

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
UNIVERSITY OF SOUTHERN DENMARK, ODENSE

COMPUTER SCIENCE COLLOQUIUM

A Finite Representation of the Narrowing Space and its Application

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Abstract:

Narrowing basically extends rewriting by allowing free variables in terms and by replacing matching with unification. As a consequence, the search space of narrowing becomes usually infinite, as in logic programming.

In this talk, we introduce the use of some operators that allow one to always produce a finite data structure that still represents all the narrowing derivations. Furthermore, we extract from this data structure a novel, compact equational representation of the (possibly infinite) answers computed by narrowing for a given initial term. Both the finite data structure and the equational representation of the computed answers might be useful in a number of areas, like program comprehension, static analysis, program transformation, etc.

Host: Peter Schneider-Kamp