

Darko Marinov

Assistant Professor
Department of Computer Science
University of Illinois at Urbana-Champaign
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Education	Massachusetts Institute of Technology Cambridge, MA
2005	Ph.D. in Computer Science Dissertation title: “Automatic Testing of Software with Structurally Complex Inputs” Advisor: Prof. Martin C. Rinard
2000	S.M. in Computer Science Dissertation title: “Credible Compilation”, Minor: Mathematics (Combinatorics)
	School of Electrical Engineering, University of Belgrade Belgrade, Yugoslavia
1997	B.S. in Computer Science and Engineering
Research Interests	Software Engineering: improving software reliability, software testing, model checking, theorem proving, rich specification languages, compilers (correctness of program analyses and transformations)
Research Experience	University of Illinois at Urbana-Champaign Urbana-Champaign, IL
01/05 – present	Leader of Software Testing and Analysis group; 4 PhD and 1 MS students, graduated 1 PhD and 1 MS
	Massachusetts Institute of Technology Cambridge, MA
09/98 – 12/04	Member of Program Analysis and Compilation group, Leader: Martin Rinard
	Microsoft Research Redmond, WA
06/03 – 08/03	Summer intern in Foundations of Software Engineering group, Manager: Yuri Gurevich
	IBM T. J. Watson Research Center Hawthorne, NY
05/02 – 08/02	Summer intern in Advanced Programming Tools group, Manager: John Field
	School of Electrical Engineering, University of Belgrade Belgrade, Yugoslavia
02/97 – 08/98	Member of Distributed Shared Memory group, Leader: Veljko Milutinovic
	University of Illinois at Chicago Chicago, IL
07/95	Visiting scholar in Summer Research Program for Yugoslav Students, Advisor: Jorge Lobo
Awards and Honors	NSF CAREER award, 1 teaching recognition, 2 paper awards, 1 student award, 1 fellowship
2008	NSF Faculty Early Career Development (CAREER) Program Award
2006	UIUC “Incomplete List of Teachers Ranked as Excellent by Their Students” for Spring 2006
2005	ACM SIGSOFT Distinguished Paper Award for [27]
2002	ACM SIGSOFT Distinguished Paper Award for [41]
1997	Best Student Award , Class of 1996-97, Department of Computer Science and Engineering, School of Electrical Engineering, University of Belgrade, Yugoslavia
1989 – 1998	Fellowship , Serbian Science Foundation, Belgrade, Yugoslavia
Publications	28 conference papers, 18 workshop papers, 10 technical reports, 4 journal papers, 2 articles; selected:
ASE-s 2009	[1] J. Siddiqui, D. Marinov, and S. Khurshid. Optimizing a structural constraint solver for efficient software checking. In <i>Proc. of the 24th IEEE/ACM Conference on Automated Software Engineering</i> , Auckland, New Zealand, Nov. 2009. (Short paper.) (To appear.)
ASE 2009	[2] S. Lauterburg, M. Dotta, D. Marinov, and G. Agha. A framework for state-space exploration of Java-based actor programs. In <i>Proc. of the 24th IEEE/ACM Conference on Automated Software Engineering</i> , Auckland, New Zealand, Nov. 2009. (To appear.)
ASE 2009	[3] B. Daniel, V. Jagannath, D. Dig, and D. Marinov. ReAssert: Suggesting repairs for broken unit tests. In <i>Proc. of the 24th IEEE/ACM Conference on Automated Software Engineering</i> , Auckland, New Zealand, Nov. 2009. (To appear.)

