Darko Marinov

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Siebel School of Computing and Data Science
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Education

2005 **Massachusetts Institute of Technology** . . . . . Cambridge, MA
PhD in Computer Science, dissertation: "Automatic Testing of Software with Structurally Complex Inputs"

2000 SM in Computer Science, dissertation: "Credible Compilation", minor: Mathematics (Combinatorics)

1997 **School of Electrical Engineering, University of Belgrade** . . . . . Belgrade, Yugoslavia
BS in Computer Science and Engineering

Research Interests **Software Engineering**, in particular improving software quality; software testing; regression testing

Experience

01/05 – now **University of Illinois at Urbana-Champaign** . . . . . Urbana-Champaign, IL
Leader, Software Testing and Analysis group, advising 6 PhD+1 MS students, graduated 12 PhD+11 MS

03/22 – 09/22 **Katana Graph, Inc.** . . . . . Austin, TX
Senior Scientist, CTO: Chris Rossbach, Manager: Milos Gligoric

08/20 – 09/20 **[Anonymous] Law Office** . . . . . Chicago, IL
Software Expert for a Case in Federal Court, Lawyer: [Anonymous] – contact me for details

01/18 – 02/19 **Runtime Verification, Inc.** . . . . . Urbana, IL
Chief Quality Officer, CEO: Grigore Rosu

01/13 – 06/13 **Groupon, Inc.** . . . . . Chicago, IL
Temporary Applied Quality Engineering Researcher, Manager: Jeff Ayars

09/12 – 12/12 **The University of Texas at Austin** . . . . . Austin, TX
Sabbatical Visitor, Hosts: Sarfraz Khurshid and Don Batory

09/98 – 12/04 **Massachusetts Institute of Technology** . . . . . Cambridge, MA
Research and Teaching Assistant, Program Analysis and Compilation group, Advisor: Martin Rinard

06/03 – 08/03 **Microsoft Research** . . . . . Redmond, WA
Intern, Foundations of Software Engineering group, Manager: Yuri Gurevich, Mentor: Wolfram Schulte

05/02 – 08/02 **IBM T. J. Watson Research Center** . . . . . Hawthorne, NY
Intern, Advanced Programming Tools group, Manager: John Field, Mentor: Rob O'Callahan

Awards&Honors

Community Honor

2023 Fellow of Automated Software Engineering, bestowed by the ASE Steering Committee

Test-of-Time Wins

2019 ACM SIGSOFT **Impact Paper Award** for paper [C12] (ESEC/FSE 2005)
2015 ASE **Most Influential Paper** Award for paper [C2] (ASE 2001)
2012 ACM SIGSOFT **Impact Paper Award** for paper [C3] (ISSTA 2002)

Test-of-Time Loss

2024 ACM SIGSOFT FSE 2024 **Test-of-Time Runner-Up Honorable Mention** for paper [C58] (FSE 2014)

More Paper Awards

2021 ACM SIGSOFT **Distinguished Paper Award** for paper [C100] (ISSTA 2021)
2017 ACM SIGSOFT **Distinguished Paper Award** for paper [C74] (ESEC/FSE 2017)
2017 CHI **Best Paper Award** for paper [C73] (CHI 2017)
2016 ACM SIGSOFT **Distinguished Paper Award** for paper [C70] (ASE 2016)
2015 ACM SIGSOFT **Distinguished Paper Award** for paper [C61] (ISSTA 2015)
2010 ACM SIGSOFT **Distinguished Paper Award** for paper [C31] (ICSE 2010)
2005 ACM SIGSOFT **Distinguished Paper Award** for paper [C12] (ESEC/FSE 2005)
2002 ACM SIGSOFT **Distinguished Paper Award** for paper [C3] (ISSTA 2002)

Advising

2022 CRA-E **Undergraduate Research Faculty Mentoring** Award
2020 Campus Award for **Excellence in Guiding Undergraduate Research**, UIUC
2014 Engineering Council Award for **Excellence in Advising**, University of Illinois at Urbana-Champaign

Teaching

2023 UIUC "List of **Teachers Ranked as Excellent** by Their Students" for Fall 2023
2021 UIUC "List of **Teachers Ranked as Excellent** by Their Students" for Fall 2021
2015 UIUC "List of **Teachers Ranked as Excellent** by Their Students" for Spring 2015
2006 UIUC "Incomplete List of **Teachers Ranked as Excellent** by Their Students" for Spring 2006

Reviewing

2025 **Reliable Rapid Response Reviewer** for ISSTA 2025
2024 **Distinguished Reviewer Award** for ASE 2024
2023 **Reliable Rapid Response Reviewer** for ESEC/FSE 2023
2022 **Distinguished Reviewer Award** for ESEC/FSE 2022
2022 **Reliable Rapid Response Reviewer** for ICSE SEIP 2022
2021 **Distinguished PC Member Award** for ASE 2021
2020 **Reliable Rapid Response Reviewer** for ASE 2020
2019 **Distinguished Reviewer Award**, Program Committee (PC) member for ICST 2019
2018 **Reliable Rapid Response Reviewer** for ICSE 2018
2017 **Distinguished Reviewer Award**, Expert-Review Panel (ERP) member for ASE 2017

More Awards&Honors

2010 C.W. Gear **Outstanding Junior Faculty** Award, Department of Computer Science, UIUC
2010 **Beckman Fellow**, Center for Advanced Study, University of Illinois at Urbana-Champaign
2008 NSF Faculty Early Career Development (**CAREER**) Program Award

Publications 114 conference papers, 13 demo papers, 31 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

CGO 2025 C114. Keyur Joshi, Rahul Singh, Tommaso Bassetto, Sarita Adve, Darko Marinov, and Sasa Misailovic. FastFlip: Compositional SDC Resiliency Analysis. In *Proc. of the 21st ACM/IEEE International Symposium on Code Generation and Optimization*, pages to–appear, Las Vegas, NV, Mar. 2025

ISSRE 2024 C113. Hao Wang, Pu (Luke) Yi, Jeremias Parladorio, Wing Lam, Darko Marinov, and Tao Xie. Hierarchy-Aware Regression Test Prioritization. In *Proc. of the 35th IEEE International Symposium on Software Reliability Engineering*, pages 343–354, Tsukuba, Japan, Oct. 2024. (acceptance: 26%, 53/205)

