The 8th joint meeting of
the European Software Engineering Conference
and the ACM SIGSOFT Symposium
on the Foundations of Software Engineering

CONFERENCE
PROGRAM

Hosted by the University of Szeged
http://2011.esec-fse.org
### Main Conference Program Highlights

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**Legends:**
- DS – Doctoral Symposium
- TB – Technical Briefings
- NIx – New Ideas track
- PWG – PhD Working Groups
- Rx – Research track
- Ix – Industrial track
- TDx – Tool Demonstrations

**Notes:**
- The detailed program of the workshops and the co-located 3rd International Symposium on Search Based Software Engineering (SSBSE 2011) can also be found in this booklet, see for an overview on page 10, and for the details following it.
- The ICSE Steering Committee meeting will take place on Tuesday from 17:30-20:00 in the Meeting room.
- The FSE Steering Committee meeting will take place on Friday during lunchtime in the Meeting room.
- The distinguished papers and artifact papers are marked in the program.
On behalf of the entire Organizing Committee it is our great pleasure to welcome you to the 8th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, an internationally renowned forum for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, experiences, and challenges in the field of software engineering.

Every second year FSE is jointly organized with ESEC on the Old Continent of Europe. This year’s host city is Szeged in the South of Hungary. Szeged, which has always been referred to as the city of sunshine, is simply beautiful and has an atmosphere that no other city has in Hungary. Its sights, like the Votive church, the Synagogue, the Hero’s Arch, and the University of Szeged all give a distinct character to the town. From September until late June, the local cafés, restaurants, shops, and streets are all noisy from the lively bustle of university students and the whole town is turned into a nest of youthful spirit. Let us invite you to be part of this unique atmosphere and enjoy your stay during the ESEC/FSE 2011 Conference.

This year’s program promises to be very exciting. The research track call for papers attracted 203 papers from all continents. After extensive virtual and physical discussions, the Program Committee accepted 34 papers covering a large variety of software engineering topics – ranging from mining software archives and empirical studies over the most recent innovations, trends, experiences, and challenges in the field of software engineering. After extensive virtual and physical discussions, the Program Committee accepted 34 papers covering a large variety of software engineering topics – ranging from mining software archives and empirical studies over the most recent innovations, trends, experiences, and challenges in the field of software engineering. This year’s program also offers a comprehensive student program, including the Doctoral Symposium, the Technical Briefings and the PhD Working Groups (PWGs). PWGs are offered for PhD students and other young (pre-doc) researchers with the aim of providing them with the opportunity to meet prominent senior researchers in certain software engineering fields and work with them throughout the conference week.

Organizing such a complex event as ESEC/FSE 2011 has been a team effort. First, we would like to thank the authors for providing the content of the program. We deeply appreciate the hard work of the program committees of several tracks when reviewing papers and providing feedback for authors. We would also like to express my gratitude to the University of Szeged for hosting the conference, our sponsors ACM and SIGSOFT, and our generous corporate supporters: Microsoft Research, Ericsson, DEAK Zrt., IBM Research, and FrontEndART Software. Last but not least, let us thank the organizing committee for their effort and dedicated work in putting together ESEC/FSE 2011.
Mechatronics is the engineering discipline concerned with the construction of systems incorporating mechanical, electronic and information technology components. Typical examples of mechatronic systems are automotive applications, e.g. advanced braking systems, fly-by-wire or active suspension techniques, but also DVD-players or washing machines. Mechatronic systems are characterised by a combination of basic mechanical devices with a processing unit monitoring and controlling it via a number of actuators and sensors. This leads to massive improvements in product performance and flexibility. The introduction of mechatronics as a tight integration of mechanical, electronic and information-driven units allowed for turning conventionally designed mechanical components into smart devices.

In the talk we survey current state of the art in the development of mechatronic systems from a software engineering point of view. Based on identified weaknesses of existing approaches we present our own approach called Mechatronic UML. Mechatronic UML supports model-driven development of mechatronic systems addressing complex coordination between system components under hard real-time constraints and reconfiguration of control algorithms at runtime to adjust the system behaviour to changing system goals as well as target platform specific code generation. Modelling is based on a syntactically and semantically rigorously defined and partially refined subset of UML. It uses a slightly refined version of component diagrams, coordination patterns, and a refined version of state charts including the notion of time which are called Real time state charts. Verification of safety properties is based on a special kind of compositional model checking to make it scalable. Model checking exploits an underlying unifying semantics which is formally defined using graph transformation systems. The last part of the talk is devoted to pointing out future developments and research challenges which we believe characterise advanced mechatronic systems of the future.

Dr. Wilhelm Schäfer, born August 16th 1954, got his PhD degree 1986 in the area of software engineering from the University of Osnabrück, Germany. 1986 -1987 he spent as a Visiting Assistant Professor at McGill University Montreal, Canada. From 1986 to 1990 he was head of research and development at STZ company for Software Technology Ltd., Dortmund. From 1991 to 1994 he was Associate Professor, Department of Computer Science, University of Dortmund. Since 1994 he is full professor and chair, head of Software Engineering Group, Department of Computer Science, University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Since 1994 he is full professor and chair, head of Software Engineering Group, Department of Computer Science, University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn. Prof. Schäfer is also the chair of the International Graduate School of the University of Paderborn.

The ELI – Extreme Light Infrastructure – or as it is commonly referred to: the SUPERLASER will be one of the large research facilities of the European Union. ELI will be built with a joint international effort to form an integrated infrastructure comprised of three branches. The ELI Beamline Facility (Prague, Czech Republic) will mainly focus on particle acceleration and X-ray generation, while the ELI Nuclear Physics Facility (Magurele, Romania) will be dealing with laser-based nuclear physics as well as high field physics. In the talk we introduce the ELI Attosecond Light Pulse Source (ELI-ALPS) to be built in Szeged, Hungary.

The primary mission of the ELI-ALPS Research Infrastructure is to provide the international scientific community with a broad range of ultrafast light sources, especially with coherent XUV and X-ray radiation, including single attosecond pulses. Thanks to this combination of parameters never achieved before, energetic attosecond X-ray pulses of ELI-ALPS will enable recording freeze-frame images of the dynamical electronic-structural behaviour of complex atomic, molecular and condensed matter systems, with attosecond-picolometer resolution. The secondary purpose is to contribute to the scientific and technological development towards generating 200 PW pulses, being the ultimate goal of the ELI project. ELI-ALPS will be operated also as a user facility and hence serve basic and applied research in physical, chemical, material and biomedical sciences as well as industrial applications.

