

2018 IEEE/ACM 11th International Workshop on Search-Based Software Testing (SBST 2018)

**Gothenburg, Sweden
28-29 May 2018**



**IEEE Catalog Number: CFP18C58-POD
ISBN: 978-1-5386-6267-0**

**Copyright © 2018, Association for Computing Machinery (ACM)
All Rights Reserved**

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18C58-POD
ISBN (Print-On-Demand):	978-1-5386-6267-0
ISBN (Online):	978-1-4503-5741-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2018 ACM/IEEE 11th International Workshop on Search-Based Software Testing **SBST 2018**

Table of Contents

Message from the ICSE 2018 General Chair .vii.....	
Message from the SBST 2018 Co-Chairs .x.....	
Committees for SBST 2018 .xii.....	
ICSE 2018 Sponsors and Supporters .xiv.....	

Keynote I

Predictive Analytics for Software Testing .1.....	
<i>Federica Sarro (University College London)</i>	

Technical Session I

Multifaceted Test Suite Generation Using Primary and Supporting Fitness Functions .2.....	
<i>Gregory Gay (University of South Carolina)</i>	
Search-Based Optimization for the Testing Resource Allocation Problem: Research Trends and Opportunities .6.....	
<i>Roberto Pietrantuono (Università di Napoli Federico II) and Stefano Russo (Università di Napoli Federico II)</i>	
An Effective Approach for Regression Test Case Selection Using Pareto Based Multi-Objective Harmony Search .13.....	
<i>Ankur Choudhary (Amity University Uttar Pradesh), Arun Prakash Agrawal (Amity University Uttar Pradesh), and Arvinder Kaur (Guru Gobind Singh Indraprastha University)</i>	

Tutorial

Evaluating Search-Based Techniques with Statistical Tests .21.....	
<i>Andrea Arcuri (Westerdals Oslo ACT and University of Luxembourg)</i>	

Tool Competition

Java Unit Testing Tool Competition - Sixth Round .22.....	
<i>Urko Rueda Molina (Universitat Politècnica de València), Fitsum Kifetew (Fondazione Bruno Kessler), and Annibale Panichella (University of Luxembourg and Delft University of Technology)</i>	
T3 @SBST2018 Benchmark, and How Much We Can Get from Asemantical Testing .30.....	
<i>Wishnu Prasetya (Utrecht University)</i>	
EvoSuite at the SBST 2018 Tool Competition .34.....	
<i>Gordon Fraser (University of Passau), José Miguel Rojas (University of Leicester), and Andrea Arcuri (Westerdals Oslo ACT)</i>	

Keynote II

Testing and Continuous Integration at Scale: Limits, Costs, and Expectations .38.....	
<i>Kim Herzig (Microsoft)</i>	

Technical Session II

From Operational to Declarative Specifications Using a Genetic Algorithm .39.....	
<i>Facundo Molina (CONICET and University of Rio Cuarto), Renzo Degiovanni (University of Rio Cuarto), Germán Regis (University of Rio Cuarto), Pablo Castro (CONICET and University of Rio Cuarto), Nazareno Aguirre (CONICET and University of Rio Cuarto), and Marcelo Frias (CONICET and Buenos Aires Institute of Technology)</i>	
To Call, or Not to Call: Contrasting Direct and Indirect Branch Coverage in Test Generation .43.....	
<i>Gregory Gay (University of South Carolina)</i>	
Generating Test Input with Deep Reinforcement Learning .51.....	
<i>Junhwi Kim (KAIST), Minhyuk Kwon (Suresoft Technology), and Shin Yoo (KAIST)</i>	

Technical Session III

An Empirical Analysis of the Mutation Operator for Run-Time Adaptive Testing in Self-Adaptive Systems .59.....	
<i>Erik M. Fredericks (Oakland University)</i>	
On the Effect of Object Redundancy Elimination in Randomly Testing Collection Classes .67.....	
<i>Pablo Ponzio (CONICET and University of Rio Cuarto), Valeria Bengolea (University of Rio Cuarto), Simón Gutiérrez Brida (CONICET and University of Rio Cuarto), Gastón Scilingo (University of Rio Cuarto), Nazareno Aguirre (CONICET and University of Rio Cuarto), and Marcelo Frias (CONICET and Buenos Aires Institute of Technology)</i>	
Author Index .71.....	