ICSME NIER 2024 C112. Muhammad Salman Abid, Mrigank Pawagi, Sugam Adhikari, Xuyan Cheng, Ryed Badr, Md Wahiduzzaman, Vedant Rathi, Ronghui Qi, Choiyin Li, Lu Liu, Rohit Sai Naidu, Licheng Lin, Que Liu, Asif Zubayer Palak, Mehzabin Haque, Xinyu Chen, Darko Marinov, and Saikat Dutta. GlueTest: Testing Code Translation via Language Interoperability. In *Proc. of the 40th International Conference on Software Maintenance and Evolution, New Ideas and Emerging Results*, pages 612–617, Flagstaff, AZ, Oct. 2024. (acceptance: 29%, 10/35)

ISSTA 2024 C111. Runxiang Cheng, Shuai Wang, Reyhaneh Jabbarvand, and Darko Marinov. Revisiting Test-Case Prioritization on Long-Running Test Suites. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 615–627, Vienna, Austria, Sept. 2024. (acceptance: 21%, 143/694)

ACM REP 2024 C110. Samuel Grayson, Faustino Aguilar, Reed Milewicz, Daniel S. Katz, and Darko Marinov. A Benchmark Suite and Performance Analysis of User-Space Provenance Collectors. In *Proc. of the 2nd ACM Conference on Reproducibility and Replicability*, pages 85–95, Rennes, France, June 2024. (acceptance: 66%, 15/23)

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: 29%, 117/406)

ACM 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, Khalique 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, Tifany 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, Tifany 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** in 2014. This paper **won Test-of-Time Award Runner-Up Honorable Mention** in 2024.

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)

ICST 2012 C41. Shin Hwei Tan, Darko Marinov, Lin Tan, and Gary T. Leavens. @tComment: Testing Javadoc Comments to Detect Comment-Code Inconsistencies. In *Proc. of the Fifth IEEE International Conference on Software Testing, Verification and Validation*, pages 260–269, Montreal, Canada, Apr. 2012. (acc: 27%, 39/145)

ICST 2012 C40. Junaid Haroon Siddiqui, Darko Marinov, and Sarfraz Khurshid. Lightweight Data-flow Analysis for Execution-driven Constraint Solving. In *Proc. of the Fifth IEEE International Conference on Software Testing, Verification and Validation*, pages 91–100, Montreal, Canada, Apr. 2012. (acceptance: 27%, 39/145)

ICST 2012 C39. Milos Gligoric, Peter C. Mehlitz, and Darko Marinov. X10X: Model Checking a New Programming Language with an "Old" Model Checker. In *Proc. of the Fifth IEEE International Conference on Software Testing, Verification and Validation*, pages 11–20, Montreal, Canada, Apr. 2012. (acceptance: 27%, 39/145) This paper was **nominated for the best paper award**.

ISSRE 2011 C38. Lingming Zhang, Darko Marinov, Lu Zhang, and Sarfraz Khurshid. An Empirical Study of JUnit Test-Suite Reduction. In *Proc. of the 22nd IEEE International Symposium on Software Reliability Engineering*, pages 170–179, Hiroshima, Japan, Nov. 2011. (acceptance: 26%, 27/106)

ESEC/FSE 2011 C37. Vilas Jagannath, Milos Gligoric, Dongyun Jin, Qingzhou Luo, Grigore Roşu, and Darko Marinov. Improved Multithreaded Unit Testing. In *Proc. of the 8th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 223–233,

Szeged, Hungary, Sept. 2011. (acceptance: 17%, 34/203)

ISSTA 2011 C36. Milos Gligoric, Darko Marinov, and Sam Kamin. CoDeSe: Fast Deserialization via Code Generation. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 298–308, Toronto, Canada, July 2011. (acceptance: 29%, 35/121)

ISSTA 2011 C35. Vilas Jagannath, Qingzhou Luo, and Darko Marinov. Change-Aware Preemption Prioritization. In *Proc. of the ACM International Symposium on Software Testing and Analysis*, pages 133–143, Toronto, Canada, July 2011. (acceptance: 29%, 35/121)

FASE 2011 C34. Rohan Sharma, Milos Gligoric, Andrea Arcuri, Gordon Fraser, and Darko Marinov. Testing Container Classes: Random or Systematic? In *Proc. of the Fundamental Approaches to Software Engineering*, pages 262–277, Saarbrucken, Germany, Mar. 2011. (acceptance: 30%, 29/99)

MICRO 2010 C33. Adrian Nistor, Darko Marinov, and Josep Torrellas. InstantCheck: Checking the Determinism of Parallel Programs Using On-the-fly Incremental Hashing. In *Proc. of the 43rd Annual IEEE/ACM International Symposium on Microarchitecture*, pages 251–262, Atlanta, GA, Dec. 2010. (acceptance: 19%, 45/248)

ISSTA 2010 C32. Brett Daniel, Tihomir Gvero, and Darko Marinov. On Test Repair using Symbolic Execution. In *Proc. of the International Symposium on Software Testing and Analysis*, pages 207–218, Trento, Italy, July 2010. (acceptance: 23%, 24/105)

ICSE 2010 C31. Milos Gligoric, Tihomir Gvero, Vilas Jagannath, Sarfraz Khurshid, Viktor Kuncak, and Darko Marinov. Test Generation through Programming in UDITA. In *Proc. of the 32nd International Conference on Software Engineering*, pages 225–234, Cape Town, South Africa, May 2010. (acceptance: 15%, 54/380) This paper **won an ACM SIGSOFT Distinguished Paper Award**.

ICST 2010 C30. Milos Gligoric, Vilas Jagannath, and Darko Marinov. MuTMuT: Efficient Exploration for Mutation Testing of Multithreaded Code. In *Proc. of the 3rd International Conference on Software Testing, Verification, and Validation*, pages 55–64, Paris, France, Apr. 2010. (acc: 27%, 41/154) **Invited for journal submission**.

