

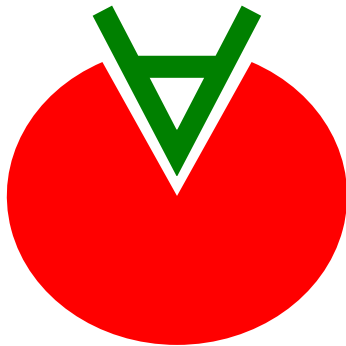
Toma

Teppei Saito Nao Hirokawa

JAIST

IWC 2023

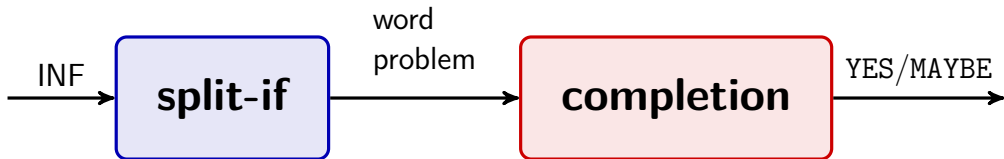
Toma: **T**heorem prover based on **o**rdered **m**aximal completion



equational theorem prover **Toma**

<https://www.jaist.ac.jp/project/maxcomp/>

Architecture



- 1 INF problem is transformed into word problem by *split-if* encoding (Claessen and Smallbone, 2018).
- 2 Word problem is solved by new variant of maximal ordered completion:
 - maximal ordered completion (Winkler and Moser, 2018) plus
 - maximal completion with inter-reduction (Hirokawa, 2021)

Witness of infeasibility is (ground-complete) term rewrite system.