1

Extended static checking

(Invited Lecture)

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Abstract

Extended static checking (ESC) is a static program analysis technique that attempts to find common programming errors like null-dereferences, array index bounds errors, type cast errors, deadlocks, and race conditions. An ESC tool is powered by program verification technology, yet it feels to the programmer like a type checker because of the limited ambition of finding only certain kinds of errors. This talk reports on some of the research results of and the current state of the Extended Static Checking project at DEC SRC.

BIOGRAPHY

Dr. K. Rustan M. Leino is a computer science researcher at DEC SRC, where his research has centered around programming tools, languages, semantics, and specifications, with focus on modular, object-oriented software. He is currently the project leader for ESC/Java, a programming tool that uses program semantics to find common errors in programs. He holds a BA in Computer Science from The University of Texas at Austin and an MS and PhD in Computer Science from Caltech. Before graduate school, he worked as a technical lead in Windows/NT at Microsoft.

Programming Concepts and Methods D. Gries, & W-P. de Roever (Eds.)