



# SAT 2019

## 22<sup>nd</sup> International Conference on Theory and Applications of Satisfiability Testing

Lisbon, Portugal, July 7–12, 2019

<http://sat2019.tecnico.ulisboa.pt/>

### Dates:

Abstract due: 01.03.19  
Paper due: 08.03.19  
Rebuttal phase: 08–10.04.19  
Notification: 22.04.19  
Final paper due: 06.05.19

Summer school: 03–06.07.19  
Workshops: 07–08.07.19  
Conference: 09–12.07.19

### Chairs:

Mikoláš Janota Portugal  
Inês Lynce Portugal

### Workshop Chair:

Vasco Manquinho Portugal

### Program Committee:

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### Scope and Mission

The International Conference on Theory and Applications of Satisfiability Testing (SAT) is the premier annual meeting for researchers focusing on the theory and applications of the propositional satisfiability problem, broadly construed. In addition to plain propositional satisfiability, it also includes Boolean optimization (such as *MaxSAT* and *Pseudo-Boolean (PB)* constraints), *Quantified Boolean Formulas (QBF)*, *Satisfiability Modulo Theories (SMT)*, and *Constraint Programming (CP)* for problems with clear connections to Boolean-level reasoning.

Many hard combinatorial problems can be tackled using SAT-based techniques including problems that arise in Formal Verification, Artificial Intelligence, Operations Research, Computational Biology, Cryptography, Data Mining, Machine Learning, Mathematics, etc. Indeed, the theoretical and practical advances in SAT research over the past twenty years have contributed to making SAT technology an indispensable tool in a variety of domains.

### Scope

SAT 2019 welcomes scientific contributions addressing different aspects of the satisfiability problem, interpreted in a broad sense. Domains include MaxSAT and Pseudo-Boolean (PB) constraints, Quantified Boolean Formulae (QBF), Satisfiability Modulo Theories (SMT), as well as Constraint Satisfaction Problems (CSP). Topics include, but are not restricted to:

- *Theoretical advances* (including algorithms, proof complexity, parameterized complexity, and other complexity issues);
- *Practical search algorithms*;
- *Knowledge compilation*;
- *Implementation-level details* of SAT solving tools and SAT-based systems;
- *Problem encodings* and *reformulations*;
- *Applications* (including both novel applications domains and improvements to existing approaches);
- *Case studies* and *reports* on insightful findings based on rigorous experimentation.

### Affiliated Events

SAT 2019 will host a number of *related workshops* (July 7–8) and various competition events. SAT 2019 is also co-located with the *8<sup>th</sup> International SAT/SMT/AR Summer School* (July 3–6).

### Paper Submission

The proceedings of SAT 2019 will be published within the Springer LNCS series. All paper submissions are to be done exclusively via *EasyChair* in Springer's  $\LaTeX$  *lncs2e style*. The review process will be subject to a rebuttal phase. Submissions to SAT 2019 are solicited in three paper categories:

- *Long papers* (9 to 15 pages, excluding references);
- *Short papers* (up to 8 pages, excluding references);
- *Tool papers* (up to 6 pages, excluding references).

**Long** and **short papers** should contain original research, with sufficient detail to assess the merits and relevance of the contribution. For papers reporting experimental results, authors are strongly encouraged to make their data and implementations available with their submission. Submissions reporting on case studies are also encouraged, and should describe details, weaknesses, and strengths in sufficient depth. Long and short papers will be evaluated with the same quality standards, and are expected to contain a similar contribution per page ratio.

**Tool papers** must obey to a specific content criteria. A tool paper should describe the implemented tool and its novel features. Here “tools” are interpreted in a broad sense, including descriptions of implemented solvers, preprocessors, etc., as well as systems that exploit SAT solvers or their extensions for use in interesting problem domains. A demonstration is expected to accompany a tool presentation. Papers describing tools that have already been presented previously are expected to contain significant and clear enhancements to the tool.

More details about scope, topics and paper submission are available at [SAT 2019 web page](#).