://mir.cs.illinois.edu/coverage>, Containter code instrumented for predicate coverage  
Ekstazi <http://ekstazi.org>, Dynamic regression test selection  
iDFlakies <http://github.com/idflakies/iDFlakies>, Tool for detecting flaky tests  
IDoFT <http://github.com/TestingResearchIllinois/NonDex>, Dataset of flaky tests  
iFixFlakies <http://github.com/TestingResearchIllinois/iFixFlakies>, Tool for fixing flaky tests  
IMUnit <http://mir.cs.illinois.edu/imunit>, Improved multithreaded unit testing  
JaConTeBe <http://sir.unl.edu/portal/bios/JaConTeBe.php>, Java test benchmarks with concurrency faults  
JPF contributions <http://mir.cs.illinois.edu/jpf>, Contributions to the Java PathFinder model checker  
Korat <http://mir.cs.illinois.edu/korat>, Test generation (using declarative test abstractions)  
NonDex <http://github.com/TestingResearchIllinois/NonDex>, Test exploration for non-deterministic specs  
ReAssert <http://mir.cs.illinois.edu/reassert>, Test repair  
ReEx <http://mir.cs.illinois.edu/reex>, Re-execution based exploration of multithreaded (Java) programs  
RTR <http://mir.cs.illinois.edu/rtr>, Systematic testing of refactoring engines on real software projects  
Setac <http://mir.cs.illinois.edu/setac>, Test framework for (Scala) actor programs  
STARTS <http://github.com/TestingResearchIllinois/starts>, Static regression test selection  
Toddler <http://mir.cs.illinois.edu/toddler>, Performance testing based on similar memory patterns  
UDITA <http://mir.cs.illinois.edu/udita>, Test generation (using declarative&imperative test abstractions)  
YASGL <http://github.com/TestingResearchIllinois/yasgl>, Yet another simple graph library

**Graduated Students**  
**University of Illinois at Urbana-Champaign** ..... Urbana-Champaign, IL  
PhD 2023 Chaitra Niddodi, *Code Analysis and Rewriting for Data Debloating and Improved Fuzz Testing*  
co-advised by Sabin Mohan  
PhD 2021 Wing Lam, *Detecting, Characterizing, and Taming Flaky Tests*  
co-advised by Tao Xie  
first job: George Mason University, Fairfax, VA  
PhD 2020 August Shi, *Improving Regression Testing Efficiency and Reliability via Test-Suite Transformations*  
first job: University of Texas at Austin, Austin, TX  
PhD 2019 Owolabi Legunsen, *Evolution-Aware Runtime Verification*  
co-advised by Grigore Rosu  
first job: Cornell University, Ithaca, NY  
PhD 2018 Farah Hariri, *Exploring Design Decisions for Mutation Testing*  
first job: Granular, Champaign, IL  
PhD 2017 Alex Gyori, *Proactively Detecting Unreliable Tests*  
first job: Facebook, Seattle, WA

