Automatic Termination Proofs for Software

Byron Cook

Automatic termination proofs for software

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Abstract

In this talk I will describe recent advances in the area of automatic program termination analysis. In particular, I will describe the development of several automatic tools, called TERMINATOR and MUTANT, which implement new termination analysis algorithms. These tools have been used to prove that Windows device driver dispatch routines always return control back to their caller. The tools have also found a number of critical termination bugs in device drivers.

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