infChecker at the 2025 Confluence Competition*

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1 Overview

infChecker is a tool for checking *(in)feasibility* of sequences of rewrite and relations with respect to *first-order theories*, called goals [5]. infChecker participates in the INF category at the Confluence Competition but it is also used as as a external tool in CONFident, which participates in several categories in the Competition.

The tool is available here:

http://zenon.dsic.upv.es/infChecker/.

Some processors are mechanized using external tools like AGES [2], Prover9 and Mace4 [6]. Latest description of the tool can be found in [1, 3].

In 2025, we extended the tool (and its input format) to support *Generalized Term Rewriting Systems* (GTRSs) [4], which are CTRS extended with a replacement map μ and by allowing more general conditions in rules, atoms defined by a set of Horn clauses [3]. Furthermore, we now support problems in ARI format, which in previous years were handled by external tools.

References

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