Fabrizio Pastore - Scientific Curriculum

Personal information

Name:	Fabrizio
Surname:	Pastore
Phone:	
Office:	University of Milano - Bicocca, Department of Informatics, Systems and Communications (DISCo), viale Sarca 336, building U14, 20126 Milano, Italy
E-mail:	fabrizio.pastore@gmail.com
Spoken languages:	Italian (mother tongue), English
Web site:	www.fabriziopastore.com
Member of:	IEEE, IEEE Computer Society, ACM, ACM SIGSOFT

Current Position

Postdoctoral researcher at University of Milano - Bicocca, Italy, from January 1st, 2011.

Past University Positions

Post-doc. Research fellow for UE IP project RESERVOIR, University of Lugano, Switzerland, from January 1st 2010 to December 31st 2010.

Research fellow, University of Milano - Bicocca, November 1st to December 31st 2009.

Ph.D. student, University of Milano - Bicocca, from November 1st, 2006 to November 1st, 2009.

European Projects

UE STREP PINCETTE, from January 1st, 2011 to November 30th, 2013. University of Milano - Bicocca. Goal of the project: development of a framework for the automatic detection and localization of regression faults. Role within the project: design, development and experimentation of dynamic analysis solutions, design, development and experimentation of solutions that combine static and dynamic analysis technologies developed by different partners. Consortium: IBM Haifa Research Laboratory, Israel; Israel Aerospace Industries, Israel; ABB Corporate Research, Switzerland/Germany; VTT Technical Research Center of Finland, Finland; The University of Oxford, UK; University of Lugano, Switzerland; University of Milano – Bicocca, Italy.

UE IP RESERVOIR, from January 1st, 2010 to December 31st, 2010. University of Lugano, Switzerland. Goal of the project: development of a federated Cloud computing infrastructure (also known as Sky Computing). Role within the project: design, development and experimentation of a monitoring framework and a Kringing Controller for scaling up/down virtual machines. Consortium: IBM Haifa Research Laboratory, Israel; Israel Aerospace Industries, Israel; Telefónica Research and Development, Spain; University College of

London, UK; Oracle; SAP Research Labs, Ireland; Thales, France; Umea University, Sweden; Universidad Complutense de Madrid, Spain; University of Lugano, Switzerland; University of Messina, Italy.

UE STREP SHADOWS, from November 1st, 2006 to September 3rd, 2009. University of Milano – Bicocca. Goal of the project: development of a software self-healing framework. Role within the project: design, development and experimentation of dynamic analysis solution, design, development and experimentation of solutions that integrate technologies from different partners. Consortium: IBM Haifa Research Laboratory, Israel; Israel Aerospace Industries, Israel; Telefónica Research and Development, Spain; ARTISYS, Czech Republic; Net Technologies LTD, Greece; Scapa Technology, UK; Brno University of Technology, Czech Republic; University of Milano - Bicocca, Italy; University of Potsdam, Germany.

Grants

Research grant at University of Milano - Bicocca. From January 1st, 2011 to December 31st, 2014.

Education

February 2010. Ph.D. in Informatics University of Milano - Bicocca, Piazza dell'Ateneo Nuovo, 1, C.A.P. 20126, Milano. Thesis title: *Automatic Diagnosis of Software Functional Faults by Means of Inferred Behavioral Models.* Advisors: Prof. Mauro Pezzè, Dr. Leonardo Mariani.

December 2008. Professional Engineer Qualification. University of Milano - Bicocca, Piazza dell'Ateneo Nuovo, 1, C.A.P. 20126, Milano.

October 2006. Master Degree in Computer Science. University of Milano - Bicocca, Piazza dell'Ateneo Nuovo, 1, C.A.P. 20126, Milano. 110/110 cum Laude. Thesis title: *Verifica Sperimentale di Tecniche di Analisi Dinamica del Software (Empirical Validation of Dynamic Analysis Techniques).* Advisor: Prof. Mauro Pezzè. Co-advisor: Dr. Leonardo Mariani.