The Facility will be built by the end of 2015 from a budget exceeding 240M€. The building and the IT infrastructure, from high speed internal networking, remote controlled system alignment, targetry and data acquisition through laser and radiation safety tools until security systems, will challenge the state of the art of similar research facilities.

Gábor Szabó received his MS and PhD degrees in physics from JATE University, Szeged, Hungary, in 1978 and 1981, respectively. From 1978 to the present he has been working at University of Szeged where he has been a full professor in the Department of Optics and Quantum Electronics since 1994. Since 2010 he has been the rector of the University of Szeged. He has also visited scientists at both Max Planck Institute, Göttingen, Germany, and Rice University, Houston, Texas. Dr. Szabó is a member of the Hungarian Physical Society, he is the chairman of the Hungarian Association for Innovation, and has been a member of Hungarian Academy of Sciences since 2010. His research activities include photoacoustic spectroscopy, ultrafast laser spectroscopy, generation of femtosecond pulses, nonlinear optics, optimum control of quantum systems, medical applications of lasers.
Luca de Alfaro is a professor of Computer Science at the University of California, Santa Cruz.

Thomas A. Henzinger is President of IST Austria (Institute of Science and Technology Austria) and Adjunct Professor of Electrical Engineering and Computer Sciences at the University of California, Berkeley. He holds a Dipl.-Ing. degree in Computer Science from Kepler University in Linz, Austria, an M.S. degree in Computer and Information Sciences from the University of Delaware, and a Ph.D. degree in Computer Science from Stanford University (1991). He was Assistant Professor of Computer Science at Cornell University (1992-95), Assistant Professor (1996-97), Associate Professor (1997-98), and Professor (1998-2004) of Electrical Engineering and Computer Sciences at the University of California, Berkeley. He was also Director at the Max-Planck Institute for Computer Science in Saarbruecken, Germany (1999) and Professor of Computer and Communication Sciences at EPFL in Lausanne, Switzerland (2004-09). His research focuses on modern systems theory, especially models, algorithms, and tools for the design and verification of reliable software, hardware, and embedded systems. His HyTech tool was the first model checker for mixed discrete-continuous systems. He is an ISI highly cited researcher, a member of Academia Europaea, a member of the German Academy of Sciences (Leopoldina), a member of the Austrian Academy of Sciences, a Fellow of the ACM, a Fellow of the IEEE, and the recipient of an ERC Advanced Investigator Grant.

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We survey the last decade’s research on interface automata and related formalisms, with special emphasis on non-functional aspects of interfaces (real time, power consumption) and on the automatic synthesis of software component interfaces.

Software Architecture emerged in the 1990’s as an important sub-field of software engineering. While good architectural design had long been recognized as critical to the success of any complex software system, before then the practice of architecting had relied largely on ad hoc, uncodified, and idiosyncratic techniques and knowledge. By the 2000’s the field had matured to the point where there were widely-recognized taxonomies of architectural patterns, techniques for formally representing and analyzing architectures, methods for reviewing an architectural design, widespread adoption of architectural product lines and composition frameworks, and techniques for ensuring conformance between an architecture and an implementation of it. In this talk we reflect on the key enablers of a discipline of software architecture that led to these advances, the central ideas that form its core, and its enduring principles that continue to shape the field of software engineering. We consider both the important concepts on which it builds, as well as those that have built on top of it. Finally, we examine some of the important new trends and challenges that are likely to have an impact on how software architecture will evolve in the future.

Mary Shaw is the Alan J. Perlis University Professor of Computer Science at Carnegie Mellon University, where she has been a member of the faculty since completing her PhD in 1972. Her research interests lie in the area of software engineering and software systems, particularly software architecture, end user software engineering, cybersociotechnical systems, and software design. She is co-author of “Software Architecture: Perspectives on an Emerging Discipline” and is considered to be one of the founders of the field of software architecture. She has received the ACM SIGSOFT Outstanding Research Award, the IEEE Computer Society TCSE’s Distinguished Educator Award, CSEE&T’s Nancy Mead Award for Excellence in Software Engineering Education, the Stevens Award, and the Warner Prize. She is a fellow of the Association for Computing Machinery (ACM), the Institute for Electrical and Electronics Engineers (IEEE) and the American Association for the Advancement of Science (AAAS), and she is a member of IFIP WG 2.10 on Software Architecture. She is a past member of the National Research Council’s Computer Science and Telecommunications Board and the Defense Advanced Research Project Agency’s Information Science and Technology Board.

David Garlan is a Professor of Computer Science and Director of Software Engineering Professional Programs in the School of Computer Science at Carnegie Mellon University. He received his Ph.D. from Carnegie Mellon in 1987 and worked as a software architect in industry between 1987 and 1990. His interests include software architecture, self-adaptive systems, formal methods, and cyber-physical systems. He is considered to be one of the founders of the field of software architecture, and, in particular, formal representation and analysis of architectural designs. He is a co-author of two books on software architecture: “Software Architecture: Perspectives on an Emerging Discipline”, and “Documenting Software Architecture: Views and Beyond.” In 2005 he received a Stevens Award Citation for “fundamental contributions to the development and understanding of software architecture as a discipline in software engineering.”
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### Workshops and Co-located Events

#### WoSQ 2011
- **http://sites.google.com/site/wosq2011/**
- **Sunday, September 4 9:00 - 17:30**
- International Workshop on Software Quality
  - Organizers: Stefan Wagner, Sunita Chulani and Bernard Wong

#### ASAS 2011
- **http://asas.dei.uc.pt/**
- **Sunday, September 4 9:00 - 17:30**
- Workshop on Assurances for Self-Adaptive Systems
  - Organizers: Javier Cámara, Rogério De Lemos, Carlo Ghezzi and Antónia Lopes

#### IWPSE-EVOL 2011
- **http://pleiad.cl/iwpse-evol/**
- **Monday-Tuesday, September 5-6 9:00 - 17:30**
- 12th International Workshop on Principles on Software Evolution and 7th ERCIM Workshop on Software Evolution
  - Organizers: Romain Robbes and Anthony Cleve

#### PASTE 2011
- **http://sites.google.com/site/paste2011/**
- **Monday, September 5 9:00 - 17:30**
- 10th ACM SIGPLAN-SIGSOFT Workshop on Program Analysis for Software Tools and Engineering
  - Organizers: Jeff Foster and Lori Pollock