FASE 2010 C29. Steven Lauterburg, Rajesh K. Karmani, Darko Marinov, and Gul Agha. Evaluating Ordering Heuristics for Dynamic Partial-Order Reduction Techniques. In *Proc. of the Fundamental Approaches to Software Engineering*, pages 308–322, Paphos, Cyprus, Mar. 2010. (acceptance: 25%, 24/96)

MICRO 2009 C28. Adrian Nistor, Darko Marinov, and Josep Torrellas. Light64: Lightweight Hardware Support for Race Detection during Systematic Testing of Parallel Programs. In *Proc. of the 42nd IEEE/ACM International Symposium on Microarchitecture*, pages 541–552, New York, NY, Dec. 2009. (acceptance: 25%, 52/210)

ASE-s 2009 C27. Junaid Siddiqui, Darko Marinov, and Sarfraz Khurshid. Optimizing a Structural Constraint Solver for Efficient Software Checking. In *Proc. of the 24th IEEE/ACM Conference on Automated Software Engineering*, pages 615–619, Auckland, New Zealand, Nov. 2009. (Short paper) (acceptance: 32%, (38+33)/222)

ASE 2009 C26. Steven Lauterburg, Mirco Dotta, Darko Marinov, and Gul Agha. A Framework for State-Space Exploration of Java-based Actor Programs. In *Proc. of the 24th IEEE/ACM Conference on Automated Software Engineering*, pages 468–479, Auckland, New Zealand, Nov. 2009. (acceptance: 18%, 38/222)

ASE 2009 C25. Brett Daniel, Vilas Jagannath, Danny Dig, and Darko Marinov. ReAssert: Suggesting Repairs for Broken Unit Tests. In *Proc. of the 24th IEEE/ACM Conference on Automated Software Engineering*, pages 433–444, Auckland, New Zealand, Nov. 2009. (acceptance: 18%, 38/222)

ICST 2009 C24. Milos Gligoric, Tihomir Gvero, Steven Lauterburg, Darko Marinov, and Sarfraz Khurshid. Optimizing Generation of Object Graphs in Java PathFinder. In *Proc. of the 2nd International Conference on Software Testing, Verification, and Validation*, pages 51–60, Denver, CO, Apr. 2009. (acceptance: 33%, 46/141)

FASE 2009 C23. Vilas Jagannath, Yun Young Lee, Brett Daniel, and Darko Marinov. Reducing the Costs of Bounded-Exhaustive Testing. In *Proc. of the Fundamental Approaches to Software Engineering*, pages 171–185, York, UK, Mar. 2009. (acceptance: 25%, 30/124)

ISSTA 2008 C22. Bassem Elkarablieh, Darko Marinov, and Sarfraz Khurshid. Efficient Solving of Structural Constraints. In *Proc. of the International Symposium on Software Testing and Analysis*, pages 39–50, Seattle, WA, July 2008. (acceptance: 26%, 26/100)

ICSE 2008 C21. Steven Lauterburg, Ahmed Sobeih, Mahesh Viswanathan, and Darko Marinov. Incremental State-Space Exploration for Programs with Dynamically Allocated Data. In *Proc. of the 30th International Conference on Software Engineering*, pages 291–300, Leipzig, Germany, May 2008. (acceptance: 16%, 56/371)

ESEC/FSE 2007 C20. Brett Daniel, Danny Dig, Kely Garcia, and Darko Marinov. Automated Testing of Refactoring Engines. In *Proc. of the 6th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 185–194, Dubrovnik, Croatia, Sept. 2007. (acceptance: 17%, 42/251)

ESEC/FSE 2007 C19. Sasa Misailovic, Aleksandar Milicevic, Nemanja Petrovic, Sarfraz Khurshid, and Darko Marinov. Parallel Test Generation and Execution with Korat. In *Proc. of the 6th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 135–144, Dubrovnik, Croatia, Sept. 2007. (acceptance: 17%, 42/251)

ISSTA 2007 C18. Marcelo d'Amorim, Steven Lauterburg, and Darko Marinov. Delta Execution for Efficient State-Space Exploration of Object-Oriented Programs. In *Proc. of the International Symposium on Software Testing*

and Analysis, pages 50–60, London, UK, July 2007. (acceptance: 22%, 22/100) This paper was **invited for journal submission**.

ISSRE 2006 C17. Tao Xie, Jianjun Zhao, Darko Marinov, and David Notkin. Detecting Redundant Unit Tests for AspectJ Programs. In *Proc. of the 17th IEEE International Symposium on Software Reliability Engineering*, pages 179–190, Raleigh, NC, Nov. 2006. (acceptance: 38%, 38/102)

ICFEM 2006 C16. Marcelo d'Amorim, Ahmed Sobeih, and Darko Marinov. Optimized Execution of Deterministic Blocks in Java PathFinder. In *Proc. of the 8th International Conference on Formal Engineering Methods*, volume 4260 of *LNCS*, pages 549–567, Macau, China, Nov. 2006. (acceptance: 36%, 38/108)

ASE 2006 C15. Marcelo d'Amorim, Carlos Pacheco, Tao Xie, Darko Marinov, and Michael D. Ernst. An Empirical Comparison of Automated Generation and Classification Techniques for Object-Oriented Unit Testing. In *Proc. of the 21st IEEE/ACM Conference on Automated Software Engineering*, pages 59–68, Tokyo, Japan, Sept. 2006. (acceptance: 19%, 22/121) This paper was **nominated for the best paper award**.

ECOOP 2006 C14. Danny Dig, Can Comertoglu, Darko Marinov, and Ralph Johnson. Automated Detection of Refactorings in Evolving Components. In *Proc. of the 20th European Conference on Object-Oriented Programming*, volume 4067 of *LNCS*, pages 404–428, Nantes, France, July 2006. (acceptance: 14%, 21/160)

ICFEM 2005 C13. Ahmed Sobeih, Mahesh Viswanathan, Darko Marinov, and Jennifer Hou. Finding Bugs in Network Protocols Using Simulation Code and Protocol-Specific Heuristics. In *Proc. of the 7th International Conference on Formal Engineering Methods*, volume 3785 of *LNCS*, pages 235–250, Manchester, UK, Nov. 2005. (acceptance: 41%, 30/74)

ESEC/FSE 2005 C12. Koushik Sen, Darko Marinov, and Gul Agha. CUTE: A Concolic Unit Testing Engine for C. In *Proc. of the 5th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 263–272, Lisbon, Portugal, Sept. 2005. (acceptance: 16%, 32/201) This paper **won an ACM SIGSOFT Distinguished Paper Award** in 2005. This paper also **won an ACM SIGSOFT Impact Paper Award** in 2019.