October 2004. Bachelor Degree in Computer Science. Università degli Studi del Piemonte Orientale, viale Teresa Michel, 11, C.A.P. 15121, Alessandria. 110/110 cum laude. Thesis title: *ThunderDB: progettazione e sviluppo di un RDBMS open source (ThunderDB: design and development of an open source RDBMS).* Advisor: Dr. Stefania Montani

Research Activity

My research regards Software Engineering: Dynamic Program Analysis [SOQUA2007, ISSRE2008, ISSTA2009, ICSE2009, CAI2010, PHD2010, CRC2011, TSE2011, ISSRE2012], Software Testing [ICSM2010, ICST2012, ICST2013], Software Automation [TOPI2011, ICSETD2012, ICACTD2011].

Dynamic Program Analysis

My contributions to the state of the art of Dynamic Program Analysis regards the development of five different dynamic program analysis techniques that can be combined together to help software developers in the debugging of software faults: KLFA, BCT, AVA, RADAR and VART.

KLFA is a technique that captures and generalizes in a same model both data flow and control flow information. KLFA has been successfully adopted to support debugging activities through the analysis of log files. I presented the results obtained with KLFA at the 2008 International Symposium on Software Reliability Engineering (ISSRE), and in the book “Mining Software Specifications: Methodologies and Applications (CRC Press, 2011)”.

BCT is a dynamic analysis technique that identifies anomalies in the data values and events flow observed during the execution of a program. My contributions to BCT regards the introduction of means to filter false positives and build anomaly graphs, graphs that capture the correlation between different runtime anomalies thus simplifying the diagnosis of faults.

The results obtained with BCT have been presented in an articled appeared in the August 2011 issue of the IEEE Transactions on Software Engineering. Furthermore I presented a demo of the BCT Eclipse plug-in at the 2009 International Conference on Software Engineering (ICSE).

AVA is a technique that generates human readable interpretations of events flow anomalies. I presented the results obtained with AVA at the 2009 International Symposium on Software Testing and Analysis (ISSTA), and I demonstrated how AVA can be adopted to successfully analyze log files at the formal tool demo session of the 2013 International Conference on Software Testing Verification and Validation (ICST).

RADAR is a technique for the debugging of regression faults. RADAR derives models from passing executions of a base software version, and use these models to identify anomalies in the failing executions of the upgraded version of the software. The anomalies identified by RADAR are shown to software developers to help them in the debugging of regression faults. RADAR has been successfully applied to both open source and industrial case studies. I presented the results obtained with RADAR at ISSRE 2012, and I demoed the tool that implements RADAR at the formal demo session of ICSE 2013.

VART is a technique that combines dynamic and static program analysis to augment traditional regression testing with verification capabilities. VART is a joint work developed within the context of the EU project PINCETTE. VART uses dynamic analysis to derive data properties for a base version of the program that are supposed to hold also on the upgraded version, and uses bounded model checking to determine whether any of those properties no longer hold in the upgraded version of the program because of a regression fault. A paper describing VART and the results achieved with VART is undergoing the review process of ICSE 2014.

Test cases evolution and generation

During the year spent as Post-Doc in Lugano I supervised a Ph.D student, Mehdi Mirzaaghaei, on the definition of a framework, TestCareAssistant, that supports software developers in the activities related to test suite evolution: repairing test cases broken by method refactorings, and generating test cases for new functionalities. The results obtained with TestCareAssistant have been published in a short paper at the 2010 International Conference on Software Maintenance, and at ICST 2012.

More recently I worked with Gordon Fraser and Leonardo Mariani on the adoption of Crowd Sourcing platforms like Amazon Mechanical Turk as an effective mean to derive oracles for automatically generated test cases. I presented the obtained results at ICST 2013.

Software Automation

Along with Leonardo Mariani I recently introduced the concept of task-based plug-ins as a new mean to allow end-users in designing workflow of application functionalities. This research result has been presented in an article appeared on the journal “Software Practice and Experience” published by Wiley in 2012, furthermore I presented MASH , the tool that integrates task-based plug-ins in Eclipse, at the Formal Tool Demo session of ICSE 2012.

Within the context of the EU IP project RESERVOIR I worked on the definition of an autonomic controller that manages the auto-scaling capabilities of a Cloud computing platform, which was presented at the demo session of the 2011 International Conference on Autonomic Computing (ICAC).

Software Development/Consulting

I maintain, with the contribution of different students, five tools: MASH, BCT, RADAR, AVA, KLFA. All the tools are built as Eclipse plug-ins.

