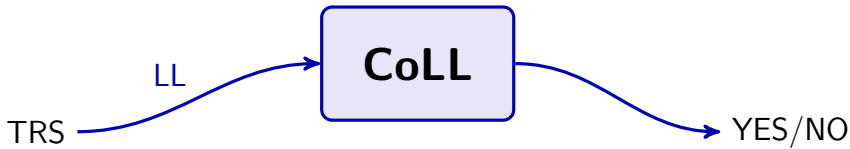
CoLL-Saigawa v1.5 (Shintani & Hirokawa, JAIST)



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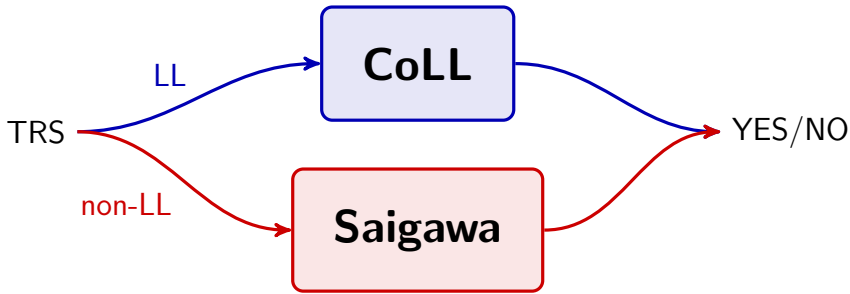

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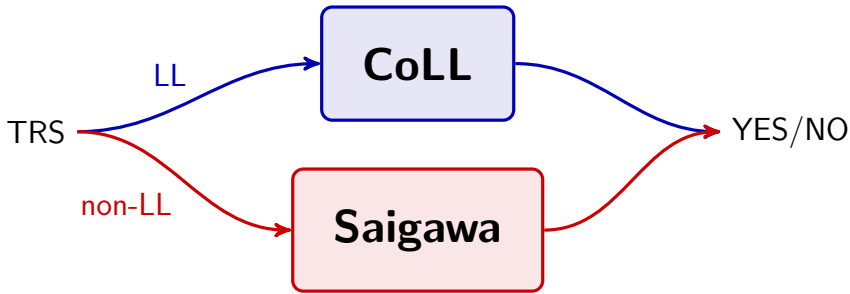

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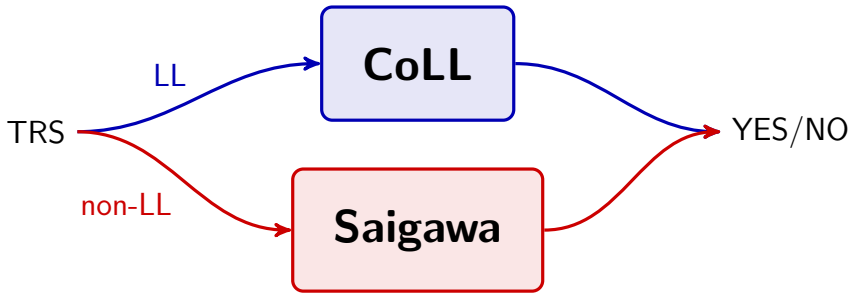

- CoLL-Saigawa uses MiniSmt, NaTT, and Z3
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Theorem (Oyamaguchi and Ohta 1997)

left-linear TRS is confluent if

- $\xleftarrow{p} \rtimes \xrightarrow{\epsilon} \subseteq \overset{\triangle p}{\leftarrow\!\!\!+\!\!\!+} \cup \xrightarrow{\epsilon}{}^{=}$ *for all* $p > \epsilon$ *and*
- $\xleftarrow{\epsilon} \rtimes \xrightarrow{\epsilon} \subseteq (\overset{>\epsilon}{\leftarrow\!\!\!+\!\!\!+} \cup \xrightarrow{\epsilon}) \cdot (\leftarrow\!\!\!+\!\!\!+ \cup \xrightarrow{\epsilon})$

where, $s \overset{\triangle p}{\rightarrow\!\!\!+\!\!\!+} t$ *if* $s \overset{Q}{\rightarrow\!\!\!+\!\!\!+} t$ *for some* $Q \subseteq \{q \mid |q| \leqslant |p|\}$

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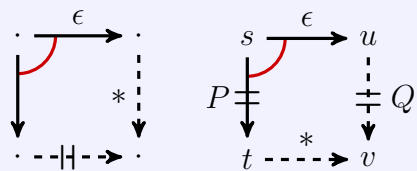

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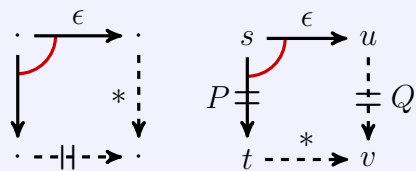

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Theorem (Okui 1998)

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