SAT 2005 C11. Darko Marinov, Sarfraz Khurshid, Suhabe Bugrara, Lintao Zhang, and Martin C. Rinard. Optimizations for Compiling Declarative Models into Boolean Formulas. In *Proc. of the 8th Conference on Theory and Applications of Satisfiability Testing*, volume 3569 of *LNCS*, pages 187–202, St. Andrews, UK, June 2005. (acceptance: 36%, 26/73)

TACAS 2005 C10. Tao Xie, Darko Marinov, Wolfram Schulte, and David Notkin. Symstra: A Framework for Generating Object-Oriented Unit Tests using Symbolic Execution. In *Proc. of the 11th International Conference on Tools and Algorithms for the Construction and Analysis of Systems*, pages 365–381, Edinburgh, UK, Apr. 2005. (acceptance: 24%, 33/140)

ASE 2004 C9. Tao Xie, Darko Marinov, and David Notkin. Rostra: A Framework for Detecting Redundant Object-Oriented Unit Tests. In *Proc. of the 19th IEEE Conference on Automated Software Engineering*, pages 196–205, Linz, Austria, Sept. 2004. (acceptance: 14%, 25/183)

OOPSLA 2003 C8. Darko Marinov and Robert O'Callahan. Object Equality Profiling. In *Proc. of the 18th Annual ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications*, pages 313–325, Anaheim, CA, Oct. 2003. (acceptance: 18%, 26/147)

RelMiCS 2003 C7. Konstantine Arkoudas, Sarfraz Khurshid, Darko Marinov, and Martin Rinard. Integrating Model Checking and Theorem Proving for Relational Reasoning. In *Proc. of the 7th International Seminar on Relational Methods in Computer Science*, volume 3051 of *LNCS*, pages 21–33, Malente, Germany, May 2003. (acceptance: 53%, 21/40)

SAT 2003 C6. Sarfraz Khurshid, Darko Marinov, Ilya Shlyakhter, and Daniel Jackson. A Case for Efficient Solution Enumeration. In *Proc. of the 6th International Conference on Theory and Applications of Satisfiability Testing*, volume 2919 of *LNCS*, pages 272–286, Santa Margherita Ligure, Italy, May 2003. (acceptance: 50%, 33/67)

OOPSLA 2002 C5. Sarfraz Khurshid, Darko Marinov, and Daniel Jackson. An Analyzable Annotation Language. In *Proc. of the 17th Annual ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications*, pages 231–245, Seattle, WA, Nov. 2002. (acceptance: 20%, 25/125)

FME 2002 C4. Darko Marinov and Sarfraz Khurshid. VAlloy: Virtual Functions Meet a Relational Language. In *International Symposium of Formal Methods Europe, Getting IT Right*, volume 2391 of *LNCS*, pages 234–251, Copenhagen, Denmark, July 2002. (acceptance: 33%, 31/95)

ISSTA 2002 C3. Chandrasekhar Boyapati, Sarfraz Khurshid, and Darko Marinov. Korat: Automated Testing Based on Java Predicates. In *Proc. of the International Symposium on Software Testing and Analysis*, pages 123–133, Rome, Italy, July 2002. (acceptance: 19%, 18/97) This paper **won an ACM SIGSOFT Distinguished Paper Award** in 2002. This paper also **won an ACM SIGSOFT Impact Paper Award** in 2012.

ASE 2001 C2. Darko Marinov and Sarfraz Khurshid. TestEra: A Novel Framework for Automated Testing of Java Programs. In *Proc. of the 16th IEEE Conference on Automated Software Engineering*, pages 22–31, San Diego, CA, Nov. 2001. (acceptance: 20%, 32/164) This paper was **nominated for the best paper award** and **invited for journal submission** in 2001. This paper also **won an ASE Most Influential Paper Award** in 2015.

MASCOTS 2000 C1. Darko Marinov, Davor Magdic, Aleksandar Milenkovic, Jelica Protic, Igor Tartalja, and Veljko Milutinovic. Scowl: A Tool for Characterization of Parallel Workload and its Use on Splash-2 Application Suite. In *Proc. of the 8th International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems*, pages 207–213, San Francisco, CA, Aug. 2000. (acceptance: 61%, 57/94)

Demo papers

FSE Demo 2024 D13. Shuai Wang, Xinyu Lian, Qingyu Li, Darko Marinov, and Tianyin Xu. Ctest4J: A Practical Configuration Testing Framework for Java. In *Proc. of the the 32nd ACM International Conference on the Foundations of Software Engineering, Demo Papers*, pages 562–566, Porto de Galinhas, Brazil, July 2024. (acceptance: 53%, 22/42)

ESEC/FSE Demo 2020 D12. Jiayi Yang, Wenxi Wang, Darko Marinov, and Sarfraz Khurshid. AlloyMC: Alloy Meets Model Counting. In *Proc. of the 28th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Demo Papers*, pages 1541–1545, Virtual Conference, Nov. 2020. (acceptance: 60%, 26/44)

DSN-t 2019 D11. Radha Venkatagiri, Khalique Ahmed, Abdulrahman Mahmoud, Sasa Misailovic, Darko Marinov, Christopher W. Fletcher, and Sarita V. Adve. gem5-Approxilyzer: An Open-Source Tool for Application-level Soft Error Analysis. In *Proc. of the 49th IEEE/IFIP International Conference on Dependable Systems and Networks*, pages 214–221, Portland, OR, June 2019. (Tool paper) (acceptance: 22%, 54/252)

ESEC/FSE Demo 2018 D10. Kaiyuan Wang, Allison Sullivan, Darko Marinov, and Sarfraz Khurshid. ASketch: A Sketching Framework for Alloy. In *Proc. of the 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Demo Papers*, pages 916–919, Lake Buena Vista, FL, Nov. 2018. (acceptance: 45%, 16/36)

