CO3

a **CO**nverter for proving **CO**nfluence of **CO**nditional TRSs

Ver. 1.3

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Overview

Convert a CTRS to a TRS by using

- the simultaneous unraveling $\mathbb{U}$
  [Marchiori, 96][Ohlebusch, 02][Gmeiner et al, 13]
  - for normal 1-CTRSs (ver. 1.2)
  - for 3-DCTRSs (ver. 1.3)

- the SR transformation $\mathbb{SR}$ [Șerbănuță & Roșu, 06]
  - for normal 1-CTRSs (ver. 1.2)
  - for WLL and ultra-WLL 3-DCTRSs (ver. 1.3)

Theorem (confluence criteria)

$\mathcal{R}$ is confluent if

- $\mathbb{U}$ is sound for $\mathcal{R}$ and $\mathbb{U}(\mathcal{R})$ is confluent, [Gmeiner et al, 13]
  or
- $\mathbb{SR}$ is sound for $\mathcal{R}$ and $\mathbb{SR}(\mathcal{R})$ is confluent
  [Nishida et al, 14][Nishida, tomorrow]

- Very simple criteria for confluence and termination