- PhD 2015 Milos Gligoric, *Regression Test Selection: Theory and Practice*  
first job: University of Texas at Austin, Austin, TX
- PhD 2015 Qingzhou Luo, *Testing, Runtime Verification, and Analysis of Concurrent Programs*  
co-advised by Grigore Rosu  
first job: Google, Mountain View, CA
- PhD 2014 Adrian Nistor, *Understanding, Detecting, and Repairing Performance Bugs*  
co-advised by Shan Lu  
first job: Chapman University, Orange, CA
- PhD 2012 Vilas Jagannath, *Improved Regression Testing of Multithreaded Programs*  
co-advised by Gul Agha  
first job: Optiver LLC, Chicago, IL
- PhD 2011 Steven Lauterburg, *Systematic Testing for Actor Programs*  
first job: Salisbury University, Salisbury, MD
- PhD 2007 Marcelo d'Amorim, *Efficient Explicit-state Model Checking for Programs with Dynamically Allocated Data*  
first job: Federal University of Pernambuco (UFPE), Recife, Brazil
- MS 2020 Peilun Zhang, *Automated Fixing of Wrong Assumptions on Underdetermined Specifications*  
co-advised by Victoria Stodden  
first job: Google, Austin, TX
- MS 2019 Qianyang Peng, *Empirically Revisiting and Enhancing IR-Based Test-Case Prioritization*  
co-advised by Lingming Zhang  
first job: Google, Seattle, WA
- MS 2018 Peiyuan Zhao, *Comparing Module- and Class-Level Regression Test Selection in Continuous Integration*  
first job: Amazon, Seattle, WA
- MS 2018 Milica Hadzi-Tanovic, *Reflection-Aware Static Regression Test Selection*  
first job: PhD student, Technical University of Munich
- MS 2015 Lamyaa Eloussi, *Determining Flaky Tests from Test Failures*  
first job: Salesforce, San Mateo, CA
- MS 2013 Rohan Sharma, *Guidelines for Coverage-based Comparisons of Non-adequate Test Suites*  
co-advised by Matt Caesar  
first job: Dropbox, San Francisco, CA
- MS 2012 Shin Hwei Tan, *@tComment: Testing Javadoc Comments to Detect Comment-Code Inconsistencies*  
co-advised by Lin Tan  
first job: PhD student, National University of Singapore
- MS 2011 Mathew Kirn, *Evaluating Machine-Independent Metrics for State-Space Exploration*  
first job: Microsoft, Redmond, WA
- MS 2010 Vilas Jagannath, *Reducing the Costs of Bounded-Exhaustive Testing*  
co-advised by Gul Agha  
first job: continued PhD studies
- MS 2007 Kely Garcia, *Testing the Refactoring Engine of the NetBeans IDE*  
first job: Strata Decision Technology, Champaign, IL

PhD Thesis

Committee Member Served on UIUC PhD committees for preliminary exams (and final defenses when a year is listed) for Tankut Baris Aktemur (2009), Deniz Arsan (2023), Angello Astorga, Federico Balaguer (2006), Sean Bartell (2021), Feng Chen (2009), Nicholas Y. Chen (2013), Anthony Edward Cozzie (2010), Daniel Dig (2007), Yue Lu Duan (2014), Saikat Dutta (2023), Jianxiong Gao (2019), Pranav Garg (2015), Munawar Hafiz (2010), Emily Hastings (2023), Zixin Huang, Dongyun Jin (2012), Rajesh K. Karmani (2013), Jacob Laurel, Choonghwan Lee (2013), Yun Young Lee (2014), Sihan Li (2019), Yu Lin (2015), Chao Liu (2007), Shan Lu (2008), Abdulrahman Mahmoud (2020), Susannah Mansky (2020), Patrick O'Neil Meredith (2012), Abdullah Muza-hid (2012), Stanislav Negara (2013), Semih Okur (2016), Jeffrey L. Overbey (2011), Amarin Phaosawasdi (2020), Shanxiang Qi (2013), Swarup Kumar Sahoo (2012), Traian Florin Serbanuta (2010), Sankalp Singh (2012), Ahmed Adel Sobeih (2008), Francesco Sorrentino (2014), Lin Tan (2009), Samira Tasharofi (2013), Joseph A. Tucek (2011), Radha Venkatagiri (2020), Wenyu Wang (2022), Zhengkai Wu (2022), Weiwei Xiong (2013), Mengjia Yan (2019), Wei Yang (2018), Ayesha Yasmeen (2011), Jiyong Yu (2023), Yi Zhang, Zirui Neil Zhao, and Pin Zhou (2006)

External Member

Also served on the PhD committees for Daniel Elsner at TUM, Germany (2023), Peisen Yao at HKUST, Hong Kong (2022), Emmanouil (Manos) Koukoutos at EPFL, Switzerland (2018), Kaiyuan Wang at the University of Texas at Austin (2018), Yi Li at the University of Toronto, Canada (2018), Mohammad Amin Alipour at Oregon State University (2017), Jonathan Bell at Columbia University (2016), Linhai Song at the University of Wisconsin–Madison (2015), Tihomir Gvero at EPFL, Switzerland (2014), Sai Zhang at the University of Washington (2014), Lingming Zhang at the University of Texas at Austin (2014), Chang Hwan