ICSE Demo 2018 D9. Alex Groce, Josie Holmes, Darko Marinov, August Shi, and Lingming Zhang. An Extensible, Regular-Expression-Based Tool for Multi-Language Mutant Generation. In *Proc. of the International Conference on Software Engineering, Demonstrations Track*, pages 25–28, Gothenburg, Sweden, May 2018. (acceptance: 42%, 30/72)

ASE Demo 2017 D8. Owolabi Legunsen, August Shi, and Darko Marinov. STARTS: STAtic Regression Test Selection. In *Proc. of the 32nd IEEE/ACM International Conference On Automated Software Engineering, Tool Demonstrations Track*, pages 949–954, Urbana-Champaign, IL, Oct.-Nov. 2017. (acceptance: 63%, 20/32)

FSE Demo 2016 D7. Alex Gyori, Ben Lambeth, August Shi, Owolabi Legunsen, and Darko Marinov. NonDex: A Tool for Detecting and Debugging Wrong Assumptions on Java API Specifications. In *Proc. of the 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering, Demo Papers*, pages 993–997, Seattle, WA, Nov. 2016. (acceptance: 41%, 13/32)

ICSE Demo 2015 D6. Milos Gligoric, Lamyaa Eloussi, and Darko Marinov. Ekstazi: Lightweight Test Selection. In *Proc. of the International Conference on Software Engineering, Demonstrations Track*, pages 713–716, Florence, Italy, May 2015. (acceptance: 60%, 25/42)

ASE Demo 2011 D5. Shadi Abdul Khalek, Guowei Yang, Lingming Zhang, Darko Marinov, and Sarfraz Khurshid. TestEra: A Tool for Testing Java Programs Using Alloy Specifications. In *Proc. of the 26th IEEE/ACM International Conference On Automated Software Engineering, Tool Demonstrations Track*, pages 608–611, Lawrence, KS, Nov. 2011. (acceptance: 45%, 16/36)

ICSE Demo 2011 D4. Brett Daniel, Danny Dig, Tihomir Gvero, Vilas Jagannath, Johnston Jiaa, Damion Mitchell, Jurand Nogiec, Shin Hwei Tan, and Darko Marinov. ReAssert: A Tool for Repairing Broken Unit Tests. In *Proc. of the International Conference on Software Engineering, Demonstrations Track*, pages 1010–1012, Honolulu, HI, May 2011. (acceptance: 37%, 22/60)

FSE Demo 2010 D3. Steven Lauterburg, Rajesh K. Karmani, Darko Marinov, and Gul Agha. Basset: A Tool for Systematic Testing of Actor Programs. In *Proc. of the 18th ACM SIGSOFT International Symposium on the Foundations of Software Engineering, Formal Research Demo*, pages 363–364, Santa Fe, NM, Nov. 2010. (acceptance: 22%, 6/28)

ICSE Demo 2008 D2. Tihomir Gvero, Milos Gligoric, Steven Lauterburg, Marcelo d'Amorim, Darko Marinov, and Sarfraz Khurshid. State Extensions for Java PathFinder. In *Proc. of the International Conference on Software Engineering, Formal Demo Papers*, pages 863–866, Leipzig, Germany, May 2008. (acceptance: 21%, 18/88)

ICSE Demo 2007 D1. Aleksandar Milicevic, Sasa Misailovic, Darko Marinov, and Sarfraz Khurshid. Korat: A Tool for Generating Structurally Complex Test Inputs. In *Proc. of the International Conference on Software Engineering, Formal Demo Papers*, pages 771–774, Minneapolis, MN, May 2007. (acceptance: 22%, 12/56)

Workshop papers

FTW 2025 W31. Kaiyao Ke and Darko Marinov. Evaluating NonDex for Modern Java Ecosystem. In *the 2nd International Flaky Tests Workshop*, pages to–appear, Ottawa, Canada, Apr. 2025

JPF 2020 W30. Pu Yi, Anjiang Wei, Wing Lam, Tao Xie, and Darko Marinov. Finding Polluter Tests Using Java PathFinder. In *Proc. of the Java Pathfinder Online Day*, volume 46 of *ACM SIGSOFT Software Engineering Notes*, pages 37–41, July 2021

P-RECS 2019 W29. Matthew Krafczyk, August Shi, Adhithya Bhaskar, Darko Marinov, and Victoria Stodden. Scientific Tests

and Continuous Integration Strategies to Enhance Reproducibility in the Scientific Software Context. In *the 2nd International Workshop on Practical Reproducible Evaluation of Computer Systems*, pages 23–28, Phoenix, AZ, June 2019

WAX 2019 W28. Vimuth Fernando, Keyur Joshi, Darko Marinov, and Sasa Misailovic. Identifying Optimal Parameters for Approximate Randomized Algorithms. In *the Workshop on Approximate Computing Across the Stack*, Phoenix, AZ, June 2019

SQAMIA 2018 W27. Sarfraz Khurshid and Darko Marinov. Reducing Combinatorial Testing Requirements Based on Equivalences with Respect to the Code Under Test. In *the 7th Workshop on Software Quality Analysis, Monitoring, Improvement, and Applications*, pages 8:1–8:7, Novi Sad, Serbia, Aug. 2018

SQAMIA 2017 W26. Allison Sullivan, Kaiyuan Wang, Sarfraz Khurshid, and Darko Marinov. Evaluating State Modeling Techniques in Alloy. In *the 6th Workshop on Software Quality Analysis, Monitoring, Improvement, and Applications*, pages 16:1–16:09, Belgrade, Serbia, Sept. 2017

WAX 2017 W25. Abdulrahman Mahmoud, Radha Venkatagiri, Khalique Ahmed, Sarita Adve, Darko Marinov, and Sasa Misailovic. Leveraging Software Testing to Explore Input Dependence for Approximate Computing. In *the Workshop on Approximate Computing Across the Stack*, Xi'an, China, Apr. 2017

JPF 2016 W24. Alex Gyori, Ben Lambeth, Sarfraz Khurshid, and Darko Marinov. Exploring Underdetermined Specifications using Java PathFinder. In *Proc. of the Java Pathfinder Workshop*, volume 41 of *ACM SIGSOFT Software Engineering Notes*, Seattle, WA, Nov. 2016

