Seminário de Teoria da Computação

A Certified Sound Algorithm for AC-unification

Gabriel Silva
PPGINF- UnB

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

Abstract. This talk discusses how we have modified Stickel's seminal AC-unification algorithm to avoid mutual recursion and formalised its termination and soundness in the PVS proof assistant. Furthermore, we discuss how Fages' termination proof of Stickel's algorithm was adapted, providing a unique elaborated measure that guarantees termination of the modified AC-unification algorithm. To the best of our knowledge, ours is the first formalised AC-unification algorithm for which soundness has been proved. Thus, our formalisation is the first step towards a formally verified sound and complete AC-unification algorithm.