CoCo 2018 Participant: FORT 2.0*

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FORT is a decision and synthesis tool for the first-order theory of rewriting for finite left-linear right-ground rewrite systems. It implements the decision procedure for this theory, which uses tree automata techniques and goes back to Dauchet and Tison [1]. In this theory confluence-related properties on ground terms are easily expressible. The basic functionality of FORT is described in [2] and in [3] we report on several extensions, including witness generation for existentially quantified variables in formulas and support for combinations of rewrite systems. The latter allows to express a property like commutation, which is a natural generalization of confluence and a potential future CoCo category.

FORT 2.0 is implemented in Java. A command-line version of the tool can be downloaded from

http://cl-informatik.uibk.ac.at/software/FORT/

FORT participates in the categories GCR, NFP, UNC, and UNR at CoCo 2018.

References

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[3] F. Rapp and A. Middeldorp. FORT 2.0. In *Proc. 9th International Joint Conference on Automated Reasoning*, volume 10900 of *LNCS (LNAI)*, 2018. To appear. doi: 10.1007/978-3-319-94205-6_6.

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