- SIMULATION 2009 [4] A. Sobeih, M. d'Amorim, D. Marinov, and M. Viswanathan. Assertion checking in J-Sim simulation models of network protocols. *Simulation: Transactions of The Society for Modeling and Simulation International*, 85, 2009. (Accepted. To appear.)
- ICST 2009 [5] M. Gligoric, T. Gvero, S. Lauterburg, D. Marinov, and S. 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
- FASE 2009 [6] V. Jagannath, Y. Y. Lee, B. Daniel, and D. Marinov. Reducing the costs of bounded-exhaustive testing. In *Proc. of the Fundamental Approaches to Software Engineering*, pages 171–185, York, UK, Mar. 2009
- TSE 2008 [7] M. d'Amorim, S. Lauterburg, and D. Marinov. Delta execution for efficient state-space exploration of object-oriented programs. *Transactions on Software Engineering*, 34(5):597–613, September/October 2008
- SSEAT 2008 [8] D. Marinov and W. 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
- ISSTA 2008 [9] B. Elkarablieh, D. Marinov, and S. Khurshid. Efficient solving of structural constraints. In *Proc. of the International Symposium on Software Testing and Analysis*, pages 39–50, Seattle, WA, July 2008
- ICSE Demo 2008 [10] T. Gvero, M. Gligoric, S. Lauterburg, M. d'Amorim, D. Marinov, and S. 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
- ICSE 2008 [11] S. Lauterburg, A. Sobeih, M. Viswanathan, and D. 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
- ESEC/FSE 2007 [12] B. Daniel, D. Dig, K. Garcia, and D. 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
- ESEC/FSE 2007 [13] S. Misailovic, A. Milicevic, N. Petrovic, S. Khurshid, and D. 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
- ISSTA 2007 [14] M. d'Amorim, S. Lauterburg, and D. 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. (This paper was **invited for journal submission**.)
- HotDep 2007 [15] Y. Zhou, D. Marinov, W. Sanders, C. Zilles, M. d'Amorim, S. Lauterburg, R. M. Lefever, and J. Tucek. Delta execution for software reliability. In *the Workshop on Hot Topics in System Dependability*, Edinburgh, UK, June 2007
- AST 2007 [16] T. Xie, K. Taneja, S. Kale, and D. 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
- ICSE Demo 2007 [17] A. Milicevic, S. Misailovic, D. Marinov, and S. 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
- STEP 2007 [18] S. Misailovic, A. Milicevic, S. Khurshid, and D. 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 [19] A. Sobeih, M. Viswanathan, D. Marinov, and J. 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 [20] D. Marinov and S. Khurshid. What will the user do (next) in the tool? In *the First Alloy Workshop*, Portland, OR, Nov. 2006
- ISSRE 2006 [21] T. Xie, J. Zhao, D. Marinov, and D. 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
- ICFEM 2006 [22] M. d'Amorim, A. Sobeih, and D. 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
- ASE 2006 [23] M. d'Amorim, C. Pacheco, T. Xie, D. Marinov, and M. 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. (This paper was **nominated for the best paper award**.)

