

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

# COMPUTER SCIENCE COLLOQUIUM

## Heuristics for multiobjective optimization applied to long-term planning of home healthcare

Thomas Sejr Jensen  
Department of Mathematics and Computer Science  
University of Southern Denmark, Denmark

Tuesday, 25 January, 2011 at 14:15  
Auditorium U49B

**Abstract:**

Long-term planning of home healthcare is a complex routing problem with objectives concerning both efficiency and quality of service. In this talk I show how the problem can be modeled and present a five-phase solution approach.

The focus of the talk will be on an interactive metaheuristic that allows the decision maker to guide the algorithm towards solutions with an appropriate trade-off between the objectives.

Results obtained on a real-life instance show that better plans can be achieved by using a developed prototype compared to a manual construction process. Furthermore, the prototype can be used to maintain an existing plan which has to be updated regularly.