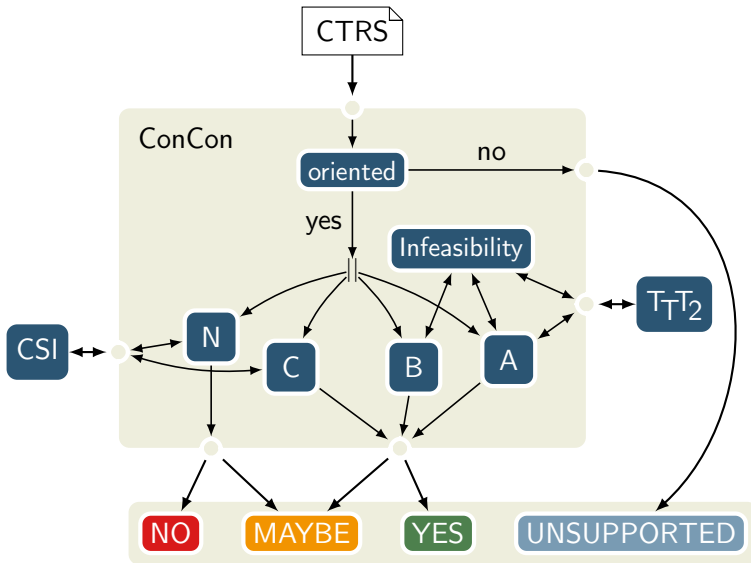# ConCon
(IWC 2014)

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- *Con*ditional *Con*fluence
- (non-)confluence of oriented CTRSs
- *LGPL* license
- http://cl-informatik.uibk.ac.at/software/concon
- web-interface
- programmed in Scala

Theorem A: A quasi-decreasing strongly irreducible deterministic 3-CTRS $\mathcal{R}$ is confluent if and only if all critical pairs of $\mathcal{R}$ are joinable.

Theorem B: Almost orthogonal properly oriented right-stable 3-CTRSs are confluent.

Theorem C: A weakly left-linear deterministic CTRS $\mathcal{R}$ is confluent if $\mathbb{U}(\mathcal{R})$ is confluent.

Theorem N: If a CTRS $\mathcal{R}$ contains an unconditional rule $\ell \to r$ s.t. $\mathcal{V}\text{ar}(r) \not\subseteq \mathcal{V}\text{ar}(\ell)$ and $r \in \text{NF}(\mathcal{R}_u)$ or there is an unconditional CP $s \approx t$ s.t. s and t are different normal forms wrt. $\mathcal{R}_u$ then $\mathcal{R}$ is non-confluent.