ALBERT-LUDWIGS-
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FAKULTÄT FÜR ANGEWANDTE WISSENSCHAFTEN

Fakultäts - Kolloquium

Zeit: Donnerstag, 30. 06. 2005, 16.00h
Ort: Raum 02-016, Geb. 101, Georges-Köhler-Allee

Graduiertenkolleg Embedded Microsystems

Location-Based Activity Recognition

Prof. Dr. Dieter Fox
University of Washington, Seattle, USA

Abstract

Knowledge of a person's location provides important context information for many pervasive computing applications. Beyond this, location information is extremely helpful for estimating a person's high-level activities. In this talk we show how Bayesian filtering can be applied to estimate the location of a person using sensors such as GPS or WiFi. The techniques track a person on graph structures that represent a street map or a skeleton of the free space in a building. In the context of GPS, we show how such a graph representation can be embedded into a hierarchical activity model that learns and infers a user's daily movements through the community. The model uses multiple levels of abstraction so as to bridge the gap between raw GPS measurements and high level information such as a user's mode of transportation or her goal. We will also discuss recent work on using probabilistic relational models for inferring a person's significant places from traces of GPS data.

Gastgeber: Prof. Dr. Wolfram Burgard

Alle Interessenten sind recht herzlich eingeladen.

Organisation : Prof. Dr. B. Becker / F. Schmiedle

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