

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

# COMPUTER SCIENCE COLLOQUIUM

## Sound and Fast Static Analysis for Higher-Order Programs

Jan Midtgaard  
Department of Computer Science  
Aarhus University

Friday, 01 June, 2012 at 09:00  
Auditorium U49

### Abstract:

Programming languages such as JavaScript, C#, Haskell, and F# are higher order, meaning that computations are treated as values. Such programs present a particular challenge to static analysis, as the control flow through a given program depends on the run-time values that the program's variables may take.

In this talk we present an overview of recent efforts within static analysis of higher-order programs in terms of (a) soundness – meaning that the static analysis accounts for all possible execution paths, and (b) speed – meaning that the static analysis scales to large input programs. Finally we argue why we believe the overall approach represents a step forward for existing and future higher-order static analyses.

Host: Martin Svensson