#### SSE 2011
- **http://www1.in.tum.de/static/sse11/**
- **Monday, September 5 9:00 - 17:30**
- 4th International Workshop on Social Software Engineering
  - Organizers: Walid Maalej and Raian Ali

#### WebQuEst 2011
- **https://researcher.ibm.com/researcher/view_project.php?id=2426**
- **Tuesday, September 6 9:00 - 17:30**
- Web Quality, Security, and Testing
  - Organizers: Julian Dolby, John Field, Mangala Gowri and Benjamin Livshits

#### SSBSE 2011
- **http://www.ssbse.org/2011/**
- **Saturday-Monday, September 10-12 9:00 - 17:30**
- The 3rd International Symposium on Search Based Software Engineering
  - Co-located event
Welcome 9:00 - 9:30
Seminar room 2
The Impact of ICT Evolution and Application Explosion on Software Quality 9:30 - 10:30
Keynote address by Motoe Azuma, Session Chair: Stefan Wagner
Coffee break 10:30 - 11:00
Atrium
Quality Models and Process Improvement 11:00 - 12:30
Session Chair: Stefan Wagner
A Unifying Model for Software Quality
K. Lochmann, A. Goeb
Do Software Process Improvements Lead to ISO 9126 Architectural Quality Factor Improvement?
M. Lavallee, P. Robillard
A Software Quality Model for SOA
K. Lochmann, A. Goeb
Lunch 12:30 - 14:00
Exhibition area
Quality and Metrics 14:00 - 15:30
Session Chair: Klaus Lochmann
An Explanatory Analysis on Eclipse Beta-Release Bugs Through In-Process Metrics
A. Tosun Misrli, B. Murphy, T. Zimmermann, A. Bener
Introduction of Japan's Investigation Activities on Systems and Software Product Quality Metrics
M. Yamamura, Y. Tanitsu, T. Komiyama, M. Azuma
The Use of Application Scanners in Software Product Quality Assessment
Stefan Wagner
Coffee break 15:30 - 16:00
Atrium
Data Quality and Discussion 16:00 - 17:30
Session Chair: Stefan Wagner
A Process for Assessing Data Quality Group or plenary discussion
H. Sneed, R. Majnar
Closing
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<td>Challenges of Evolving Sequential to Parallel Code: An Exploratory Study</td>
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<tr>
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<td>Requirements evolution drives software evolution</td>
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<td>Using the Gini Coefficient for Bug Prediction in Eclipse</td>
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<td>Measuring Multi-language Software Evolution: A Case Study</td>
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<td>Hitotoki Hata, Osamu Mizuno and Tohru Kikuno</td>
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<tr>
<td>14:30 - 15:30</td>
<td>An Editing-operation Replayer with Highlights Supporting Investigation of Program Modifications</td>
<td>Atrium / Exhibition area</td>
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<tr>
<td>Takayuki Omori and Katsushia Maruyama</td>
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<tr>
<td>15:30 - 16:00</td>
<td>Coffee break</td>
<td>Atrium / Exhibition area</td>
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<tr>
<td>15:30 - 16:00</td>
<td>Session 6: Architecture and model evolution</td>
<td>Atrium / Exhibition area</td>
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<tr>
<td>16:00 - 17:30</td>
<td>Problem-Solution Mapping for Forward and Reengineering on Architectural Level</td>
<td>Seminar room 2</td>
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<tr>
<td>Matthias Riedisch, Stephan Bode and Robert Brona</td>
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<tr>
<td>16:00 - 17:30</td>
<td>Challenges in Model-Based Evolution and Merging of Access Control policies</td>
<td>Seminar room 2</td>
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<tr>
<td>Lionel Montrieux, Michel Wermeuling and Yijun Yu</td>
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<tr>
<td>16:00 - 17:30</td>
<td>An agent-based framework for distributed collaborative model evolution</td>
<td>Seminar room 2</td>
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<tr>
<td>Hao Khang Dam and Aditya Ghose</td>
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<tr>
<td>17:30 - 18:00</td>
<td>Closing</td>
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</tbody>
</table>
Program Synthesis for Automating End-user Programming and Education 9:00 - 10:30
Keynote Address by Sumit Gulwani

Coffee break 10:30 - 11:00
Atrium / Exhibition area

Session 1: Technical papers 11:00 - 12:30
Seminar room 1

Labeling Library Functions in Stripped Binaries
Emily R. Jacobson, Nathan Rosenblum, Barton P. Miller

Anywhere, Any-Time Binary Instrumentation
Andrew R. Bernat, Barton P. Miller

Toward Systematic, Comprehensive Trace Generation for Behavioral Pattern Detection through Symbolic Execution
Markus von Detten

Lunch 12:30 - 14:00
Exhibition area

Session 2: Technical papers 14:00 - 15:30
Seminar room 1

An Evaluation of Change-Based Coverage Criteria
Marc Fisher II, Jan Wloka, Frank Tip, Barbara G. Ryder and Alexander Luchansky

Locating Failure-Inducing Environment Changes
Dawei Qi, Minh Ngoc Ngo, Tao Sun, Abhrick Roychoudhury

Assessing Modularity via Usage Changes
Yana Momchilova Miheva, Andreas Zeller

Coffee break 15:30 - 16:00
Atrium / Exhibition area

Flexible time 16:00 - 17:30
Seminar room 1

5-minute madness, demos, discussion, etc

Welcome 9:00 - 9:10
Seminar room 3

Invited Talk 9:10 - 9:45
Seminar room 3

How Social Media Artifacts Support Collaborative Software Development?
Keynote address by Christoph Treude

Social Requirements Engineering 9:45 - 10:30
Seminar room 3

Online Social Networks as a Catalyst for Software and IT Innovation
Leif Singer, Norbert Seyff and Samuel A. Fricke

Towards Systematic Analysis of Continuous User Input
Dennis Pagano

Coffee break 10:30 - 11:00
Atrium / Exhibition area

Empirical Studies on Social and Human Aspects 11:00 - 12:30
Seminar room 3

On the Interplay between Software Architects and Software Engineers in an Agile Environment: Who Should Do What?
Antony Tang, Ton Gerrits, Peter Nacken and Hans Van Vliet

The Learning Component in Social Software Engineering
Pierre Robillard

Extending Socio-technical Congruence with Awareness Relationships
Ineke Kwan and Daniela Damian

