SBST 2022
Call for Submissions

About the Workshop

Search-Based Software Testing (SBST) is the application of optimizing search techniques (for example, Genetic Algorithms) to solve problems in software testing. SBST is used to generate test data, prioritize test cases, minimize test suites, optimize software test oracles, reduce human oracle cost, verify software models, test service-orientated architectures, construct test suites for interaction testing, and validate real-time properties (among others).

The objectives of this workshop are to bring together researchers and industrial practitioners both from SBST and the wider software engineering community to collaborate, to share experience, to provide directions for future research, and to encourage the use of search techniques in novel aspects of software testing in combination with other aspects of the software engineering lifecycle.

Keynote Speakers
- Paolo Tonella - USI, Switzerland

Tutorial
- Alessio Gambi - University of Passau, Germany

Workshop Organizers
- Giovani Guizzo, Program Co-Chair
  (University College London, United Kingdom)
- Sebastiano Panichella, Program Co-Chair
  (Zurich University of Applied Science, Zurich, Switzerland)
- Alessio Gambi, Competition Co-Chair
  (University of Passau, Germany)
- Fiorella Zampetti, Competition Co-Chair
  (University of Sannio, Italy)
- Vincenzo Riccio, Competition Co-Chair
  (University of Lugano, Switzerland)
- Gunel Jahangirova, Competition Co-Chair
  (Università della Svizzera Italiana, Italy)
- Rebecca Moussa, Webchair
  (University College London, United Kingdom)

Important Dates
- Paper Submission Deadline: January 14, 2022
- Competition Report Deadline: January 14, 2022

- Main Track Author Notification: February 25, 2022
- Competition Author Notification: March 6, 2022
- Camera-Ready: March 18, 2022
- Date of Workshop: TBA, 2022

Call for Papers
Researchers and practitioners are invited to submit:
- **Full papers** (maximum of 8 pages, including references) Original research in SBST, either empirical, theoretical, or showing practical experience of using SBST techniques and/or tools.
- **Short papers** (maximum of 4 pages, including references) Work that describes novel techniques, ideas and positions that have yet to be fully developed; or are a discussion of the importance of a recently published SBST result by another author in setting a direction for the SBST community, and/or the potential applicability (or not) of the result in an industrial context.
- **Position papers** (maximum of 2 pages, including references) that analyze trends in SBST and raise issues of importance. Position papers are intended to seed discussion and debate at the workshop, and thus will be reviewed with respect to relevance and their ability to spark discussions.
- **Tool Competition entries** (maximum of 4 pages, including references). We invite researchers, students, and tool developers to design innovative new approaches to software test generation.

In all cases, papers should address a problem in the software testing/verification/validation domain or combine elements of those domains with other concerns in the software engineering lifecycle. Examples of problems include (but are not limited to) generating testing data, fuzzing, prioritizing test cases, constructing test oracles, minimizing test suites, verifying software models, testing service-orientated architectures, constructing test suites for interaction testing, SBST for Artificial Intelligence (AI) applications, machine learning techniques for SBST, and validating real-time properties.

The solution should apply a metaheuristic search strategy such as (but not limited to) random search, local search (e.g. hill climbing, simulated annealing, and tabu search), evolutionary algorithms (e.g. genetic algorithms, evolution strategies, and genetic programming), ant colony optimization, particle swarm optimization, and multi-objective optimization.

Submission Format All submissions must conform to the ICSE 2022 formatting and submission instructions (https://conf.researchr.org/track/icse-2022/icse-2022-papers). All submissions must be anonymized, in PDF format and should be performed electronically through EasyChair.

Workshop: https://sbst22.github.io
EasyChair: https://easychair.org/conferences/?conf=sbst2022
Tool Competition: https://sbst22.github.io/tools
Twitter: https://twitter.com/sbstworkshop