Peter Kim at the University of Texas at Austin (2013), Mehdi Mirzaaghaei at the University of Lugano, Switzerland (2012), Junaid Haroon Siddiqui at the University of Texas at Austin (2011), and Juan Pablo Galeotti at the University of Buenos Aires, Argentina (2011)

## Teaching Experience

Fall 2023, 2022, 2021, 2020, 2017, 2016, 2014, 2011, 2010, 2008 & 2007

**University of Illinois at Urbana-Champaign** ..... Urbana-Champaign, IL

**Teacher** for “Advanced Topics in Software Engineering”, a graduate course on selected topics. While we do not require research projects, still **one student published one paper** from Fall 2014, **two students published two papers** from Fall 2011, **four students published two papers** from Fall 2010, **three students published two papers** from Fall 2008, and **two students published three papers** from Fall 2007. This course was also offered online in the department’s Illinois Internet Computer Science (I2CS) program.

Spring 2016, 2015, 2012, 2009, 2008 & 2006

**Teacher** for “Software Testing”, a course for senior undergraduate and junior graduate students. The students’ scores of my teaching for Spring 2006 and 2015 placed me on the UIUC “(Incomplete) List of **Teachers Ranked as Excellent** by Their Students”.

Spring 2021/2019, 2018/14/10 & 2007

**Teacher** for “Software Engineering II”, second course in an introductory sequence on software engineering. This course was also offered online in the department’s Illinois Internet Computer Science (I2CS) program.

Fall 2015, 2013, 2009 & 2006

**Teacher** for “Software Engineering I”, first course in an introductory sequence on software engineering. This course was also offered online in the department’s Illinois Internet Computer Science (I2CS) program.

Fall 2018

**Teacher** for “Software Testing for All”, a project-based, graduate course on dynamic and static program analysis for various emerging domains and properties.

February 2011

**Teacher** for “Automated Test Generation and Repair”, an intensive, week-long course at the Rio 2011 Summer School in Computer Science in Rio Cuarto, Argentina.

Fall 2005 & Spring 2005

**Teacher** for “Software Testing and Analysis”, a project-based, graduate course on dynamic and static program analysis for finding software errors. Based on the course projects from Fall, **two students published two papers**, and from Spring, **five students published four papers**.

**Massachusetts Institute of Technology** ..... Cambridge, MA

08/01 – 12/04

**Supervisor**, with Sarfraz Khurshid, of one M.Eng. student, two AUP (Advanced Undergraduate Project) students, and six UROP (Undergraduate Research Opportunities) students in the MulSaw project.

01/01 – 05/01

**Supervisor** of one AUP and two UROP students in the MIT’s Direct-To (D2) project.

09/99 – 12/99

**Teaching Assistant** for “Computer Language Engineering”, an undergraduate compiler course that includes a team project on compiler implementation.

**School of Electrical Engineering, University of Belgrade** ..... Belgrade, Yugoslavia

10/97 – 12/97 & 10/96 – 12/96

**Lab Assistant** for undergraduate courses in computer architecture and digital design. Participated in the development of simulation programs for lab assignments [W3] and helped students use these programs.

05/96

**Coach** of the University of Belgrade Computer Science team for the National Contest of Electrical Engineering Schools. Selected and prepared our team, developed problems for other teams, and marked answers.

10/93 – 07/95

**Student Assistant** for “Programming Languages and Methods” course. Helped students in overcoming weak points, reviewed problem sets, and graded exams; four semesters.

**Math Academy High School** ..... Belgrade, Yugoslavia

04/96 – 06/96

**Teacher** for the “Operating Systems” course at the Math Academy, a high school specializing in math and computer science, unique in Yugoslavia. Developed lecture notes, gave lectures, and graded pupils.