Lunch 12:30 - 14:00
Exhibition area

Collaboration, Communication, and Awareness 14:00 - 15:30
Seminar room 3

Engineering Software Engineering Teams
Patrick Wagstrom

Socially Mediated Technology Awareness
Thomas Fritz and Gail Murphy

Augmenting Social Awareness in a Collaborative Development Environment
Fabio Calefato, Filippo Lanciotti, Nicola Santafede and Giuseppe Santoro

Secret Ninja Testing with HALO Software Engineering
Jonathan Bell, Swapneel Sheth and Gail Kaiser

Coffee break 15:30 - 16:00
Atrium / Exhibition area

Round Table Discussion 16:00 - 17:00
Seminar room 3

Summary of discussion, feedback, and closing 17:00 - 17:30
Social Event (http://www.regihid.hu/en/) 19:30
**Monday, September 5**

**How to perform a reliable software engineering empirical study**
Invited talk by Prem Devanbu
9:00 - 9:30
Lecture room 1

**DS1 - Development documentation**
Mining Development Repositories To Study the Impact of Collaboration on Software Systems
Nicolas Bettenburg
9:30 - 10:30
Lecture room 1

**DS1 - Development documentation**
Reputation-based Self-management of Software Process Artifact Quality in Consortium Research Projects
Christian Prause
An architecture-centric approach for goal-driven requirements elicitation
Zoya Durak
10:30 - 11:00
Atrium / Exhibition area

**DS2 - Specification mining**
Experimental Specification Mining for Enterprise Applications
Matthias Schur
Search Based Hierarchy Generation for Reverse Engineered State Machines
Mathew Hall
11:00 - 11:40
Lecture room 1

**DS3 - Testing**
Automatic Test Suite Evolution
Mehdi Mirzaaghaei
Automatic Structural Testing with Abstraction Refinement and Coarsening
Mauro Baluda
Understanding Failures Through Facts
Jeremias Rößler
11:40 - 12:30
Lecture room 1

**DS4 - Adaptation**
QoS Verification and Model Tuning @ Runtime
Antonio Fäber
A Software Lifecycle Process for Context-aware Adaptive Systems
Marco Mori
16:00 - 16:40
Lecture room 1

**DS - Closed discussion of morning presentations**
12:30 - 14:00
Exhibition area

**Lunch**
14:00 - 14:30
Exhibition area

**How to write an excellent software engineering paper**
Invited talk by Laurie Williams
14:40 - 15:30
Lecture room 1

**DS - Closed discussion of afternoon presentations**
15:30 - 16:00
Atrium / Exhibition area

**Coffee break**
10:30 - 11:00
Atrium / Exhibition area

**Coffee break**
15:30 - 16:00
Atrium / Exhibition area

**Welcome, introduction of the organizers and the groups**
17:30 - 18:30
Lecture room 1

**Social event**

**Individual work meetings of the groups**
17:30 - 18:30
Lecture room 1-2

**Social event**

**Individual work activities**
17:30 - 18:30
Exhibition area

**Social event**

**Individual work activities**
17:30 - 18:30
Exhibition area

**Presentations of the results**
14:00 - 14:30
Congress hall

**Individual demonstrations**
14:30 - 15:30
Exhibition area

**Announcements of the results on the closing session**
17:00 - 17:30
Congress hall
Tuesday, September 6

Technical Briefings 1
Management of Unstructured Information during Software Evolution: Applications of Text Retrieval
Andrian Marcus
9:00 - 10:30
Lecture room 1

Technical Briefings 2
Multicore Software engineering
Victor Pankratius
9:00 - 10:30
Lecture room 2

Coffee break
10:30 - 11:00
Atrium / Exhibition area

Technical Briefings 3
Text Analytics for Software Engineering: Applications of Natural Language Processing
Lin Tan, Tao Xie
11:00 - 12:30
Lecture room 1

Technical Briefings 4
Model-based Emergent Middleware to Meet the Challenges of Interoperability in Pervasive Networks
Valérie Issarny
11:00 - 12:30
Lecture room 2

Lunch
12:30 - 14:00
Exhibition area

Technical Briefings 5
Source code licensing as an essential aspect of modern software development
Daniel German, Massimiliano Di Penta
14:00 - 15:30
Lecture room 1

Technical Briefings 6
Self-healing software systems
Mauro Pezze
14:00 - 15:30
Lecture room 2

Coffee break
15:30 - 16:00
Atrium / Exhibition area

Technical Briefings 7
Applying Domain Analysis Methods in Agile Development
Sarunas Marciuska, Salvatore Alessandro Sarcia, Alberto Silitti, Giancarlo Succi
16:00 - 17:30
Lecture room 1

Technical Briefings 8
Search Based Software Engineering: Automating Software Engineering (This talk is free for all ESEC/FSE and SSBSE participants. Supported by SSBSE.)
Mark Harman
16:30 - 17:30
Lecture room 2

Tuesday, September 6

Session 1 - Mozilla
Introduction and Welcome
Organizers
9:00 - 10:30
Seminar room 3

Security challenges for the web platform
David Herman
Vetting Browser Extensions for Security Vulnerabilities with VEX
Sruthi Bandhakavi (Presented by Julian Dolby)
Discussion - Possible topic: what could be added to the browser to aid security
10:30 - 11:00
Atrium / Exhibition area

Session 2 - Tools
Providing Tool Support for JavaScript Programmers -
Anders Moeller
Discussion - Possible topics: static analysis issues for client- and server-side Web software; whether/how to do refactorings to fix security issues
11:00 - 12:30
Seminar room 3

Session 3 - Learning and Microsoft
Detecting and Analyzing Web-based Malware via Statistical Learning Techniques -
Marco Cova
Finding Malware on a Web Scale
Benjamin Livshits:
Discussion - Possible topic: integrating the learning techniques into browsers, and whether it would be possible to do static analysis to approximate the dynamic properties learning can find.
14:00 - 15:30
Seminar room 3

Session 4 - IBM security analyses
Information-flow Security: Moving Beyond Graph Reachability
Omar Tripp
Using Taint Analysis to Detect Vulnerabilities in Web Sites
Salvatore Guarneri
Discussion - Possible topic: around what are the key challenges to improve real-world tools
16:00 - 17:30
Seminar room 3

Wrap up
17:30 - 18:00
Seminar room 3
Opening session
9:00 - 9:30
Congress hall

Building Advanced Mechatronic Systems
9:30 - 10:30
Keynote address by Wilhelm Schäfer
Congress hall