MASH is a framework that enables runtime composition of plug-in functionalities. I presented MASH at the Formal Tool Demo Session of the 34th International Conference on Software

Engineering (ICSE'12). MASH has been detailed in different papers [TOPI2011], [ICSETD2012]. Web site: http://www.lta.disco.unimib.it/tools/mash/

BCT (Behavior Capture and Test) is a dynamic analysis tool to support software developers in debugging software faults. I presented BCT at the Formal Tool Demo Session of the 31st International Conference on Software Engineering (ICSE'09). BCT has been detailed in different research papers [ICSETD2009], [CAI2010], [TSE2011]. BCT has been adopted in two EU projects: SHADOWS and PINCETTE. Web site: http://www.lta.disco.unimib.it/tools/bct/

RADAR is a dynamic analysis tool built upon BCT that leverages program diffing and dynamic program analysis to identify and present the anomalous software behaviors that cause a regression failure. I presented a demo of RADAR at the Formal Tool Demo Session of the 35th International Conference on Software Engineering (ICSE'13) and at the 7th Workshop of the Italian Eclipse Community (Eclipse-IT 2012). RADAR has been detailed in a paper published at ISSRE 2012. Web site: http://www.lta.disco.unimib.it/tools/radar/

AVA (Automata Violations Analyzer) is a tool that provides human readable interpretations of finite state automata violations. I presented a demo of AVA at the Formal Tool Demo Session of ICST 2013. AVA has been described in different research papers [ISSTA2009], [CRC2011]. Web site: http://www.lta.disco.unimib.it/tools/ava/

KLFA is a tool that identifies anomalous behaviors in log files. KLFA has been described in different research papers ([SOQUA2007], [ISSRE2008]). Web site: http://www.lta.disco.unimib.it/tools/klfa/

In 2011 and 2012 I did consulting as Software Quality expert for a software company that develops C/C++ automotive software.

Publications

Ph.D. Thesis

[PHD2010] Fabrizio Pastore. Automatic Diagnosis of Software Functional Faults by Means of Inferred Behavioral Models. Ph.D. Thesis. University of Milano -Bicocca, http://hdl.handle.net/10281/7818, 2010.

International Journals

[STVR2013] Mehdi Mirzaaghaei, Fabrizio Pastore, and Mauro Pezzè. Automatic Test Case Evolution. Software Testing, Verification and Reliability. Wiley Interscience. 2013 (Paper selected for the ICST special issue, not published yet)

[SPE2012] Leonardo Mariani, Fabrizio Pastore. MASH: tool integration made easy. Software: Practice and Experience, John Wiley & Sons, Ltd, 2012, doi:10.1002/spe.2129. 2012

[TSE2011] Leonardo Mariani, Fabrizio Pastore, Mauro Pezzè. Dynamic Analysis for Diagnosing Integration Faults. IEEE Transactions on Software Engineering (Impact Factor 3.75), Vol. 37 (4). Pages 486 - 508. IEEE Computer Society, 2011

[CAI2010] Alessandra Gorla, Mauro Pezzè, Jochen Wuttche, Leonardo Mariani, Fabrizio Pastore. Achieving cost-effective software reliability through self-healing. Computing and Informatics, 2. Pages 1001 - 1022. Institute of Informatics, Slovak Academy of Sciences, Bratislava, Slovakia. 2010.

Book Chapters

[CRC2011] Leonardo Mariani, Fabrizio Pastore, Mauro Pezzè, Mauro Santoro. Mining Finite-State Automata with Annotations. Mining Software Specifications: Methodologies and Applications. CRC Press, 2011.

International Conferences and Workshops

[ICSETD2013] F. Pastore and L. Mariani and A. Goffi. RADAR: a Tool for Debugging Regression Problems in C/C++ Software. Proceedings of the International Conference on Software Engineering (ICSE) - Tool Demo Track. Pages 1335 – 1338. San Francisco, USA, 2013. IEEE Press.

[ICSTTD2013] F. Pastore and L. Mariani. AVA: Supporting Debugging with Failure Interpretations. Proceedings of the International Conference on Software Testing Verification and Validation (ICST) - Tool Demo Track. Pages 416 – 421. *Luxemburg.* 2013. IEEE Computer Society.

[ICST2013] Fabrizio Pastore, Leonardo Mariani, Gordon Fraser. CrowdOracles: Can the Crowd Solve the Oracle Problem?. In ICST'13: Proceedings of the 6th IEEE International Conference on Software Testing, Verificaton and Validation. Pages 342-351. Luxemburg. *2013.* IEEE Computer Society.

