UW CENTER FOR
PATTERN ANALYSIS AND MACHINE INTELLIGENCE

GRADUATE SEMINAR SERIES

A Solution to the Ill-Conditioned GPS Accuracy Classification Problem: Context Based Classifier

Speaker: Nabil Drawil

Date: January 18, 2012

Time: 4 pm – 4:30 pm

Place: E5 (5128) Refreshments will be served

Abstract :

GPS localization has been attracting significant attention in many areas (e.g., navigation systems, road tolling, collision avoidance systems, and other intelligent transportation systems). However, localization accuracy remains a key issue that prevents such applications from delivering on their ultimate promise.

The localization accuracy of any GPS system depends heavily on the methodology it uses to compute locations as well as the measurement conditions in its surrounding. The impact of the measurement conditions on the localization accuracy in itself is an intricate ill-conditioned problem due to the incongruent nature of the measurement process.

In this seminar a novel scheme to address localization accuracy will be introduced. The scheme involves three steps, namely, classify instantaneous GPS accuracy based on measurement conditions, consolidate the consecutive classifications of the GPS Accuracy, and enhance the robustness of classifying the GPS accuracy for the successive measurements. Comparisons of real-life experimental results will be presented as well.

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