

Publications

Conference Papers:

Title: Pareto Efficient Multi-Objective Test Case Selection

Authors: Shin Yoo and Mark Harman

ISSTA 07 to appear (Download in PDF)

Title: A Multi-Objective Approach To Search-Based Test Data Generation

Authors: Mark Harman , Kiran Lakhotia , Phil McMinn

GECCO 07 to appear (Download in PDF)

Title: Search Algorithms for Regression Test Case Prioritisation

Authors: Zheng Li, Mark Harman , Robert M. Hierons

IEEE TSE (Download in PDF)

Title: A Theoretical & Empirical Analysis of Evolutionary Testing and Hill Climbing for Structural Test Data Generation

Authors: Mark Harman , Phil McMinn

ISSTA 07 (<http://www.cse.unl.edu/issta07/>) To Appear (Download in PDF)

Title: The Impact of Input Domain Reduction on Search-Based Test Data Generation

Authors: Mark Harman , Youssef Hassoun, Kiran Lakhotia , Phil McMinn , Joachim Wegener

FSE 2007 To appear. (Download in PDF)

Title: Applying Particle Swarm Optimization to Software Testing

Authors: A. Windisch, S. Wappler, J. Wegener, accepted by GECCO (Download in PDF)

Title: Improving Evolutionary Testing in the Presence of Function-Assigned Flags

Authors: S. Wappler, A. Baresel, J. Wegener, accepted by TAIC PART

Title: The Current State and Future of Search Based Software Engineering

Author: Mark Harman

29th Int. Conference on Software Engineering (ICSE 2007), Future of Software Engineering (FoSE)

Minneapolis, USA, 20 - 26 May 2007

Title: GUIDE, a Graphical User Interface for Evolutionary Algorithms

Design Authors: Da Costa, Luis and M. Schoenauer 2007.

GECCO Workshop on Open-Source Software for Applied Genetic and Evolutionary Computation (SoftGEC), J. H. Moore (editor)

Title: Search-Based Testing of Complex Simulink Models containing Stateflow Diagrams

Author: Andreas Windisch

ICST 2008 (Download in PDF)

Title: Evolutionary Structural Testing of Software with Pointers

Authors: Maria Prutkina, Andreas Windisch

ICST 2008 (Download in PDF)

Title: Automatic Test Generation from Coupled UML Models using Input Partitions

Authors: H. Schlingloff, S. Weißleder

MoDeVVA 2007 - 4th Int. Workshop on Model-Driven Engineering, Verification and Validation, Nashville, TN, Oct 2007

Title: White-box Analysis of a System-on-Chip in Accordance with IEC 61508

Authors: R. Mariani, F. Rauch, H. Schlingloff

VDI Conf. Electronic Systems for Vehicles, Baden-Baden 10. - 11. October 2007

Title: Using Formal Specifications in the Implementation of CMMI

Authors: S. Mishra, H. Schlingloff

CS&P 2007, Proc. 16th Int. Conf on Concurrency, Specification and Programming, Lagow, Poland, Sept. 2007

Title: Improving Test Coverage for UML State Machines using Transition Instrumentation

Authors: M. Friske, H. Schlingloff

SAFECOMP 2007, The International Conference on Computer Safety, Reliability and Security, Nürnberg, Sept 2007

Title: Specification-Based Testing for Refinement

Authors: T. Kahsai, M. Roggenbach, H. Schlingloff

SEFM 2007 - Proc. 5th IEEE International Conference on Software Engineering and Formal Methods, London, Aug. 2007

Title: Constructing Subtle Faults Using Higher Order Mutation Testing

Authors: Yue Jia and Mark Harman

8th International Working Conference on Source Code Analysis and Manipulation (SCAM'08)
Beijing, China, 28th-29th September 2008. To appear.

Title: Handling Dynamic Data Structures in Search Based Testing

Authors: Kiran Lakhota, Mark Harman, Phil McMinn

Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2008), Atlanta, USA, July 12-16, 2008, pp. 1759-1766, ACM Press.