Coffee break
10:30 - 11:00
Foyer

Research track 1 - Bugs and Changes
11:00 - 12:30
Session chair: Rudolf Ferenc
Congress hall

Don’t Touch My Code! Examining the Effects of Ownership on Software Quality
Christian Bird, Nachiappan Nagappan, Brendan Murphy, Harald Gall and Premkumar Devanbu

ReLink: Recovering Links between Bugs and Changes
Rongxin Wu, Hongyu Zhang, Sungtun Kim and Shing-Chi Cheung

How Do Fixes Become Bugs? -- A Comprehensive Characteristic Study on Incorrect Fixes in Commercial and Open Source Operating Systems
Zuoning Yin, Ding Yuan, Yuanyuan Zhou, Shankar Pasupathy and Lakshmi Balarivasundaram

Research track 2 - Models and Requirements
11:00 - 12:30
Session chair: Martin Glinz
Lecture room 2

CSSL: A Logic for Specifying Conditional Scenarios
Shoham Ben-David, Marsha Chechik, Arie Gurfinkel and Sebastian Uchitel

Using an SMT Solver for Interactive Requirements Prioritization
Francois Palma, Angelo Susi and Paolo Tonella

Modeling the HTML DOM and Browser API in Static Analysis of JavaScript Web Applications
Simon Holm Jensen, Magnus Madsen and Anders Møller

Industrial track 1 - Software Development
11:00 - 12:30
Lecture room 1

Development and Operations - Two Worlds Collide (Keynote)
Eberhard Wolff

Does Pair Programming Increase Developers Attention?
Ilaria Fronza, Alberto Stilitti and Giancarlo Succi, Jelena Vlasenko

A True Story of Refactoring a Large Oracle PL/SQL Banking System
Csaba Nagy, Rudolf Ferenc and Tibor Bakota

Lunch
12:30 - 14:00
Lecture hall

Research track 3 - Empirical Studies
14:00 - 15:30
Congress hall

The Onion Patch: Migration in Open Source Ecosystems
Corey Jergensen, Anita Sarma and Patrick Wegstrom

Does Adding Manpower Also Affect Quality? An Empirical, Longitudinal Analysis
Andrew Meneely, Pete Rotella and Laurie Williams

Effective Communication of Software Development Knowledge Through Community Portals
Christoph Treude and Margaret-Anne Storey

Research track 4 - Analysis I
14:00 - 15:30
Lecture room 2

Proving Programs Robust
Swarat Chaudhuri, Sumit Gulwani, Roberto Lublínernan and Sara Navidpour

Checking Conformance of a Producer and a Consumer
Evan Driscoll, Amanda Burton and Thomas Reps

Managing Performance vs. Accuracy Trade-offs With Loop Perforation
Stelios Sidiroglou, Sasa Misiakovic, Hank Hoffman and Martin Rinard

Industrial track 2 - Software Systems and Services
14:00 - 15:30
Lecture room 1

Productivity in IT services (Keynote)
Satish Chandra

Hybrid Analysis for JavaScript Security Assessment
Omar Trip and Omri Weisman

Automotive System Development Based on Collaborative Modeling Using Multiple ADLs
Shin’ichi Shiraishi and Mutsumi Ate

Coffee break
15:30 - 16:00
Foyer

Research track 5 - Debugging
16:00 - 17:30
Congress hall

Partial Replay of Long-Running Applications
Alvin Cheung, Armando Solar-Lezama and Sam Madden

Mitigating the Confounding Effects of Program Dependences for Effective Fault Localization
George Baah, Andy Podgurski and Mary Jean Harrold

Fault Localization for Data-Centric Programs
Diptikalyan Saha, Mangala Gowri Nanda, Pankaj Dhoolia, V. Krishna Nandivada, Vibha Sinha and Satish Chandra
**Wednesday, September 7**

**Research track 6 - Collaboration**

Session chair: Henry Muccini

Proactive Detection of Collaboration Conflicts
Yunyi Brun, Reid Holmes, Michael Ernst and David Notkin

ADDiFF: Semantic Differencing for Activity Diagrams
Shahar Maas, Jan Oliver Ringert and Bernhard Rumpe

Semistructured Merge: Rethinking Merge in Revision Control Systems
Sven Apel, Jörg Liebig, Benjamin Brandt, Christian Lengauer and Christian Kaestner

**Industrial track 3 - Software Testing**

Concolic Testing on Embedded Software - Case Studies on Mobile Platform Programs
Yunho Kim, Moonzoo Kim and Yoonkyu Jang

Managing Performance Testing With Release Certification and Data Correlation
Tull Nivas and Christoph Csallner

Faster Fault Finding at Google using Multi Objective Regression Test Optimisation
Shin Yoo, Robert Nilsson and Mark Harman

**Organ concert**

Welcome reception

**Welcome reception**

The ESEC/FSE 2011 Welcome reception will be held in the Rector’s Office, the newly renovated central building of the University of Szeged.

Wednesday, Sep 7, 20:00

6726 Szeged, Dugonics tér 13.

**Organ Concert in the Votive Church**

The Welcome reception will be preceded by a free organ concert in the Votive Church. This cathedral is one of the most distinctive buildings in the cityscape. The most monumental work of 20th-century Hungarian Ecclesiastic architecture, it is the fourth largest church in the country.

Wednesday, Sep 7, 19:00

6726 Szeged, Dóm tér

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**Thursday, September 8**

**Research track 7 - Testing**

Session chair: Mauro Pezze

Testing Software In Age Of Data Privacy: A Balancing Act
Kunai Tanoe, Mark Grechanik, Rayid Ghani and Tao Xie

Strong Higher Order Mutation-Based Test Data Generation
Mark Harman, Yue Jia and William Langdon

Improved Multithreaded Unit Testing
Vilas Jagannath, Mito Glporic, Dongyun Jin, Qingzhou Luo, Grigore Rosu and Darko Marinov

**New Ideas track 1**

11:00 - 12:30

Lecture hall

Introduction to the New Ideas Track
Martin Robillard

Using Social Media to Study the Diversity of Example Usage among Professional Developers
Ohad Barzilay, Onit Hazzan, Amiram Yehudai

Social Sensing: When Users Become Monitors
Raian Ali, Carlos Solis, Mazear Salehia, Inah Omononyia, Bashar Nuseibeh, Waldz Maalej

Cross-library API Recommendation using Web Search Engines
Zheng Wuje, Qirun Zhang, Michael Lys

