

SSBSE 2018 Program

Saturday, September 8th

8:00 – 8:45	Registration
8:45 – 9:00	Welcome to SSBSE 2018 from the conference organisers
9:00 – 10:15	Keynote 1: Mark Harman. Deploying Search Based Software Engineering with Sapienz at Facebook. <i>Chair: Phil McMinn</i>
10:15 – 10:55	Paper Session 1: Stress Testing – <i>Chair: Annibale Panichella</i> Basil Eljuse and Neil Walkinshaw. <i>Comparison of Search Based Algorithms in Stress-Testing Integrated Circuits.</i> (R) Abdullah Alourani, Md Abu Naser Bikas and Mark Grechanik. <i>Search-Based Stress Testing the Elastic Resource Provisioning for Cloud-Based Applications.</i> (R)
10:55 – 11:15	Coffee Break
11:15 – 12:15	Tutorial 1: 10th Edition of SSBSE Special Tutorial: Gordon Fraser. Search-based unit test generation with EvoSuite. <i>Chair: Gregory Gay</i>
12:15 – 13:15	Paper Session 2: Model Transformation – <i>Chair: Gregory Gay</i> Edouard Batot and Houari Sahraoui. <i>Injecting Social Diversity in Multi-Objective Genetic Programming: the Case of Model Well-formedness Rule Learning.</i> (R) Bogdan Korel, Nada Almasri and Luay Tahat. <i>Towards Minimizing the Impact of Changes using Search-Based Approach.</i> (R) Wael Kessentini, Houari Sahraoui and Manuel Wimmer. <i>Automated Co-Evolution of Metamodels and Transformation Rules: A Search-Based Approach.</i> (R)
13:15 – 14:15	Lunch
14:15 – 15:15	Tutorial 2: Marouane Kessentini. Search-based Software Refactoring. <i>Chair: Gordon Fraser</i>
15:15 – 16:15	Paper Session 3: Online Experiments and Non-Functional Requirements – <i>Chair: Shin Yoo</i> David Issa Mattos, Erling Mårtensson, Jan Bosch and Helena Holmström Olsson. <i>Optimization Experiments in the Continuous Space: The Limited Growth Optimistic Optimization Algorithm.</i> (R) Kate M. Bowers, Erik M. Fredericks and Betty H. C. Cheng. <i>Automated Optimization of Weighted Non-Functional Objectives in Self-Adaptive Systems.</i> (R) Irene Manotas, James Clause and Lori Pollock. Exploring Evolutionary Search Strategies to Improve Applications' Energy Efficiency. (R)
16:15 – 16:40	Coffee Break
16:40 – 17:00	10th Edition of SSBSE Special Paper: Jerffeson Souza, Allysson Alex Araújo, Raphael Saraiva, Pamella Soares and Camila Maia. <i>The Human Competitiveness of Search Based Software Engineering.</i> <i>Chair : Phil McMinn</i>
17:00	SSBSE 2019 announcement, followed by Steering Committee election
18:30	City Tour + SSBSE Dinner (Best Paper and Best Reviewer Announcements)

Sunday, September 9th

9:00 – 10:15 **Keynote 2: 10th Edition of SSBSE Special Keynote:** Enrique Alba. How Can Metaheuristics Help Software Engineers?

Chair: Myra Cohen

10:15 – 11:05 **Session Paper 4:** Reliability, Security and Software Maintenance – *Chair: Erik Fredericks*

Thomas Jones and David Ackley. *Damage Reduction via White-Box Failure Shaping*. (R)

Mengmei Ye, Myra B. Cohen, Witawas Srisa-An and Sheng Wei. *EvolSolator: Evolving Hardware Isolation for Software Security*. (H)

William B. Langdon and Justyna Petke. *Evolving Better Software Parameters*. (H)

11:05 – 11:30 Coffee Break

11:30 – 12:30 **Tutorial 3:** Matías Martínez. Astor: An automated software repair framework.

Chair: Lars Grunke

12:30 – 14:00 Lunch

(Steering Committee Meeting to take place on a reserved table)

14:00 – 15:15 **Keynote 3 -** Guillaume Beslon. Can in silico experimental evolution close the link between evolutionary biology and evolutionary engineering?

Chair: Benoit Baudry

15:15 – 16:05 **Paper Session 5:** Fault Localisation – *Chair: José Miguel Rojas*

Jinhan Kim, Michael G. Epitropakis and Shin Yoo. *Learning Without Peeking: Secure Multi-Party Computation Genetic Programming*. (R)

Kabdo Choi, Jeongju Sohn and Shin Yoo. *Learning Fault Localisation for Both Humans and Machines using Multi-Objective GP*. (H)

Gregory Gay. *Detecting Real Faults in the Gson Library Through Search-Based Unit Test Generation*. (C)

16:05 – 16:25 Coffee Break

16:25 – 17:20 **Paper Session 6:** Test Data Generation – *Chair: Shaukat Ali*

Mozhan Soltani, Pouria Derakhshanfar, Annibale Panichella, Xavier Devroey, Andy Zaidman and Arie van Deursen. *Single-objective versus Multi-Objectivized Optimization for Evolutionary Crash Reproduction*. (R)

Annibale Panichella, Fitsum Meshesha Kifetew and Paolo Tonella. *Incremental Control Dependency Frontier Exploration for Many-Criteria Test Case Generation*. (R)

Allen Kanapala and Gregory Gay. *Mapping Class Dependencies for Fun and Profit*. (H)

17:20 **Close**

Key for session chairs:

Research Papers (R) = 15 minutes presentation + 5 minutes for questions

Hot off the Press Track Papers (H) = 10 minutes presentation + 5 minutes for questions

Challenge Track Papers (C) = 10 minutes presentation + 5 minutes for questions