[ISSRE2012] Fabrizio Pastore, Leonardo Mariani, Alberto Goffi, Manuel Oriol and Michael Wahler. Dynamic Analysis of Upgrades in C/C++ Software. In ISSRE'12: Proceedings of the 23rd IEEE

International Symposium on Software Reliability Engineering. Dallas, USA, 2012. IEEE Computer Society.

[ICST2012] Mehdi Mirzaaghaei, Fabrizio Pastore, and Mauro Pezzè. Supporting Test Suite Evolution through Test Cases Adaptation. In ICST'12: Proceedings of the 5th International Conference on Software Testing, Verification and Validation. Montreal, Canada. 2012. IEEE Computer Society.

[ICSETD2012] Leonardo *Mariani, Fabrizio Pastore.* MASH: A Tool For End-User Plug-In Composition. In ICSE'12: Proceedings of the 34th International Conference on Software Engineering (Formal Tool Demo paper). Zurich, Switzerland. 2012. IEEE Computer Society.

[TOPI2011] Leonardo Mariani, Fabrizio Pastore. Supporting Plug-in Mashes to Ease Tool Integration. In Proceedings of the First International Workshop on Developing Tools as Plug-ins (TOPI) - colocated with the International Conference on Software Engineering (ICSE). Pages 1-4. Waikiki, HI, USA. *2011.* ACM.

[ICACTD2011] Alessio Gambi, Giovanni Toffetti, Fabrizio Pastore, Mauro Pezzè. A Kriging-based Controller for the Cloud. In ICAC'11: Proceedings of the 8th International Conference on Autonomic Computing (Tool Demo paper). Karlsruhe, Germany. 2011. ACM.

[ICSM2010] Mehdi Mirzaaghaei, Fabrizio Pastore, Mauro Pezzè. Automatically Repairing Test Cases for Evolving Method Declarations. In ICSM'10: Proceedings of 26th IEEE International Conference on Software Maintenance (short paper). Timisoara, Romania. 2010. ACM.

[ISSTA2009] Anton Babenko, Leonardo Mariani and Fabrizio Pastore. AVA: Automated Interpretation of Dynamically Detected Anomalies. In ISSTA'09: Proceedings of the 2009 International Symposium on Software Testing and Analysis. Chicago, IL, USA. Pages 237-248. 2009. ACM.

[ICSETD2009] Leonardo Mariani, Fabrizio Pastore, Mauro Pezzè. A toolset for Automated Failure Analysis. In proceedings of the 2009 IEEE 31st International Conference on Software Engineering – Volume 00 (Formal Tool Demo paper). Vancouver, Canada. Pages 563-566. 2009. IEEE Computer Society.

[ISSRE2008] Leonardo Mariani, and Fabrizio Pastore. Automated Identification of Failure Causes in System Logs. In proceedings of the 2008 19th International Symposium on Software Reliability Engineering. ISSRE. Seattle, WA, USA . Pages 117-126. 2008. IEEE Computer Society.

[SOQUA2007] Domenico Cotroneo, Roberto Pietrantuono, Leonardo Mariani, Fabrizio Pastore. Investigation of Failure Causes in Workload-Driven Reliability Testing. In Fourth international Workshop on Software Quality Assurance: in Conjunction with the 6th ESEC/FSE Joint Meeting. SOQUA '07. Dubrovnik, Croatia. Pages 78-85. 2007. ACM.

National workshops

[ECLIPSE2012] Fabrizio Pastore, Leonardo Mariani, Alberto Goffi: RADAR: Supporting Developers in Debugging Regression Faults. *In* Proceedings of the Seventh Workshop of the Italian Eclipse Community, Eclipse-IT 2012. Pozzuoli. 2012.

[ECLIPSEa2011] Leonardo Mariani, Fabrizio Pastore. Enabling End-User Plug-in Compositions with MASH. In Proceedings of the Sixth Workshop of the Italian Eclipse Community, Eclipse-IT 2011. Milano. 2011.

[ECLIPSEb2011] Mehdi Mirzaaghaei, Fabrizio Pastore. TestCareAssistant: Automatic Repair of Test Case Compilation Errors. *In* Proceedings of the Sixth Workshop of the Italian Eclipse Community, Eclipse-IT 2011. Milano. 2011.