JPF 2015 W23. Karl Palmskog, Farah Hariri, and Darko Marinov. A Case Study on Executing Instrumented Code in Java PathFinder. In *Proc. of the Java Pathfinder Workshop*, volume 40 of *ACM SIGSOFT Software Engineering Notes*, Lincoln, NE, Nov. 2015

SPIN-s 2014 W22. Allison Sullivan, Razieh Nokhbeh Zaeeem, Sarfraz Khurshid, and Darko Marinov. Towards a Test Automation Framework for Alloy. In *Proc. of the 21st International SPIN Symposium on Model Checking of Software*, pages 113–116, San Jose, CA, July 2014. (Short paper) (acceptance: 63%, 10/16)

ETSE 2011 W21. Brett Daniel, Qingzhou Luo, Mehdi Mirzaaghaei, Danny Dig, Darko Marinov, and Mauro Pezzè. Automated GUI Refactoring and Test Script Repair (Position Paper). In *the First International Workshop on End-to-End Test Script Engineering*, pages 38–41, Toronto, Canada, July 2011

Scala Days 2011 W20. Samira Tasharofi, Milos Gligoric, Darko Marinov, and Ralph Johnson. Setac: A Framework for Phased Deterministic Testing of Scala Actor Programs. In *the Second Scala Workshop*, Stanford, CA, June 2011

IWMSE 2010 W19. Vilas Jagannath, Milos Gligoric, Dongyun Jin, Grigore Rosu, and Darko Marinov. IMUnit: Improved Multithreaded Unit Testing. In *the Third International Workshop on Multicore Software Engineering*, pages 48–49, Cape Town, South Africa, May 2010

CSTVA 2010 W18. Rohan Sharma, Milos Gligoric, Vilas Jagannath, and Darko Marinov. A Comparison of Constraint-based and Sequence-based Generation of Complex Input Data Structures. In *the 2nd Workshop on Constraints in Software Testing, Verification and Analysis*, pages 337–342, Paris, France, Apr. 2010

Mutation 2010 W17. Vilas Jagannath, Milos Gligoric, Steven Lauterburg, Darko Marinov, and Gul Agha. Mutation Operators for Actor Systems. In *the 5th International Workshop on Mutation Analysis*, pages 157–162, Paris, France, Apr. 2010

SSEAT 2008 W16. Darko Marinov and Wolfram Schulte. Workshop on State-space Exploration for Automated Testing (SSEAT 2008). In *Proc. of the International Symposium on Software Testing and Analysis*, pages 315–316, Seattle, WA, July 2008

WRT 2007 W15. Brett Daniel, Danny Dig, Kely Garcia, and Darko Marinov. Automated Testing of Eclipse and NetBeans Refactoring Tools. In *the 1st Workshop on Refactoring Tools*, pages 42–43, Berlin, Germany, July 2007 (a shorter version of [C20])

HotDep 2007 W14. Yuanyuan Zhou, Darko Marinov, William Sanders, Craig Zilles, Marcelo d'Amorim, Steven Lauterburg, Ryan M. Lefever, and Joe Tucek. Delta Execution for Software Reliability. In *the Workshop on Hot Topics in System Dependability*, Edinburgh, UK, June 2007

AST 2007 W13. Tao Xie, Kunal Taneja, Shreyas Kale, and Darko Marinov. Towards a Framework for Differential Unit Testing of Object-Oriented Programs. In *the 2nd International Workshop on Automation of Software Test*, Minneapolis, MN, May 2007

STEP 2007 W12. Sasa Misailovic, Aleksandar Milicevic, Sarfraz Khurshid, and Darko Marinov. Generating Test Inputs for Fault-Tree Analyzers using Imperative Predicates. In *the Workshop on Advances and Innovations in Systems Testing*, Memphis, TN, May 2007

NGS 2007 W11. Ahmed Sobeih, Mahesh Viswanathan, Darko Marinov, and Jennifer C. Hou. J-Sim: An Integrated Environment for Simulation and Model Checking of Network Protocols. In *the Next Generation Software Workshop*, Long Beach, CA, Mar. 2007

Alloy 2006 W10. Darko Marinov and Sarfraz Khurshid. What Will the User Do (Next) in the Tool? In *the First Alloy Workshop*, Portland, OR, Nov. 2006

LDTA 2006 W9. Xiaoming Li, Daryl Shannon, Jabari Walker, Sarfraz Khurshid, and Darko Marinov. Analyzing the Uses of a Software Modeling Tool. In *the Workshop on Language Descriptions, Tools and Applications*, Vienna,

Austria, Apr. 2006

WOOR 2005 W8. Danny Dig, Can Comertoglu, Darko Marinov, and Ralph Johnson. Automatic Detection of Refactorings for Libraries and Frameworks. In *the International Workshop on Object-Oriented Reengineering*, Glasgow, UK, July 2005 (a previous version of [C14])

WTAOP 2005 W7. Tao Xie, Jianjun Zhao, Darko Marinov, and David Notkin. Automated Test Generation for AspectJ Program. In *the Workshop on Testing Aspect-Oriented Programs*, Chicago, IL, Mar. 2005

SoftMC 2001 W6. Sarfraz Khurshid and Darko Marinov. Checking Java Implementation of a Naming Architecture Using TestEra. *Electronic Notes in Theoretical Computer Science*, 55(3), July 2001

SOW 2001 W5. Sarfraz Khurshid and Darko Marinov. Using TestEra to Check the Intentional Naming System of Oxygen. In *the MIT Student Oxygen Workshop*, pages 25–26, Gloucester, MA, July 2001 (an extended abstract of [W6])

RTRV 1999 W4. Martin Rinard and Darko Marinov. Credible Compilation with Pointers. In *the Workshop on Run-Time Result Verification*, Trento, Italy, July 1999

WCAE 1999 W3. Jovan Djordjevic, Aleksandar Milenkovic, Ivan Todorovic, and Darko Marinov. CALKAS: A Computer Architecture Learning and Knowledge Assessment System. In *the Workshop on Computer Architecture Education*, Orlando, FL, Jan. 1999

PAID 1998 W2. Milos Prvulovic, Darko Marinov, and Veljko Milutinovic. Performance Evaluation of Split Temporal/Spatial Caches: Paving the Way to New Solutions. In *the Workshop on Performance Analysis and its Impact on Design*, Barcelona, Spain, June 1998

