1st International Symposium on Search Based Software Engineering

Cumberland Lodge, Windsor, UK
13 - 15 May, 2009
www.ssbse.org

CALL FOR PARTICIPATION

We invite you to participate in the 1st International Symposium on Search Based Software Engineering – SSBSE 2009.

SSBSE 2009 is the inaugural meeting of an annual symposium dedicated to Search Based Software Engineering (SBSE), held in cooperation with the IEEE. The symposium's objective is to build on the recent flourishing of interest in SBSE by not only creating a welcoming forum for discussion and dissemination, but also by establishing a regular event that will strengthen the rapidly growing international community.

The venue for SSBSE 2009 is Cumberland Lodge, a beautiful and historic royal residence in the heart of Windsor Great Park with world-class conference facilities. The Lodge is close to London, and only a short taxi ride from Heathrow Airport, yet is surrounded by some of the finest parkland in the country.

Registration for the symposium is now open. The registration fee of 300 pounds covers not only attendance at the symposium and printed proceedings, but also two nights of de-luxe accommodation and all meals: two breakfasts, three lunches and dinner and banquet. All this from an award-winning chef at Cumberland Lodge. Once you arrive at the conference venue, there will be nothing to pay at all. This unbeatable value for money is made possible by significant sponsorship for this event from the EPSRC and industrial sponsors Berner & Mattner, Berlin and Sogeti, London for which we are most grateful. We can also offer extremely attractive reduced rates for those who wish to attend but make their own arrangements for overnight accommodation. Contact Jian Ren (Jian.Ren@kcl.ac.uk), the registration chair for more details if this is of interest to you.

KEYNOTE SPEAKERS

The symposium program includes three keynote speakers who are internationally renowned leaders in their research fields:

- Enrique Alba, University of Malaga, Spain
- Lionel C. Briand, Simula Research Lab & University of Oslo, Norway
- David E. Goldberg, Illinois Genetic Algorithms Laboratory (IlliGAL), University of Illinois at Urbana-Champaign, USA

SOFTWARE ENGINEERING EXPERTS' PANEL

The Status and Future of SBSE in the Software Engineering Community

We are very pleased to announce a special panel discussion as part of the symposium program. Five world-leading experts on software engineering will discuss the current state of search based software engineering research, identify challenges to the research agenda, and assess the potential impact of SBSE on software engineering practice.

The panellists are:

- Norman Fenton, Queen Mary, University of London, UK
- Anthony Finkelstein, University College London, UK
- Paola Inverardi, Università dell'Aquila, Italy
- Mary Lou Soffa, University of Virginia, USA
- Ian Sommerville, University of St Andrews, UK

CALL FOR FAST ABSTRACTS

We invite the submission of Fast Abstracts to the symposium that describe either:

- research in progress that has yet to be fully developed and validated; or,
- opinions on important and controversial themes in search based software engineering.

Fast Abstracts should not exceed 2 pages in the IEEE proceedings format, and will be reviewed for relevance, soundness, ability to stimulate discussion, and novelty. Contributions should be original work that has not been submitted elsewhere, but authors will retain copyright. Accepted contributions will be allocated a 10 minute presentation at the symposium, and will be published on the SSBSE 2009 website.

Fast Abstracts should be submitted by 20 April 2009; authors will notified of acceptance on 30 April 2009. Further details on formatting and submission are available from the SSBSE 2009 website: www.ssbse.org.

Please note that the submission and selection of regular technical papers is now complete.

Cumberland Lodge, by Zheng Li

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PROGRAM - WEDNESDAY, MAY 13

Keynote

Model-driven Development and Search-based Software Engineering: An Opportunity for Research Synergy
Lionel C. Briand
Simula Research Lab and University of Oslo, Norway

Session 1 – Testing and Defect Prediction

- Search-Based Testing of Ajax Web Applications
  Alessandro Marchetto and Paolo Tonella
- An Improved Meta-Heuristic Search for Constrained Interaction Testing
  Brady J. Garvin, Myra B. Cohen and Matthew B. Dwyer
- Evolution and Search Based Metrics to Improve Defects Prediction
  Segla Kpodjedo, Filippo Ricca, Giuliano Antoniol and Philippe Galinier

ORGANIZING COMMITTEE

- General Chair
  Mark Harman, King's College London, UK
- Program Co-chairs
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- PhD Student Track Chair
  Myra B. Cohen, University of Nebraska - Lincoln, USA
- Local Arrangements and Registration Chair
  Jian Ren, King's College London, UK
- Publicity Chair
  Per Kristian Lehre, University of Birmingham, UK
- Website
  David White and Paul Emberson, University of York, UK

PROGRAM - THURSDAY, MAY 14

Keynote

Not Your Grandmother's Genetic Algorithm
David E. Goldberg
University of Illinois at Urbana-Champaign, USA

Session 2 – PhD Student Track

- Search-Based Prediction of Fault Count Data
  Wasif Afzal, Richard Torkar and Robert Feldt
- On Search Based Software Evolution
  Andrea Arcuri
- Local Search-Based Refactoring as Graph Transformation
  Fawad Qayum and Reiko Heckel

Session 3 – Software Evolution

- A Study of the Multi-Objective Next Release Problem
  J. J. Durillo, Y. Zhang, E. Alba and A. J. Nebro
- Dynamic Architectural Selection: A Genetic Algorithm Based Approach
  Dongsun Kim and Sooyong Park
- On the Use of Discretized Source Code Metrics for Author Identification
  Maxim Shevertalov, Jay Kothari, Edward Stehle and Spiros Mancoridis

Software Engineering Experts' Panel

The Status and Future of SBSE in the Software Engineering Community
- *Norman Fenton, Queen Mary, University of London, UK*
- *Anthony Finkelstein, University College London, UK*
- *Paola Inverardi, Università dell'Aquila, Italy*
- *Mary Lou Soffa, University of Virginia, USA*
- *Ian Sommerville, University of St Andrews, UK*

PROGRAM - FRIDAY, MAY 15

Keynote

How Can Metaheuristics Help Software Engineers
Enrique Alba
Universidad de Málaga, Spain

Session 4 – Short Papers

- Search-Based Testing with in-the-loop systems
  Joachim Wegener and Peter M. Kruse
- A Testability Transformation Approach for State-Based Programs
  AbdulSalam Kalaji, Robert M. Hierons and Stephen Swift
- Searching for Rules to find Defective Modules in Unbalanced Datasets
  D. Rodríguez, J.C. Riquelme, R. Ruiz, and J.S. Aguilar-Ruiz
- Formal model simulation: can it be guided?
  Thang H. Bui and Albert Nymeyer
- How can optimization models support the maintenance of component-based software?
  Vittorio Cortellessa and Pasqualina Potena

Session 5 – Testing

- WCET Analysis of Modern Processors Using Multi-Criteria Optimisation
  Usman Khan and Iain Bate
- Full Theoretical Runtime Analysis of Alternating Variable Method on the Triangle Classification Problem
  Andrea Arcuri
- Widening the Goal Posts: Program Stretching to Aid Search Based Software Testing
  Kamran Ghani and John A. Clark

Session 6 - Fast Abstracts

(papers will be available from www.ssbse.org)