

The First Syntax-Guided Synthesis Competition (SyGuS-COMP 2014)

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Syntax-Guided Synthesis (SyGuS) is the computational problem of finding an implementation f that meets both a semantic constraint given by a logical formula φ in a background theory T , and a syntactic constraint given by a grammar G , which specifies the allowed set of candidate implementations [?]. Such a synthesis problem can be formally defined in SyGuS-IF [?], a language that is built on top of SMT-LIB.

The *Syntax-Guided Synthesis Competition (SyGuS-COMP)* is an effort to facilitate, bring together and accelerate research and development of efficient solvers for SyGuS by providing a platform for evaluating different synthesis techniques on a comprehensive set of benchmarks. The benchmarks for the first competition are restricted to the theories of bit-vector and integer linear arithmetic, yet their origin spans a variety of domains including bitvector algorithms, concurrency, robotics, and invariant generation. The solvers are scored primarily on the number of benchmark solved and the solving time, and secondarily on the succinctness of the synthesized solution.

References

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