Teaching

Teaching Assistant for “Fondamenti di Informatica” (Foundations of Informatics) Dipartimento di Elettronica, Informazione e Bioingegneria. Politecnico di Milano. 2013/2014 (Frontal lessons 40 hours). Instructor: Prof. Cristiana Bolchini.

Teaching Assistant for “Ingegneria del Software” (Software Engineering) Department of Informatics Systems and COmmunications, University of Milano – Bicocca. 2011/2012 (Laboratory 24 hours). Instructors: Dr. Leonardo Mariani, Prof. Francesca Arcelli.

Teaching Assistant for “Gestione di Documenti in Ambiente Web” (Document Management on the Web) Department of Informatics Systems and COmmunications, University of Milano – Bicocca. 2011/2012 (Frontal lessons 12 hours). Instructor: Dr. Hue Le Van.

Teaching Assistant for “Laboratorio di Sistemi Operativi e Reti” (Operating Systems and Networking Lab.) Department of Informatics Systems and COmmunications, University of Milano – Bicocca. 2008/2009 (Frontal lessons 36 hours + Laboratory 24 hours), 2011/2012 (Frontal lessons 24 hours + Laboratory 24 hours). Instructors: Prof. Flavio De Paoli, Dr. Hue Le Van.

Teaching Assistant for “Laboratorio di Progettazione” (Software Design Lab.). Department of Informatics Systems and COmmunications, University of Milano – Bicocca. 2007/2008 (Frontal lessons 12 hours), 2008/2009 (Frontal lessons 12 hours), 2009/2010 (Frontal lessons 12 hours). Instructor: Dr. Leonardo Mariani.

Teaching Assistant for “Laboratorio di Informatica per Fisici” (Informatics for Physician Lab.). Department of Phisics, University of Milano – Bicocca. 2006/2007 (Laboratory 40 hours), 2007/2008 (Laboratory 30 hours), 2008/2009 (Laboratory 24 hours). Instructor: Dr. Luca Bernardinello.

Theses Supervising

Ph.D. Thesis

Mehdi Mirzaghaei. Automatically Evolving Test Suites. Ph.D. Thesis. Advisor: Prof. Mauro Pezzè. Co-advisor: Dr. Fabrizio Pastore. University of Lugano. Lugano. 2012

Master Theses

Luciano Poto. End - User Programming in applicazioni RCP: sviluppo di una soluzione basata sui workflow (End User Programming with RCP applications: a workflow based solution). Master Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). March 2012.

Anton Babenko. Diagnosi di difetti attraverso system logs. Master Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). April 2009.

Mirko Granata. Correzione automatizzata di difetti di regressione. Master Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). April 2009.

Bachelor Theses

Matteo Brunetto. Sviluppo di uno Strumento di Crowd Mutation Testing. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). October 2012.

Andrea Di Cosmo. Sviluppo di un plug-in Eclipse per la localizzazione di difetti. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). February 2012.

Davide Ramaglietta. Sviluppo di un plug-in Eclipse per il Crowdtesting. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). November 2011.

Anida Zgura. Valutazione Empirica della Tecnica di Analisi Dinamica AVA. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). June 2011.

Alessia Ferrari. Analisi empirica di una tecnica per l'interpretazione dei fallimenti delle applicazioni orientate agli oggetti. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). April 2011.

Silvia Traversi. Modellazione di una tecnica per l'identificazione di anomalie nei file di log. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Mathematics. November 2010.

Covelli Marco. Ottimizzazione di una tecnica per la prevenzione di problemi di concorrenza. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Dr. Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). April 2010.

Alberto Goffi. Definizione di un'interfaccia grafica per la visualizzazione e l'analisi dei dati prodotti dalla tecnologia BCT. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). July 2009.

Andrea Mattavelli. Sviluppo di una tecnica di healing per problemi di concorrenza. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). December 2009.

Valerio Terragni. Sviluppo di un ambiente visuale per il controllo della tecnica di analisi dinamica BCT. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). October 2008.

Antonio Toscano. Sperimentazione di tecniche per il test di regressione in assenza di codice sorgente. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). February 2008.

Francesco Columella. Progettazione e sviluppo di un framework per il controllo della tecnologia BCT. Bachelor Thesis. Supervisors: Dr. Leonardo Mariani, Fabrizio Pastore. University of Milano-Bicocca, Department of Informatics Systems and Communication (DISCo). December 2007.

