

SOL 2025 (Makoto Hamana, Shotaro Karasaki)

- ▷ SOL: **Haskell-based tool** for analysing confluence and termination of higher-order rewriting [H. JFP19][H., Abe, Kikuchi SCP20]
- ▷ **New**: Rewriting with Term Evaluation and Refinement System (TERS) [Muroya, H. FLOPS'24]
- ▷ **New**: Simulate context-sensitive rewriting by TES
- ▷ **New**: CS-Confluence based on criterion [Lucus'20]
 - If $\mathcal{R}$ is left-linear, empty CS-CP, **LHRV** then CS-CR
 - If $\mathcal{R}$ is CS-SN and all CS-CPs are CS-joinable, **LHRV** then CS-CR
- ▷ LHRV: active variables in lhs are not non-active in l nor r

$$\text{Var}^{\mu}(l) \cap (\text{Var}^{\mu}(l) \cup \text{Var}^{\mu}(r))$$

- ▷ CS-SN by SN of normal TRS