- ECOOP 2006 [24] D. Dig, C. Comertoglu, D. Marinov, and R. 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
- LDTA 2006 [25] X. Li, D. Shannon, J. Walker, S. Khurshid, and D. Marinov. Analyzing the uses of a software modeling tool. In *the Workshop on Language Descriptions, Tools and Applications*, Vienna, Austria, Apr. 2006
- ICFEM 2005 [26] A. Sobeih, M. Viswanathan, D. Marinov, and J. 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
- ESEC/FSE 2005 [27] K. Sen, D. Marinov, and G. 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. (This paper **won an ACM SIGSOFT Distinguished Paper Award.**)
- SAT 2005 [28] D. Marinov, S. Khurshid, S. Bugrara, L. Zhang, and M. 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
- TACAS 2005 [29] T. Xie, D. Marinov, W. Schulte, and D. 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
- WTAOP 2005 [30] T. Xie, J. Zhao, D. Marinov, and D. Notkin. Automated test generation for AspectJ program. In *the Workshop on Testing Aspect-Oriented Programs*, Chicago, IL, Mar. 2005
- PhD Thesis [31] D. Marinov. *Automatic Testing of Software with Structurally Complex Inputs*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA, Dec. 2004
- JASE 2004 [32] S. Khurshid and D. Marinov. TestEra: Specification-based testing of Java programs using SAT. *Automated Software Engineering Journal*, 11(4):403–434, Oct. 2004
- ASE 2004 [33] T. Xie, D. Marinov, and D. 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
- OOPSLA 2003 [34] D. Marinov and R. 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
- Tech Report [35] D. Marinov, A. Andoni, D. Daniliuc, S. Khurshid, and M. Rinard. An evaluation of exhaustive testing for data structures. Technical Report MIT-LCS-TR-921, MIT CSAIL, Cambridge, MA, Sept. 2003
- EJC 2003 [36] D. Marinov and R. Radoicic. Counting 1324-avoiding permutations. *Electronic Journal of Combinatorics*, 9(2):Research Paper 13, 9 pp. (electronic), 2003
- ReLMiCS 2003 [37] K. Arkoudas, S. Khurshid, D. Marinov, and M. 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
- SAT 2003 [38] S. Khurshid, D. Marinov, I. Shlyakhter, and D. 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
- OOPSLA 2002 [39] S. Khurshid, D. Marinov, and D. 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
- FME 2002 [40] D. Marinov and S. 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
- ISSTA 2002 [41] C. Boyapati, S. Khurshid, and D. 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. (This paper **won an ACM SIGSOFT Distinguished Paper Award.**)
- ASE 2001 [42] D. Marinov and S. Khurshid. TestEra: A novel framework for testing Java programs. In *Proc. of the 16th IEEE Conference on Automated Software Engineering*, pages 22–31, San Diego, CA, Nov. 2001. (This paper was **nominated for the best paper award.**)
- SoftMC 2001 [43] S. Khurshid and D. Marinov. Checking Java implementation of a naming architecture using TestEra. *Electronic Notes in Theoretical Computer Science*, 55(3), July 2001
- SM Thesis [44] D. Marinov. *Credible compilation*. Master’s thesis, Massachusetts Institute of Technology, Cambridge, MA, Sept. 2000
- MASCOTS 2000 [45] D. Marinov, D. Magdic, A. Milenkovic, J. Protic, I. Tartalja, and V. 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

RTRV 1999 [46] M. Rinard and D. Marinov. Credible compilation with pointers. In *Proc. of the Workshop on Run-Time Result Verification*, Trento, Italy, July 1999

TCCA 1999 [47] M. Prvulovic, D. Marinov, Z. Dimitrijevic, and V. Milutinovic. The split spatial/non-spatial cache: A performance and complexity evaluation. *IEEE TCCA Newsletter*, pages 18–25, July 1999

TCCA 1999 [48] M. Prvulovic, D. Marinov, Z. Dimitrijevic, and V. Milutinovic. Split temporal/spatial cache: A survey and reevaluation of performance. *IEEE TCCA Newsletter*, pages 8–17, July 1999

WCAE 1999 [49] J. Djordjevic, A. Milenkovic, I. Todorovic, and D. Marinov. CALKAS: A computer architecture learning and knowledge assessment system. In *Proc. of the Workshop on Computer Architecture Education*, Orlando, FL, Jan. 1999

PAID 1998 [50] M. Prvulovic, D. Marinov, and V. Milutinovic. Performance evaluation of split temporal/spatial caches: Paving the way to new solutions. In *Proc. of the Workshop on Performance Analysis and its Impact on Design*, Barcelona, Spain, June 1998

Presentations

20 conference and workshop talks, 13 invited talks, 9 visit talks, 9 job talks, 2 poster presentations, 1 panel

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

07/09 “UDITA: Unified Declarative&Imperative Test Abstractions”, ASE Pre-PC Workshop, Marburg, Germany

07/09 —, SAP Research, Darmstadt, Germany

04/09 [5] at ICST 2009, Denver, CO

03/09 [6] at ISSTA Pre-PC Workshop 2009, Raleigh, NC

03/09 “Model-Based Testing Using Test Abstractions”, EPFL, Lausanne, Switzerland

03/09 —, MBT 2009 workshop, York, UK

11/08 “Automated Testing of Refactoring Engines Using Test Abstractions”, Microsoft Research, Redmond, WA