Exploiting Software Architecture to support Requirements satisfaction Testing
Paul Clements, Maria Jose Escalona, Paola Inverardi, Ivan Malavolta, Eda Marchetti

EAGLE:Engineering sofwaRe in the ubiquitous Globe by Leveraging uncErtainty
Marco Autii, Davide Di Russo, Paola Inverardi, Patrizio Pellicoone, Massimo Tivoli, Vittorio Cortellessa

Lunch

12:30 - 14:00

Lecture room 1-2

Tool Demonstrations 1

14:00 - 15:30

Congress hall

EvoSuite: Automatic Test Suite Generation for Object-Oriented Software
Gordon Fraser and Andrea Arcuri

SCORE: a Scalable Concolic Testing Tool for Reliable Embedded Software
Yunho Kim and Moonzoo Kim
Main conference - Thursday

Thursday, September 8

SMutant: A Tool for Type-Sensitive Mutation Testing
Milos Gligoric, Sandro Badame and Ralph Johnson

jStar-eclipse: an IDE for Automated Verification of Java Programs
Daiva Naudziuniene, Matko Botincan, Dino Distefano, Mike Dodds, Radu Grigore and Matthew J. Parkinson

Static Deep Error Checking in Large System Applications Using Parfait
Cristina Citroes, Nathan Keynes, Lian Li, Nathan Hawes, Manuel Valdiviezo, Andrew Browne, Jacob Zimmermann, Andrew Craik, Douglas Teoh and Christian Hoermann

Querypoint: Moving Backwards on Wrong Values in the Buggy Execution
Salman Mirghasemi, John Barton and Claude Petitpierre

Sydit: Creating and Applying a General Program Transformation from an Example
Na Meng, Miyoung Kim and Kathryn Mokrinsky

New ideas track 2
14:00 - 15:30
Lecture hall

Stateful Breakpoints: A Practical Approach to Defining Parameterized Runtime Monitors
Eric Bodden

Finding Bugs by Isolating Unit Tests
Kivan Muhu, Bilge Soran, Jochen Wuttke

Inferring Test Results for Dynamic Software Product Lines
Bruno Calleo, Joost Noppen, Fabiano Ferrari, Ruzanna Chitchyan, Awas Rashid

Testing MapReduce-Style Programs
Christoph Csallner, Leonidas Fegaras and Chengkai Li

Join Point Interfaces for Modular Reasoning in Aspect-Oriented Programs
Milton Inostroza, Eric Tanter, Eric Bodden

Probabilistic dataflow analysis using path profiles on structure graphs
Arun R, Subhajit Roy, Srikant Y. N.

Coffee break
15:30 - 16:00
Foyer

Tool Demonstrations 2
16:00 - 17:30
Congress hall

Crystal: Precise and Unobtrusive Conflict Warnings
Yuny Brun, Reid Holmes, Michael D. Ernst and David Notkin

Synoptic: Studying Logged Behavior with Inferred Models
Ivan Beschastnikh, Jenny Abrahamson, Yuny Brun and Michael D. Ernst

Cross-Layer Modeler - A Tool for Flexible Multilevel Modeling with Consistency Checking
Andreas Demuth, Roberto E. Lopez-Herrejon and Alexander Egyed

Tool Support for UML-based Specification and Verification of Role-Based Access Control Properties
Lionel Monteux, Michel Wermelinger and Yiyun Yu

SafeSlice: A Model Slicing and Design Safety Inspection Tool for SysML
Davide Falesi, Shiva Nejati, Mehrdad Sabetzadeh, Lionel Briand and Antonia Messina

Design and Validation of Feature-based Process Model Tailoring - A Sample Implementation of PDE
Daniela Costache, Georg Kalus and Marco Kuhrmann

PSPWizard: Machine-assisted Definition of Temporal Logical Properties with Specification Patterns
Markus Lumpe, Indika Meedeniya and Lars Grunske

Research track 8 - Configurations
16:00 - 17:30
Session chair: Wilhelm Schäfer

Taming Uncertainty in Self-Adaptive Software
Naeem Esfahani, Ersan Kocurkstraf and Sam Malek

Version-consistent Dynamic Reconfiguration of Component-based Distributed Systems
Xiaoying Ma, Luciano Baresi, Carlo Ghezzi, Valerio Panizza La Manna and Jian Lu

On Software Component Co-Installability
Jerome Vuillon and Roberto Di Cosmo

Gala diner
20:00 -

Gala dinner

The ESEC/FSE 2011 Gala dinner will be hosted by the University of Szeged Congress Centre.

Thursday, Sep 8, 20:00

6722 Szeged, Ady tér 10.
### Friday, September 9

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<td>9:00 - 10:00</td>
<td>Software Architecture: Reflections on an Evolving Discipline</td>
<td>Congress hall</td>
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<td>ACM SIGSOFT Outstanding Research Award talk by Mary Shaw, David Garlan</td>
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<td>10:00 - 10:30</td>
<td>Artifact evaluation presentations</td>
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<td>10:30 - 11:00</td>
<td>Coffee break</td>
<td>Foyer</td>
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<td>11:00 - 12:30</td>
<td>Research track 9 - Analysis II</td>
<td>Congress hall</td>
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<td>Session chair: Tevfik Bultan</td>
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<td>Leveraging Existing Instrumentation to Automatically Infer Invariant-Constrained Models</td>
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<td>Ivan Beschastnikh, Yuriy Brun, Sigurd Schneider, Michael Sloan and Michael D. Ernst</td>
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<td>Path Exploration based on Symbolic Output</td>
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<td>Dawei Qi, Hoang D. T. Nguyen and Abhik Roychoudhury</td>
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<td>Synthesizing Data-structure Manipulations from Storyboards</td>
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<td>Rishabh Singh and Amando Solar-Lezama</td>
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<td>11:00 - 12:30</td>
<td>Research track 10 - Defects</td>
<td>Congress hall</td>
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<td>High-Impact Defects: A Study of Breakage and Surprise Defects</td>
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<td>Emad Shihab, Audris Mockus, Yasutaka Kamei, Bram Adams and Ahmed E. Hassan</td>
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<td>Micro Interaction Metrics for Defect Prediction</td>
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<td>Task Lee, Jaechang Nam, Donggyun Han, Sunghun Kim and Hoh Peter In</td>
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<td>BugCache for Inspections : Hit or Miss?</td>
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<td>Foyzur Rahman, Daryl Posnett, Abram Hindle, Earl Barr and Premkumar Devanbu</td>
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<td>12:30 - 14:00</td>
<td>Lunch</td>
<td>Lecture room 1-2</td>
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<td>14:00 - 14:30</td>
<td>PhD Working Groups - presentations</td>
<td>Congress hall</td>
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<td>14:30 - 15:30</td>
<td>Informal Tool Demonstrations, Posters, PhD Working Groups – demonstrations</td>
<td>Exhibition area</td>
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<td>15:30 - 16:00</td>
<td>Coffee break</td>
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### Research track 11 - Analysis III

