CeTA 3.6

- CeTA: certifier of various properties
- verified in Isabelle/HOL in IsaFoR library
- mostly developed by Computational Logic Group in Innsbruck
- several confluence techniques supported, see a complete list at:

  `http://cl-informatik.uibk.ac.at/software/ceta/`

- usage in CoCo: certify proofs and disproofs of
  - confluence
  - commutation (not this year)
  - infeasibility
- usage in ARI-database: certify YES/NO for CR/COM/INF-tags

New techniques in CeTA 3.6 in comparison to 2024

- new term ordering: core matrix interpretations
  - original matrix ordering for SRSs, developed by Hofbauer and Waldmann
  - generalized to TRSs
  - usage: discrimination pair, co-rewrite pair, reduction pair, reduction order
  - details on ordering: see WST talk
- feasibility proofs via explicit rewrite sequences of (C)TRSs
  - unfortunately no certificate generating tool yet
- explicit swap for non-commutation proofs
  - improves application of non-symmetric techniques
- on its way: Okui's confluence criterion
  - soundness of criterion has been formally proven in IsaFoR
  - missing: verified computation of simultaneous critical pairs