



CoCo 2021 Participant: **FORT-h** 1.1

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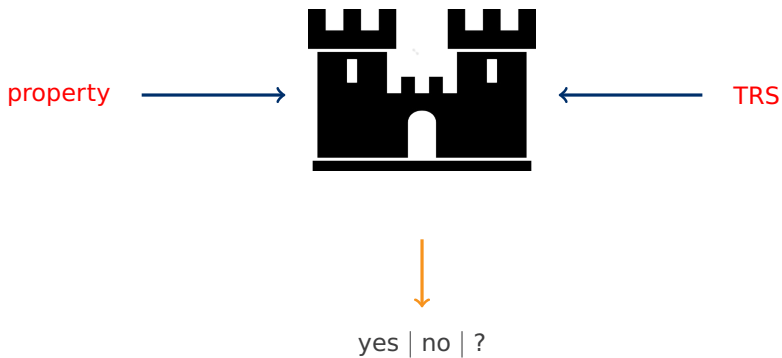
Jamie Hochrainer

Aart Middeldorp

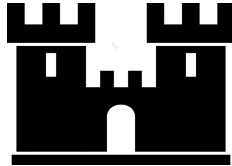
FORT-h



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property



linear variable-separated



TRS

$$\forall s \exists t (s \rightarrow^* t \wedge \neg \exists u (t \rightarrow u)) \\ \Rightarrow \exists v (s \twoheadrightarrow v \vee v \xrightarrow{\epsilon} t)$$



yes | no | ?

property is arbitrary formula in first-order theory of rewriting

CoCo 2020 Categories (FORT-h)

GCR

NFP

UNC

UNR

COM

CoCo 2020 Categories (FORT-h)

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most YES results

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Differences FORT and FORT-h (2020)

- modified decision procedure
- supports linear variable-separated TRSs
- more expressive theory ($\rightarrow_{>\epsilon}$)
- goal: **certified results**

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Differences 2020 and 2021

- **certified results!**
- FORTify can certify proofs

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Differences 2020 and 2021

- certified results!
- FORTify can certify proofs
- optimized signature extension results (IWC 2021)

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Differences 2020 and 2021

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- faster/smaller automata constructions via eager epsilon eliminations

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