04/96

**Jury Member** at the Province of Vojvodina math contest for primary school pupils. Graded solutions.

## Contests

02/96

6 international, 9 national (8 in former Yugoslavia), total of over 30 above regional level

11/95

**World Finals**, ACM International Collegiate Programming Contest (ICPC), Philadelphia, PA

05/95

3rd place, Eastern European Regional ACM ICPC, Bucharest, Romania

10/94

**1st place**, Computer Science area, National Contest of Electrical Engineering Schools, Budva, Yugoslavia

07/91

Eastern European Regional ACM ICPC, Bucharest, Romania

05/91

International Mathematical Olympiad, Sigtuna, Sweden

05/91

**2nd prize**, International Olympiad in Informatics, Athens, Greece

2nd prize, Balkan Mathematical Olympiad, Constanța, Romania

<b>Funding</b>	
09/23 – 09/24	17 NSF grants, 8 industry grants, 5 industry gifts, 2 faculty awards; <b>my share over \$6M of \$12.9M total</b>
08/23 – 08/25	“Enhanced LLVM-COV”, research grant from Boeing, PI: Darko Marinov, \$146k
08/22 – 08/23	“Advancing Code Translation and Validation Through Neuro-Symbolic Approaches”, research grant from IBM-Illinois Discovery Accelerator Institute, PI: Reyhaneh Jabbarvand, co-PI: Darko Marinov, \$302k
09/21 – 12/21	“AI-Enabled Automated Testing for Cloud Applications”, research grant from IBM-Illinois Discovery Accelerator Institute, PI: Reyhaneh Jabbarvand, co-PIs: Lingming Zhang, Darko Marinov, \$75k
10/20 – 09/23	“Adding Verifiability into DevSecOps (AVID)”, PI: Darko Marinov, subcontract from Raytheon BBN Technologies Corp., <i>Air Force Research Laboratory</i> , FA8750-21-C-0527, \$42k
10/20 – 09/23	“Sociotechnical Interventions for Nurturing Successful Team Learning Experiences”, PI: Brian Bailey, co-PIs: Karrie Karahalios, Darko Marinov, Emma Mercier, <i>National Science Foundation</i> , IIS-2016908, \$750k
07/20 – 06/24	“Thwarting Microarchitectural Replay Attacks”, research grant from SRC, PI: Josep Torrellas, co-PIs: Chris Fletcher, Darko Marinov, \$210k
12/18 – 12/19	“SHF: Medium: Software Engineering for Hardware Errors”, PI: Sarita Adve, co-PIs: Chris Fletcher, Darko Marinov, Sasa Misailovic, <i>National Science Foundation</i> , CCF-1956374, \$1.2M
10/18	“Holistic Intelligent Testing: The Test Quality Topic”, research grant from Huawei, \$140k
10/18 – 09/22	“Being Proactive in ATAFistic World”, gift from Facebook Testing and Verification Research Award, \$10k
08/18 – 07/20	“SHF: Medium: Collaborative Research: Enhancing Continuous Integration Testing for the Open-Source Ecosystem”, PI: Darko Marinov; also non-UIUC: Jon Bell, Lingming Zhang, <i>National Science Foundation</i> , CCF-1763788, \$437k
07/18 – 06/21	“EAGER: Preserve/Destroy Decisions for Simulation Data in Computational Physics and Beyond”, PI: Victoria Stodden, co-PI: Darko Marinov, <i>National Science Foundation</i> , OAC-1839010, \$300k
09/17 – 08/19	“InvisiSpec: Invisible Speculation for Secure and Efficient Speculative Execution, Hardware/Software Support for Data Oblivious ISA Extensions”, research grant from Intel, UIUC: Chris Fletcher, Josep Torrellas, Darko Marinov; also non-UIUC: Adam Morrison, Mohit Tiwari, \$900k
01/17 – 12/19	“EAGER:USBRCR: Collaborative Research: Lightweight Policy Enforcement of Information Flows in IoT Infrastructures”, PI: Darko Marinov; also non-UIUC: Atul Prakash, José Augusto Suruagy Monteiro, Paulo André da Silva Gonçalves, Marcelo d’Amorim, Kiev Gama, <i>National Science Foundation</i> , CNS-1740916, \$136k