07/08 —, NC State University, Raleigh, NC

06/08 [11] at ASE Post-PC Workshop 2008, Mountain View, CA

05/08 [10] at JPF Workshop 2008, Sunnyvale, CA

01/08 “Systematic Software Testing with Test Abstractions”, Agitar, Mountain View, CA

01/08 —, Google, Mountain View, CA

11/07 [13] at University of Michigan, Ann Arbor, MI

05/07 [18] at STEP 2007, Memphis, TN

04/06 Panel on “Formal Methods: It’s not too Much to Ask”, Affiliates Conference, UIUC, Urbana-Champaign, IL

04/06 [25] at LDTA 2006, Vienna, Austria

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 [28] at SAT 2005, St. Andrews, UK

06/05 Talk based on [28], University of Belgrade, Belgrade, Serbia-Montenegro

06/05 —, University of Novi Sad, Novi Sad, Serbia-Montenegro

03/05 Talk based on [31] and [29], 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

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

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

10/03 [34] at OOPSLA 2003, Anaheim, CA

10/03 [34] at the New England Programming Languages Seminar (NEPLS), Brandeis University, Waltham, MA

05/03 [37] at RelMiCS 7, Malente, Germany

05/03 [38] at SAT 2003, Santa Margherita Ligure, Italy

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

08/02 “Object Equality Profiling”, Poster Presentation, IBM T. J. Watson Research Center, Hawthorne, NY

07/02 [40] at FME 2002, Copenhagen, Denmark

05/02 [39] at the IBM Programming Languages Day, IBM Research, Hawthorne, NY
 11/01 [42] at ASE 2001, San Diego, CA
 05/01 “Credible Compilation”, Guest Lecturer, Object-Oriented Dynamic Languages course, MIT, Cambridge, MA
 01/01 —, Dynamic Languages Seminar, MIT, Cambridge, MA
 04/00 [44] at the Masterworks 2000, MIT, Cambridge, MA
 05/99 [46] at the Student Poster Session, PLDI 1999, Atlanta, GA
 01/99 [49] at WCAE 1999, Orlando, FL
 01/98 [45] at the Workshop on Distributed Shared Memory, HICSS 1998, Kohala Coast, HI

Service

(Extended) PC member for 14 conferences and 14 workshops; co-organizer of 3 workshops; 5 NSF panels
 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 Workshop on Specification and Verification of Component Based Systems (SAVCBS 2009)
 2009 20th IEEE International Symposium on Software Reliability Engineering (ISSRE 2009)
 2009 24th IEEE/ACM Conference on Automated Software Engineering (ASE 2009)
 2009 Workshop on State-space Exploration for Automated Testing (SSEAT 2009), Co-organizer
 2009 3rd International Workshop on Advances and Innovations in Systems Testing (STEP 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 First Software Testing Education Workshop (STEW 2009), Co-organizer
 2009 5th Workshop on Model Based Testing (MBT 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 Two Panels at the National Science Foundation, Arlington, VA
 2008 Workshop on Specification and Verification of Component Based Systems (SAVCBS 2008)
 2008 Workshop on State-space Exploration for Automated Testing (SSEAT 2008), Co-organizer
 2008 19th IEEE International Symposium on Software Reliability Engineering (ISSRE 2008)
 2008 23rd IEEE/ACM Conference on Automated Software Engineering (ASE 2008)
 2008 16th ACM SIGSOFT International Symposium on Foundations of Software Engineering (FSE 2008)
 2008 2nd International Workshop on Advances and Innovations in Systems Testing (STEP 2008)
 2008 4th Workshop on Model Based Testing (MBT 2008)
 2008 International Conference on Software Testing Verification and Validation (ICST 2008), Student Papers Track
 2007 Two Panels at the National Science Foundation, Arlington, VA
 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)
 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)
 2006 ICSE Research Demonstrations (ICSE Demo 2006)
 2005 One Panel at the National Science Foundation, Arlington, VA
 2004 4th MIT Student Oxygen Workshop (MIT SOW 2004)
 1998 – present External reviewer for 13 conferences (CAST 2009, ISSTA 2008, PLDI 2008, MoDELS 2007, PLDI 2007, PLDI 2006, CAV 2005, ECOOP 2004, TACAS 2004, PLDI 2004, POPL 2003, SC 2002, CC 2001), 14 papers in 8 journals (ACM TOPLAS, ACM TOSEM, ASE-J, IEEE TSE, IEEE TPDS, IEEE TCOMP, IJSI, Real-Time Systems), and 1 workshop (MIT SOW 2003)