**Session chair:** TBA

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<tr>
<td>16:00 - 17:00</td>
<td>Inferring Data Polymorphism in Systems Code</td>
<td>Congress hall</td>
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<td>Brian Hackett and Alex Aiken</td>
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<td>Boosting the Performance of Flow-sensitive Pointsto Analysis using Value Flow</td>
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<td>Lian Li, Cristina Cifuentes and Nathan Keynes</td>
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### Research track 12 - Mining

**Session chair:** TBA

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<tr>
<td>16:00 - 17:00</td>
<td>On the Congruence of Modularity and Code Coupling</td>
<td>Lecture hall</td>
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<td>Fabian Beck and Stephan Diehl</td>
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<td>Fuzzy Set and Cache-based Approach for Bug Triaging</td>
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<td>Ahmed Tamrawi, Tung Nguyen, Jafar Al-Kofahi and Tien Nguyen</td>
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### Closing session

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<tr>
<td>17:00 - 17:30</td>
<td>Closing session</td>
<td>Congress hall</td>
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<tr>
<td>9:00 - 9:15</td>
<td>Welcome</td>
<td>Lecture hall</td>
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<tr>
<td>9:15 - 10:00</td>
<td>SBSE: Introduction and Motivation</td>
<td>Lecture hall</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Coffee break</td>
<td>Exhibition area</td>
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<tr>
<td>10:30 - 12:00</td>
<td>Search-Based Program Analysis</td>
<td>Lecture hall</td>
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<td>12:00 - 13:30</td>
<td>Lunch</td>
<td>Exhibition area</td>
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<tr>
<td>13:30 - 15:00</td>
<td>PAPER SESSION 1: Foundations of SBSE</td>
<td>Lecture hall</td>
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<tr>
<td>9:00 - 10:30</td>
<td>Exploiting Decomposability Using Recombination in Genetic Algorithms: An Exploratory Discussion</td>
<td>Lecture hall</td>
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<tr>
<td>10:30 - 11:00</td>
<td>Coffee break</td>
<td>Exhibition area</td>
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<tr>
<td>11:00 - 12:30</td>
<td>PAPER SESSION 2: Graduate Track</td>
<td>Lecture hall</td>
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<tr>
<td>13:30 - 15:00</td>
<td>Comparing Metaheuristic Algorithms for Error Detection in Java Programs</td>
<td>Lecture hall</td>
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<tr>
<td>12:00 - 13:30</td>
<td>Lunch</td>
<td>Exhibition area</td>
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<tr>
<td>13:30 - 15:00</td>
<td>PAPER SESSION 3: Concurrency and Models</td>
<td>Lecture hall</td>
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<tr>
<td>15:00 - 15:30</td>
<td>Coffee break</td>
<td>Exhibition area</td>
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SSBSE
The 3rd International Symposium on Search Based Software Engineering

Sunday, September 11

PAPER SESSION 4: Requirements and Planning
15:30 - 17:00
Lecture hall

Cooperative Co-evolutionary Optimization of Software Project Staff Assignments and Job Scheduling
Jian Ren, Mark Harman and Massimiliano Di Penta

An Ant Colony Optimization Approach to the Software Release Planning with Dependent Requirements
Jefferson Teixeira de Souza, Camila Lucila Brito Masa, Thiago do Nascimento Ferreira, Rafael Augusto Ferreira do Carmo and Maria Maria Albuquerque Brasil

Optimizing the trade-off between Complexity and Conformance in Process Reduction
Alessandro Marchetto, Chiara Di Francescomarino and Paolo Tonella

SSBSE 2012, Steering Committee elections
17:00 - 18:00

Walking Tour
18:00 - 19:00

Conference Banquet
20:00 -

Monday, September 12

Conducting and Analyzing Empirical Studies in Search-Based Software Engineering
9:00 - 10:30
Lecture hall

Tutorial by Lionel Briand

Coffee break
10:30 - 11:00
Exhibition area

PAPER SESSION 5: Software Testing
11:00 - 12:30
Lecture hall

A Metaheuristic Approach to Test Sequence Generation for Applications with a GUI
Sebastian Bauerfeld, Stefan Wappler and Joachim Wegener

Integration Test of Classes and Aspects with a Multi-Evolutionary and Coupling-Based Approach
Theoia Elia Colanzi, Wesley Klewerton Guez Assuao, Silvia Regina Vergilio and Aurora Pizzo

Divide-by-zero Exception Raising via Branch Coverage
Neelesh Bhattacharya, Abdellah Sakli, Giuliano Antoniol, Yann-Gael Guéhéneuc and Gilles Pesant

Lunch and Poster Session
12:30 - 14:00

SSBSE 2012, Steering Committee elections
17:00 - 18:00

Walking Tour
18:00 - 19:00

Conference Banquet
20:00 -

PAPER SESSION 6: Fast Abstracts
14:00 - 15:30
Exhibition area

SBSE As Gaming
Shin Yoo

Searching the Variability Space to Fix Model Inconsistencies: A Preliminary Assessment
Roberto E. Lopez-Herrejon and Alexander Egyed

An Ant Colony Based Algorithm for Test Case Prioritization with Precedence
Camila L. B. Maia, Thiago N. Ferreira, Fabricio G. Freitas and Jefferson T. Souza

Multi Objective Algorithms for Automated Generation of Combinatorial Test Cases with the Classification Tree Method
Peter M. Kruse and Kran Lakhotia

Empirically Identifying the Best Genetic Algorithm for Covering Array Generation
Lang Yanm, Changhai Nie, Jonathan M. Kaufman, Gregory M. Kapfhammer and Hareton Leung

Optimised Realistic Test Input Generation
Mustafa Bozkurt and Mark Harman

Coffee break
15:30 - 16:00
Exhibition area

PAPER SESSION 7: Comprehension, Transformation and Scalability
16:00 - 17:30
Lecture hall

Highly Scalable Multi Objective Test Suite Minimisation Using Graphics Cards
Shin Yoo, Mark Harman and Shmuel Ur

Bytecode Testability Transformation
Yanchuan Li and Gordon Fraser

A Fast Algorithm to Locate Concepts in Execution Traces
Soumaya Medini, Philippe Gaëtan, Massimiliano Di Penta, Yann-Gael Guéhéneuc and Giuliano Antoniol

Close
17:30 - 17:45
Registration
Registration will be open from 8:00 am to 16:00 pm during the conference.