08/16	“CPS: Synergy: Collaborative Research: Support for Security and Safety of Programmable IoT Systems”, PI: Darko Marinov; also non-UIUC: Atul Prakash, <i>National Science Foundation</i> , CNS-1646305, \$352k
03/15	“Improving Regression Testing Efficiency”, gift from Qualcomm, \$50k
12/14 – 11/17	“Combating Flaky Tests”, gift from Google Faculty Research Awards, \$51k
09/14 – 08/17	“SHF:Small: Revisiting Assumptions of Regression Testing”, PI: Darko Marinov; <i>National Science Foundation</i> , CCF-1421503, \$462k (\$12k REU)
08/14 – 07/17	“XPS: FULL: FP: Collaborative Research: Model-based, Event Driven Scalable Programming for the Mobile Cloud”, PI: Gul Agha, co-PI: Darko Marinov; also non-UIUC: Daniel Jackson, <i>National Science Foundation</i> , CCF-1438982, \$682k (\$16k REU)
09/12 – 08/15	“SHF: Medium: Collaborative Research: Improved Performance Testing and Debugging”, PI: Darko Marinov, co-PI: Tao Xie; also non-UIUC: Guoqing (Harry) Xu, <i>National Science Foundation</i> , CCF-1409423, \$616k (\$16k REU)
07/12 – 06/16	“SHF: Small: Interactive Refactoring for Multicore Parallelism”, PI: Danny Dig, co-PI: Darko Marinov; <i>National Science Foundation</i> , CCF-1219027, \$250k
10/10	“SHF: Large: Collaborative Research: Science and Tools for Software Evolution”, UIUC PI: Danny Dig, co-PIs: Brian Bailey, Ralph Johnson, Darko Marinov; also non-UIUC: Don Batory, <i>National Science Foundation</i> CCF-1213091, \$1.8M
09/10 – 08/14	Unrestricted gift for the C.W. Gear Outstanding Junior Faculty Award, Department of Computer Science, UIUC, \$4k
08/10 – 08/11	“Collaborative Research: SHF: Large: Designing the Programmable Many-Core for Extreme Scale Computing”, UIUC PI: Josep Torrellas, co-PIs: Sam King, Darko Marinov; also non-UIUC: Sam Midkiff, <i>National Science Foundation</i> CCF-1012759, \$1.8M
06/10 – 05/13	Unrestricted gift for the Beckman Fellowship, Center for Advanced Study, UIUC, \$8k
03/10 – 08/11	“Collaborative Research: II-EN: Infrastructure Support for Software Testing Research”, UIUC PI: Darko Marinov; also non-UIUC: Gregg Rothermel, Tao Xie, Sarfraz Khurshid, <i>National Science Foundation</i> CNS-0958199, \$277k
02/10	“Static and Dynamic Analysis Tool for Testing Concurrent Embedded Systems”, research grant from Samsung Advanced Institute of Technology, PI: Grigore Rosu, co-PI: Darko Marinov, \$100k
09/09 – 08/12	“Systematic Testing in and for X10”, gift from IBM X10 Innovation Grants, \$20k
06/08 – 05/13	“SHF: Small: IMUnit: Improved Multithreaded Unit Testing”, PI: Darko Marinov, co-PI: Grigore Rosu, <i>National Science Foundation</i> CCF-0916893, \$500k
	“CAREER: Systematic Software Testing Using Test Abstractions”, PI: Darko Marinov, <i>National Science</i>

*Foundation CCF-0746856, \$406k (\$6k REU)*

09/06 – 08/08

“Collaborative Research: SoD-TEAM: A Feedback-Based Architecture for Highly Reliable Embedded Software”, UIUC PI: Tarek Abdelzaher, co-PIs: Lui Sha, Marco Caccamo, Darko Marinov; also non-UIUC: Aloysius Mok, James Browne, Fei Xie, Ella Atkins, *National Science Foundation CNS-0613665, \$200k*

08/06 – 07/09

“CSR-PDOS: Improving System Reliability via Delta Execution”, PI: Yuanyuan Zhou, co-PIs: William Sanders, Craig Zilles, Darko Marinov, *National Science Foundation CNS-0615372, \$762k (\$12k REU)*

11/05

“Theory and Practice of Object-Oriented Unit Tests”, gift from Microsoft, \$5k