Presentations

RADAR: A Tool for Debugging Regression Problems in C/C++ Software. 35th International Conference on Software Engineering (ICSE'13). Formal Tool Demo session. San Francisco, USA. May 2013

CrowdOracles: Can the Crowd Solve the Oracle Problem? 6th IEEE International Conference on Software Testing, Verificaton and Validation (ICST'13). Luxemburg, LU. March, 2013

AVA: Supporting Debugging With Failure Interpretations. 6th IEEE International Conference on Software Testing, Verificaton and Validation (ICST'13). Tool Demo. Luxemburg, LU. March, 2013

Static upgrade checking with dynamically generated assertions. *2nd Workshop on Validation Strategies for Software Evolution (VSSE'13), co-located with European Joint Conferences on Theory and Practice of Software (ETAPS). Invited Talk. Rome, Italy. March, 2013.*

Dynamic Analysis of Upgrades in C/C++ Software*. 23rd IEEE International Symposium on Software Reliability Engineering. Richardson, Dallas, USA. November, 2012.*

RADAR: Supporting Developers in Debugging Regression Faults. 7th Workshop of the Italian Eclipse Community, Eclipse-IT. Pozzuoli, Italy*, September 2012.*

MASH: A Tool for End-User Plug-In Composition, 34th International Conference on Software Engineering - Formal Tool Demo, ICSE 2012. Zurich, Switzerland, June 2012.

Enabling End-User Plug-in Compositions with MASH, Sixth Workshop of the Italian Eclipse Community, Eclipse-IT 2011. Milano, Italy, September 2011.

Supporting Plug-in Mashes to Ease Tool Integration, First International Workshop on Developing Tools as Plug-ins (TOPI) - colocated with 33rd International Conference on Software Engineering (ICSE). Waikiki, HI, USA. June *2011.*

RESERVOIR Tutorial, Service and Software Architectures, Infrastructures and Engineering Summer School, Heraklion, Crete, Greece, June 2010.

Automatically Repairing Test Cases for Evolving Method Declarations, 26th IEEE International Conference on Software Maintenance (ICSM'10), Timisoara, Romania, September 2010.

A toolset for Automated Failure Analysis, Formal Tool Demo at 31st International Conference on Software Engineering (ICSE'09), Vancouver, CA, May 2009.

Automated Identification of Failure Causes in System Logs, 19th IEEE International Symposium on Software Reliability Engineering (ISSRE 2008), Seattle, WA, November 2008.

Investigation of Failure Causes in Workload-Driven Reliability Testing, International Workshop on Software Quality Assurance (SOQUA'07), Dubrovnik, Croatia, September 2007.

A Self-Healing Solution for Functional Faults, Doctoral Symposium of the 2007 GIIS Doctorate School in Computer Engineering, Palermo, 19 September 2007.

Workshops organized

Co-organizer with Gordon Fraser, Leonardo Mariani, Thomas LaToza, and Nikolai Tillman of CSI-SE 2014, First International Workshop on Crowdsourcing in Software Engineering, co-located with the 36th International Conference on Software Engineering, May 31 – June 7, 2014, Hyderabad, India.

Program Committees

First International Workshop on Crowdsourcing in Software Engineering (CSI-SE), co-located with the 36th International Conference on Software Engineering, May 31 – June 7, 2014, Hyderabad, India.

Sixth International Conference on Software Testing Verification and Validation - Tool Demo Track, ICST 2013, March 18 - 22, 2013 - Barcelona, Luxemburg

Seventh International Conference on Software Engineering Advances, ICSEA 2012, November 18 - 23, 2012 - Lisbon, Portugal

Sixth International Conference on Software Engineering Advances, ICSEA 2011, October 23-29, 2011 - Barcelona, Spain

Fifth International Conference on Software Engineering Advances, ICSEA 2010, August 22-27, 2010 - Nice, France

Fourth International Conference on Software Engineering Advances, ICSEA 2009, September 20-25, 2009 - Porto, Portugal

Review Activity for Journals

Software: Practice and Experience. Edited By: R. Nigel Horspool, Andy J. Wellings. Impact Factor: 0.573. Wiley.

International Journal on Advances in Software. Edited by: Jon G. Hall. ISSN: 1942-2628. IARIA

Milano, 29/12/2013

Autorizzo al trattamento dei dati personali ai sensi del D. Lgs. 196/2003