Title: Adaptive Operator selection with dynamic multi-armed bandits

Authors: Da Costa, Luis, A. Fialho, M. Schoenauer and M. Sebag.

Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2008), Atlanta, USA, July 12-16, 2008, pp. 913-920, ACM Press.

Title: Extreme Value Based Adaptive Operator Selection

Authors: Fialho, A., Da Costa, L., Schoenauer, M. and Sebag, M.

In G. Rudolph et al., eds.: Parallel Problem Solving from Nature (PPSN X), Springer, Lecture Notes in Computer Science, Vol. 5199 : p. 175-184. September 2008

Title: Evotest - Framework for customizable implementation of Evolutionary Testing

Authors: Dimitar M. Dimitrov, Iliana Manova, Ivaylo Spasov

Accepted in the official program of the "International Workshop on Software and Services", October 2nd-10th 2008, Sofia, Bulgaria

Title: Multi Objective Mutation Testing with Genetic Programming

Authors: William B. Langdon, Mark Harman and Yue Jia

4th Testing Academia and Industry Conference - Practice and Research Techniques (TAIC PART'09) Windsor, UK, 4th-6th September 2009.

To appear.

Title: Search-Based Testing with in-the-loop Systems

Authors: Peter Kruse and Joachim Wegener

SSBSE'09, Windsor, UK

Title: Evolutionary white-box software test with the EvoTest Framework, a progress report

Authors: Hamilton Gross, Peter Kruse, Joachim Wegener and Tanja Vos

SBST'09 Workshop @ ICST'09, Denver, USA

Title: A Highly Configurable Test System for Evolutionary Black-Box Testing of Embedded Systems

Authors: Peter Kruse, Joachim Wegener and Stefan Wappler

GECCO'09, Montreal, Canada

Title: Bringing Evolutionary Computation to Industrial Applications with GUIDE.

Authors: Da Costa, L. and Schoenauer, M.

In G. Raidl et al., eds.: Genetic and Evolutionary Computation Conference (GECCO 09), ACM Press. ACM. 2009.

Title: Automated Test Data Generation for Coverage: Haven't We Solved This Problem Yet?

Authors: Kiran Lakhota, Phil McMinn and Mark Harman.

Proceedings of the Testing: Academic & Industrial Conference - Practice And Research Techniques (TAIC PART 2009), Windsor, UK, September 4-6, to appear 2009, IEEE Computer Society

Title: Measuring an Improving Latency to Avoid Test Suite Wear Out

Authors: Shin Yoo, Mark Harman and Shmuel Ur

2nd International Workshop on Search-Based Software Testing (SBST 09).

Denver, Colorado, 1 April 2009.

To Appear

Title: Evolutionary Functional Testing of Continuous Control Systems
Authors: A. Windisch, F. Lindlar, S. Topuz and S. Wappler
GECCO 2009, July 2009, to appear
<http://www.sigevo.org/gecco-2009/>
PDF: [wltw-gecco-09.pdf](#)

Title: Search-Based Testing of Complex Simulink Models containing Stateflow Diagrams
Authors: A. Windisch
ICSE 2009, Doctoral Symposium, May 2009
<http://www.cs.uoregon.edu/events/icse2009/>
PDF: [w-icse-09.pdf](#)

Title: Signal Generation for Search-Based Testing of Continuous Systems
Authors: A. Windisch and N. Al Moubayed
ICST 2009, SBST Workshop, April 2009
<http://bitterroot.vancouver.wsu.edu/icst2009/>
PDF: http://iaser.tek.bth.se/feldt/conferences/sbst09/papers/windisch_sbst09.pdf

Title: Temporal White-Box Testing Using Evolutionary Algorithms
Authors: N. Al Moubayed and A. Windisch
ICST 2009, SBST Workshop, April 2009
<http://iaser.tek.bth.se/feldt/conferences/sbst09/>
PDF: http://iaser.tek.bth.se/feldt/conferences/sbst09/papers/moubayed_sbst09.pdf

Title: Search-Based Testing of Complex Simulink Models containing Stateflow Diagrams
Authors: A. Windisch
ICST 2009, Doctoral Symposium, April 2009
<http://bitterroot.vancouver.wsu.edu/icst2009/phd.htm>
PDF: [w-icst-09.pdf](#)