DSM 1998 W1. Darko Marinov, Davor Magdic, Aleksandar Milenkovic, Jelica Protic, Igor Tartalja, and Veljko Milutinovic. An Approach to Characterization of Parallel Applications for DSM Systems. In *Proc. of the 31st Hawaii International Conference on System Sciences*, pages 782–783, Kohala Coast, HI, Jan. 1998 (an extended abstract of [C1])

Journal papers

TOSEM 2023 J10. Chao Wang, Hao He, Uma Pal, Darko Marinov, and Minghui Zhou. Suboptimal Comments in Java Projects: From Independent Comment Changes to Commenting Practices. *ACM Transactions on Software Engineering and Methodology*, 32(2):45:1–45:33, Apr. 2023

PTRSA 2021 J9. Matthew S. Krafczyk, August Shi, Adhithya Bhaskar, Darko Marinov, and Victoria Stodden. Learning from Reproducing Computational Results: Introducing Three Principles and the Reproduction Package. *Philosophical Transactions of the Royal Society A*, 379(2197):Paper 20200069, 28 pp., May 2021

JASE 2019 J8. Owolabi Legunsen, Nader Al Awar, Xinyue Xu, Wajih Ul Hassan, Grigore Rosu, and Darko Marinov. How Effective are Existing Java API Specifications for Finding Bugs During Runtime Verification? *Automated Software Engineering Journal*, 26(4):795–837, Dec. 2019

TOSEM 2015 J7. Milos Gligoric, Alex Groce, Chaoqiang Zhang, Rohan Sharma, Mohammad Amin Alipour, and Darko Marinov. Guidelines for Coverage-Based Comparisons of Non-Adequate Test Suites. *ACM Transactions on Software Engineering and Methodology*, 24(4):22:1–22:33, Aug. 2015

STVR 2014 J6. Valeria S. Bengolea, Nazareno Aguirre, Darko Marinov, and Marcelo F. Frias. RepOK-based Reduction of Bounded Exhaustive Testing. *Software Testing, Verification and Reliability*, 24(8):629–655, Dec. 2014

STVR 2013 J5. Milos Gligoric, Vilas Jagannath, Qingzhou Luo, and Darko Marinov. Efficient Mutation Testing of Multithreaded Code. *Software Testing, Verification and Reliability*, 23(5):375—-403, Aug. 2013

Simulation 2010 J4. Ahmed Sobeih, Marcelo d'Amorim, Mahesh Viswanathan, Darko Marinov, and Jennifer C. Hou. Assertion Checking in J-Sim Simulation Models of Network Protocols. *Simulation: Transactions of The Society for Modeling and Simulation International*, 86(11):651–673, Nov. 2010

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 56 conferences, 18 tracks & 32 workshops; co-organizer 22 events; 20 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

2025 Doctoral Symposium at joint meeting of International Symposium on Software Testing and Analysis and ACM Int'l Conference on the Foundations of Software Engineering (ISSTA/FSE DS 2025), **PC Co-Chair**
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

2025 International Symposium on Program Testing and Analysis (ISSTA 2025)
2025 52nd ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2025)
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 Int'l Conf. on Software Maintenance and Evolution, New Ideas and Emerging Results (ICSME NIER 2024)
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 UPCRC 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

2025 The 2nd International Workshop on Test Flakiness (FTW 2025)
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

2024 2 panels at the National Science Foundation (NSF), via Zoom
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

Award Evaluation

2025 IEEE TCSE Most Influential Paper of ICST 2015, voting member
2025 ACM SIGSOFT Impact Paper Award Committee, committee member
2024 ISSTA Impact Paper Award Committee, committee member
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 **Chair**
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 **Chair**
2015	ACM SIGSOFT Impact Paper Award Committee, committee **Chair**
2014	Award Selection Committee, Haifa Verification Conference (HVC 2014), committee member
2013	Award Selection Committee, Haifa Verification Conference (HVC 2013), committee member
Program Evaluation	
2021	Texas Higher Ed NRUF Review, Computer Science Department, UT San Antonio, expert reviewer, via Zoom
Journal Editor	
2015 – 2017	Guest Co-Editor, special issue of Software Testing, Verification and Reliability (STVR) journal
University (Selected)	
2024 – now	Senate Committee on Admissions, UIUC, **Chair**
2024 – now	Provost Committee on the Admission of Student-Athletes (CASA), UIUC, Ex Officio Member
2023 – 2024	Director of Graduate Studies, 2,600+ students in 8 graduate programs, Dept. of Computer Science, UIUC
2021 – 2023	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 – 2024	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, **Chair**
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, **Chair**
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

Presentations 57 conference and workshop talks, 43 **invited** talks, 33 visit+remote talks, 9 job talks, 8 panels, 3 posters

Invited/visit/job	
11/24	"A Decade of Research and Teaching on Flaky Tests", University of Houston, Houston, TX
09/24	—, Fudan University, Shanhai, China
09/24	—, HKUST, Hong Kong
07/24	"An Empirical Analysis of Flaky Tests", at FSE 2024, Porto De Galinhas, Brazil
04/24	"A Decade of Research and Teaching on Flaky Tests", Int'l Flaky Tests Workshop, Lisbon, Portugal
03/24	"10+ Reasons for Obtaining PhD", School of Computing, Belgrade, Serbia, via Zoom
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, Saarbrucken, Germany
03/11 —, SVARM 2011, Saarbrucken, 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

10/24 "Summary of SE Research at Illinois", at RSE+SER workshop at NCSA, UIUC, Urbana, IL

07/24 [D13] at FSE Demo 2024, Porto De Galinhas, Brazil
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", UPCRC 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", UPCRC 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

04/24 Discussion Panel at the 1st International Flaky Tests Workshop (FTW 2024), Lisbon, Portugal
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
Ctest4J	`https://github.com/xlab-uiuc/ctest4j`, Configuration testing framework for Java
Ekstazi	`http://ekstazi.org`, Dynamic regression test selection
iDFlakies	`http://github.com/idflakies/iDFlakies`, Tool for detecting flaky tests
IDoFT	`http://github.com/TestingResearchIllinois/IDoFT`, 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
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 Sibin 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 2024 Xinyu Lian, *Exploring Large Language Models as Configuration Validators*
co-advised by Tianyin Xu
first job: PhD student, University of Illinois