Graduated Students

University of Illinois at Urbana-Champaign Urbana-Champaign, IL
 PhD 2007 Marcelo d’ Amorim, *Efficient Explicit-state Model Checking for Programs with Dynamically Allocated Data*
 MS 2007 Kely Garcia, *Testing the Refactoring Engine of the NetBeans IDE*

Released Code

University of Illinois at Urbana-Champaign Urbana-Champaign, IL
 Korat <http://mir.cs.illinois.edu/korat>, Test generation (based on declarative test abstractions)
 ASTGen <http://mir.cs.illinois.edu/astgen>, Test generation (based on imperative test abstractions)
 JPF contributions <http://mir.cs.illinois.edu/jpf>, Contributions to the Java PathFinder model checker
 ReAssert <http://mir.cs.illinois.edu/reassert>, Test repair

Grants 4 NSF grants, 1 gift, 1 student grant

09/09 – 08/12 “SHF: Small: IMUnit: Improved Multithreaded Unit Testing”, PI: Darko Marinov, co-PI: Grigore Rosu, *National Science Foundation* CCF-0916893, \$500,000

06/08 – 05/13 “CAREER: Systematic Software Testing Using Test Abstractions”, PI: Darko Marinov, *National Science Foundation* CCF-0746856, \$400,000

09/06 – 08/08 “Collaborative Research: SoD-TEAM: A Feedback-Based Architecture for Highly Reliable Embedded Software”, PI: Tarek Abdelzaher, co-PIs: Lui Sha, Marco Caccamo, Darko Marinov; also Aloysius Mok, James Browne, Fei Xie, Ella Atkins, *National Science Foundation* CNS-0613665, \$200,000

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, \$750,000

11/05 “Theory and Practice of Object-Oriented Unit Tests”, unrestricted gift from Microsoft, \$5,000

11/01 “Educational Tools for Checking Software”, PIs: Sarfraz Khurshid and Darko Marinov, *MIT/Microsoft iCampus Student Projects*, awarded but not used \$30,000 for hiring undergrads and purchasing equipment

Teaching

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

Spring 2009 and 2008 and 2006 **Teacher** for “Software Testing”, a course for senior students. The students’ scores of my teaching for Spring 2006 placed me on the UIUC “Incomplete List of **Teachers Ranked as Excellent** by Their Students”.

Fall 2008 and 2007 **Teacher** for “Advanced Topics in Software Engineering”, graduate course on selected topics, which was similar as in Fall 2005 but with no requirement for research projects. Still, **one student published one paper** in Fall 2008, and **two students published two papers** in Fall 2007. This course is also offered online in the department’s Illinois Internet Computer Science (I2CS) program.

Spring 2007 **Teacher** for “Software Engineering II”, second course in an introductory sequence on software engineering. This course is also offered online in the department’s Illinois Internet Computer Science (I2CS) program.

Fall 2009 and 2006 **Teacher** for “Software Engineering I”, first course in an introductory sequence on software engineering. This course is also offered online in the department’s Illinois Internet Computer Science (I2CS) program.

Fall 2005 **Teacher** for “Software Testing and Analysis”, a project-based, graduate course on dynamic and static program analysis for finding software errors. **Two students published two papers** based on the course projects.

Spring 2005 **Teacher** for “Software Testing and Analysis”, a similar course as in Fall 2005, but with fewer lectures and more focus on research projects. **Five students published four papers** based on their course projects.

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 and 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 [49] 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.