Title: Search-Based Functional Testing of Embedded Software Systems
Authors: F. Lindlar
ICST 2009, Doctoral Symposium, April 2009
<http://bitterroot.vancouver.wsu.edu/icst2009/phd.htm>

Title: Ideas on Signal Generation for Evolutionary Testing of Continuous Systems
Authors: A. Windisch
Dagstuhl Seminar: Evolutionary Test Generation, August 2008
<http://www.dagstuhl.de/de/programm/kalender/semhp/?semnr=2008351>
PDF: <http://drops.dagstuhl.de/opus/volltexte/2009/2011/pdf/08351.WindischAndreas.Paper.2011.pdf>

Title: Using evolutionary algorithms to select parameters from equivalence classes
Authors: F. Lindlar and A. Marrero Pérez
Dagstuhl Seminar: Evolutionary Test Generation, August 2008
<http://www.dagstuhl.de/de/programm/kalender/semhp/?semnr=2008351>
PDF: <http://drops.dagstuhl.de/opus/volltexte/2009/2012/pdf/08351.LindlarFelix.Paper.2012.pdf>

Title: Pruebas estructurales evolutivas con EvoTest Framework
Authors: Arthur Baars, Verónica Hernández, Tanja Vos
In proceedings of the IV Taller sobre Pruebas en Ingeniería del Software (PRIS 2009), San Sebastián, September 2009
Journals:

Authors: Yue Jia and Mark Harman
Title: Higher Order Mutation Testing
Journal of Information and Software Technology.
To appear.

Authors: Phil McMinn, David Binkley and Mark Harman
Title: Empirical Evaluation of a Nesting Testability Transformation for Evolutionary Testing
ACM Transactions on Software Engineering and Methodology.
To appear.

Authors: Walter Gutjahr and Mark Harman.
Title: Focused Issue on Search Based Software Engineering.
Editorial: Journal Computers and Operations Research

35(10):3049-3392, October 2008.

Authors: Mark Harman and Phil McMinn,
Title: A Theoretical and Empirical Study of Search Based Testing: Local, Global and Hybrid Search
IEEE Transactions on Software Engineering.
To appear.
Special Issues:

Authors: Mark Harman and Afshin Mansouri
Title: IEEE Transactions on Software Engineering.
Special issue on Search Based Software Engineering (SBSE)

Authors: Giulio Antoniol, Massimiliano Di Penta and Mark Harman .
Title: Journal of Software Maintenance and Evolution: Research and Practice
Special issue on Search Based Software Maintenance and Evolution
To Appear, 2008.

Authors: John Clark, Mark Harman , Phil McMinn and Jeff Offutt.
Title: Journal of Systems and Software.
Special issue of Extended Papers from the TAIC PART 2007 and Mutation 2007.
To Appear, 2008.

Authors: Walter Gutjahr and Mark Harman.
Title: Focused Issue on Search Based Software Engineering.
Editorial: Journal Computers and Operations Research
35(10):3049-3392, October 2008. Keynotes:

Author: Mark Harman
Title: Open Problems in Testability Transformation
1st International Workshop on Search Based Testing (SBT 2008)
Lillehammer, Norway, 9 - 11 April 2008

Author: Mark Harman
Title: Automated Test Data Generation Using Search Based Software Engineering
2nd Workshop on Automation of Software Test (AST 07) at the 29th Int. Conference on Software Engineering (ICSE 2007),
Minneapolis, USA, 20 - 26 May 2007

Author: Mark Harman
Title: Recent Trends in Metaheuristic Optimization for Search Based Software Engineering
6th Metaheuristics and bioinspired algorithms conference (MAEB).
Malaga, Spain, 11 - 13 February 2009.

Author: Joachim Wegener
Title: Evolutionary Testing
The First Workshop on Automating Test Case Design, Selection and Evaluation, in conjunction with the 4th Conferencia Ibérica de Sistemas y Tecnologías de la Información
Póvoa de Varzim, Portugal, 17-20 June, 2009.