



CBSOFT'26

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PROCEEDINGS

11th Brazilian Symposium on Systematic and Automated Software Testing (SAST 2026)

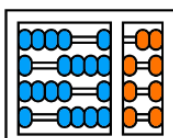
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Preface

This volume contains the proceedings of the 11th Brazilian Symposium on Systematic and Automated Software Testing (SAST 2026). This year, for the tenth time, the symposium is part of the Brazilian Conference on Software: Theory and Practice (CBSOFT 2026), which integrates three other important symposia: the Brazilian Symposium on Software Engineering (SBES), the Brazilian Symposium on Programming Languages (SBLP), and the Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS). Software testing is one of the most popular software verification and validation techniques used currently in the software industry. When applied effectively, this technique can provide essential evidence regarding the quality and reliability of a software system. The current scenario shows an increasing dependency on software in daily activities and industrial environments, resulting in a growing need for fast and correct answers of such software systems, which are often critical, pervasive, persistent, mobile, distributed, real-time, embedded, and adaptive. This need drives the development of techniques, criteria, and supporting tools for software testing, considering the different application domains and programming paradigms. After its debut in 2016, the Brazilian Symposium on Systematic and Automated Software Testing (SAST) will promote its eleventh edition in 2026, although it has existed since 2007 under the name of the Brazilian Workshop on Systematic and Automated Software Testing. SAST is the main scientific conference on software testing in Brazil. Its goal is to promote an annual forum to discuss issues on the systematization and automation of the software testing activity, promoting interaction between researchers and industry to strengthen cooperation and innovation in this vital area of software development. In the 2026 edition, SAST received 103 paper submissions. The Program Committee evaluated each submission, ensuring that every paper received at least three reviews. Following thorough discussions, 38 papers were accepted: 28 for the research track and 10 for the industrial track. The papers cover several exciting topics regarding software testing for various paradigms. This issue also includes one high-quality keynote speech: Dr. Andy Zaidman, from Delft University of Technology (TU Delft), Netherlands, presenting the keynote entitled “The Inconvenient Truth of Software Testing: What is Our Environmental Impact?”. The realization of SAST 2026 was only possible due to the active and engaged participation of several enthusiasts. We thank all Program Committee members for their interesting comments and suggestions for improving the quality of the submitted papers. We also thank all the members of the Steering Committee, external reviewers, and the Organization Committee. The reliable and prompt support from the General Chairs was crucial to accomplishing SAST 2026. We hope the symposium contributes to the expansion and consolidation of the area of software testing in Brazil.

Keynote



The Inconvenient Truth of Software Testing: What is Our Environmental Impact?

Andy Zaidman - Delft University of Technology, Netherlands

Abstract. *We push the button and let our tests run. But what really happens? What machinery is put into motion when we test and what are the environmental consequences of our quality assurance process? In this talk, I will take you through some of the insights that we have made while closely examining the potential environmental impact of building and testing 204 Java open source projects. The outlook is that testing is perhaps not as green as we might have thought.*

Short bio. Professor at Delft University of Technology (TU Delft). His research focuses on software engineering, with a strong emphasis on software evolution, automated test engineering, and the analysis of open-source software ecosystems.