Program changes
The online program at the ESEC/FSE website and the posters in the hallways will always be updated to reflect the latest status of the program.

Lunches
Each day lunch is served between 12:30 - 14:00 in the reception area (except SSBSE, please refer to the SSBSE program schedule.) Please do not forget to wear your conference badge at each meal.

Internet access
Free WiFi is available at the Congress Centre for conference attendees. All attendees receive personal login information in their conference bags.

Proceedings
Each conference bag contains an USB stick with the proceedings (no printed version provided). Additionally, the proceedings can be downloaded from the conference website from within the network of the Congress Centre.
**Opusztaszer, the Heritage Theme Park**

Enjoy a journey into the Hungarian past, brought to life in a 136-acre theme park in Ópusztaszer. Visitors can experience life in a 19th century village, learn trades of the past, and meet old breeds of livestock and domestic animals. The main attraction of the park is the 15m high and 120m long Feszty-panorama, a monumental circular painting presenting the Hungarian Invasion of 895.

**Program:**
- nomadic horse parade
- Feszty-panorama
- guided tour in the heritage village
- traditional Hungarian cuisine - dinner at the Szeri Roadhouse

**Date & time:** Tuesday, September 6, 13:00 - 20:00

**Price:** 40 euros per person (to be paid in advance by bank transfer or credit card on-site)

Book your ticket at congress@congresstravel.hu

Please note that this program will only be held if a minimum number of participants apply.

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**Computer Science Museum of Szeged**

The museum at its present state should be rather referred to as a unique collection of “artefacts” from the world of computer science about the history of informatics. The collection is now displayed in one of the old barrack rooms of a former Soviet army camp until the construction of the new museum building is finished.

**Date & time:** Friday, September 9, 18:00 – 20:00

**Price:** free entry

For more information, please visit the registration desk or send and email to congress@congresstravel.hu.

Please note that the tour is organized with max. 45 participants. Snacks and refreshments will be provided.

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**Walking tour downtown**

**Date & time:** Tuesday, September 6, 17:30 - 19

**Price:** 5 euros per person

For more information, please visit the registration desk on-site.

Please note that this program will only be organised if a minimum number of participants apply.

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**About Szeged**

Szeged, as the most important city on the South Great Plain, is the economic, scientific and cultural centre of the region. Szeged offers a unique experience to any of its visitors. Its sights, like the Votive Church, the Synagogue, the Hero’s Arch, the Ferenc Móra Museum all give such a distinct character to the city, that it is safe to say: Szeged is the gem of the Great Plains.

After the disastrous flood (in 1879) Szeged was reborn the most modern town in Hungary with its broad avenues and boulevards, its renovated, grandiose centre (winner of the “Europa Nostra” award) and eclectic-Secessionist mansions, all of which will enchant its visitors.

To give you more information about the sights of Szeged, a detailed booklet is placed in your conference bag.

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**Public transportation**

Please note that the local public transportation lines are currently under reconstruction. The diversion of the major lines might cause some inconveniences. We will try to give you up to date information about the actual state of public transport during the conference, but we warmly recommend walking or taking a taxi in the city.

Szeged is an easily walkable city, however buses, trolley buses, and trams are all available means of transportation. Bus tickets can be purchased almost anywhere in town, in kiosks, in shops, and even on busses. All tickets have to be validated on the vehicle. One ticket is valid for one journey only (single way on the same bus). Upon changing vehicle, another ticket needs to be validated.

**Public Transport Travel fares**

- pre-purchased HUF 280
- purchased on the vehicle HUF 350
- Discount coupon book containing 10 single tickets (when travelling the ticket needs to be validated) HUF 2,650
- One-day travelcard HUF 860
- Three-day travel card (valid within the three-day period given when purchased) HUF 2,150

**Parking**

The interval of paying for parking is from 8 am to 5 pm on weekdays. Validation of the parking ticket has to take place immediately after parking your car at the designated area. Instructions about the validation process can be found on the parking ticket. The parking zones are distinguished by colours (green, yellow, blue).

**Parking fees**

- The price of a full ticket is HUF 400
- The price of a half ticket is HUF 230
- The price of a one-day parking ticket is HUF 1415

**Length of validity in case of a full parking ticket**

- I. area (green zone): an hour
- II. area (yellow zone): 2 hours
- III. area (blue zone): 4 hours

**Length of validity in case of a half parking ticket is half of the full one in each zone.**
About Szeged

Restaurants

John Bull Pub
Address: 6720 Szeged, Oroszlán u. 6.
Opening hours: 11am – 01am
Category: 1.cat.

Régi Híd Vendéglő
Address: 6720 Szeged, Oskola u. 4.
Opening hours: 11:30am – 23pm
Category: 1.cat.

Alabárdos Étterem
Address: 6720 Szeged, Oskola u. 13.
Opening hours: 11:30am – 24pm
Category: 1.cat.

Roosevelt tér halászcsárda
Address: 6720 Szeged, Roosevelt tér 14.
Opening hours: 11am – 23pm

Clubs

Gin –Tonic Pub & Dance Hall
Address: 6720 Szeged, Wesselényi u. 6.
Opening hours: 11am – 23pm
Category: 2.cat.

Átrium Music Café
Address: 6720 Szeged, Kárász u. 9
Opening hours: 8am – 24pm
Category: 2.cat.

JATE Klub (official club of University of Szeged)
Address: 6720 Szeged, Toldy u. 2.
Opening hours: 10pm – 4am
Category: 1.cat.

Tourist information

http://tip.szegedvaros.hu/start.php

6720 Szeged, Dugonics tér 2.
Tel.: 62/488-699, 488-690
Fax:62/488-690
e-mail:szeged@tourinform.hu

We recommend Radio Taxi +36 62 480 480. Please indicate that you are a participant of ESEC/FSE.
You will be served by a reliable English speaking driver.

In case of emergency or need of ambulance or police, dial 112.