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 many more UIUC PhD committees for preliminary exams (and final defenses when a year is listed) for Tankut Baris Aktemur (2009), Deniz Arsan (2023), Angello Astorga (2024), Federico Balaguer (2006), Sean Bartell (2021), Feng Chen (2009), Nicholas Y. Chen (2013), Rutvik Choudhary, 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 (2024), Jinghao Jia, Dongyun Jin (2012), Rajesh K. Karmani (2013), Jacob Laurel (2024), 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 Muzahid (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), Jovan Stojkovic, Xudong Sun, 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 (2024), and Pin Zhou (2006)

External Member
Also served on the PhD committees for Katherine Hough at Northeastern University (2024), Yu Liu at the University of Texas at Austin (2024), 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

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

Fall 2024/23/22/21, 2020/17/16/14/11, 2010, 2008 & 2007 — **Teacher** for "Advanced Topics in Software Engineering", a graduate course on selected topics. This course was also offered in-person in the Chicago MCS program and 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 2021/20/19, 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.

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

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

02/96 — **World Finals**, ACM International Collegiate Programming Contest (ICPC), Philadelphia, PA
11/95 — 3rd place, Eastern European Regional ACM ICPC, Bucharest, Romania
05/95 — **1st place**, Computer Science area, National Contest of Electrical Engineering Schools, Budva, Yugoslavia
10/94 — Eastern European Regional ACM ICPC, Bucharest, Romania
07/91 — International Mathematical Olympiad, Sigtuna, Sweden
05/91 — **2nd prize**, International Olympiad in Informatics, Athens, Greece
05/91 — 2nd prize, Balkan Mathematical Olympiad, Constanţa, Romania

Funding

17 NSF grants, 9 industry grants, 5 industry gifts, 2 faculty awards; **my share over $6.1M of $13.1M total**

09/24 – 09/25 — "Enhanced LLVM-COV Extension", research grant from Boeing, PIs: Darko Marinov, Tianyin Xu, $163k
09/23 – 09/24 — "Enhanced LLVM-COV", research grant from Boeing, PI: Darko Marinov, $146k
08/23 – 08/25 — "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
08/22 – 08/23 — "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
09/21 – 12/21 — "Adding Verifiability into DevSecOps (AVID)", PI: Darko Marinov, subcontract from Raytheon BBN Tech-

nologies Corp., *Air Force Research Laboratory*, 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, *National Science Foundation*, IIS-2016908, $750k

10/20 – 09/23 "Thwarting Microarchitectural Replay Attacks", research grant from SRC, PI: Josep Torrellas, co-PIs: Chris Fletcher, Darko Marinov, $210k

07/20 – 06/24 "SHF: Medium: Software Engineering for Hardware Errors", PI: Sarita Adve, co-PIs: Chris Fletcher, Darko Marinov, Sasa Misailovic, *National Science Foundation*, CCF-1956374, $1.2M

12/18 – 12/19 "Holistic Intelligent Testing: The Test Quality Topic", research grant from Huawei, $140k

10/18 "Being Proactive in ATAFistic World", gift from Facebook Testing and Verification Research Award, $10k

10/18 – 09/22 "SHF: Medium: Collaborative Research: Enhancing Continuous Integration Testing for the Open-Source Ecosystem", PI: Darko Marinov; also non-UIUC: Jon Bell, Lingming Zhang, *National Science Foundation*, CCF-1763788, $437k

08/18 – 07/20 "EAGER: Preserve/Destroy Decisions for Simulation Data in Computational Physics and Beyond", PI: Victoria Stodden, co-PI: Darko Marinov, *National Science Foundation*, OAC-1839010, $300k

07/18 – 06/21 "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

09/17 – 08/19 "EAGER:USBRCCR: 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, *National Science Foundation*, CNS-1740916, $136k

01/17 – 12/19 "CPS: Synergy: Collaborative Research: Support for Security and Safety of Programmable IoT Systems", PI: Darko Marinov; also non-UIUC: Atul Prakash, *National Science Foundation*, CNS-1646305, $352k

08/16 "Improving Regression Testing Efficiency", gift from Qualcomm, $50k

03/15 "Combating Flaky Tests", gift from Google Faculty Research Awards, $51k

12/14 – 11/17 "SHF:Small: Revisiting Assumptions of Regression Testing", PI: Darko Marinov; *National Science Foundation*, CCF-1421503, $462k ($12k REU)

09/14 – 08/17 "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, *National Science Foundation*, CCF-1438982, $682k ($16k REU)

08/14 – 07/17 "SHF: Medium: Collaborative Research: Improved Performance Testing and Debugging", PI: Darko Marinov, co-PI: Tao Xie; also non-UIUC: Guoqing (Harry) Xu, *National Science Foundation*, CCF-1409423, $616k ($16k REU)

09/12 – 08/15 "SHF: Small: Interactive Refactoring for Multicore Parallelism", PI: Danny Dig, co-PI: Darko Marinov; *National Science Foundation*, CCF-1219027, $250k

07/12 – 06/16 "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, *National Science Foundation* CCF-1213091, $1.8M

10/10 Unrestricted gift for the C.W. Gear Outstanding Junior Faculty Award, Department of Computer Science, UIUC, $4k

09/10 – 08/14 "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, *National Science Foundation* CCF-1012759, $1.8M

08/10 – 08/11 Unrestricted gift for the Beckman Fellowship, Center for Advanced Study, UIUC, $8k

06/10 – 05/13 "Collaborative Research: II-EN: Infrastructure Support for Software Testing Research", UIUC PI: Darko Marinov; also non-UIUC: Gregg Rothermel, Tao Xie, Sarfraz Khurshid, *National Science Foundation* CNS-0958199, $277k

03/10 – 08/11 "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

02/10 "Systematic Testing in and for X10", gift from IBM X10 Innovation Grants, $20k

09/09 – 08/12 "SHF: Small: IMUnit: Improved Multithreaded Unit Testing", PI: Darko Marinov, co-PI: Grigore Rosu, *National Science Foundation* CCF-0916893, $500k

06/08 – 05/13 "CAREER: Systematic Software Testing Using Test Abstractions", PI: Darko Marinov, *National Science 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