Research

Theoretical Computer Science Seminar

Certifying Termination Proofs - the Evolution of IsaFoR/CeTA

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Time: 10:00

Zoom link:
https://us02web.zoom.us/j/89412679078?pwd=ZjV6b3BvaGYwNFVLWXJaTWd6TjVWZz09

Abstract. Since the early days of the termination competition, there have always been wrong answers produced by termination analysis tools. One way to increase the reliability of the generated analyses is by certification, an approach where the answers of the termination tools are checked by some verified certifier.

This talk will cover an overview of the CeTA certifier, whose soundness has been proven in Isabelle/HOL. We will start with the early phase where CeTA was solely used to check termination proofs of term rewrite systems, and then continue with recent developments that triggered the development of a fully verified SMT solver for linear integer arithmetic.