

UW CENTER FOR PATTERN ANALYSIS AND MACHINE INTELLIGENCE

CPAMI SEMINAR SERIES

An Approach to Vehicle Tracking Based on Particle Filter and Height Estimation Using Smart Phone Sensors

Speaker: Professor Takayoshi Yokota

Date: Tuesday, January 6th, 2015

Time: 1:30-2:30 pm

Place: EIT-3142. Refreshments will be served

Abstract :

Estimating a distance from a preceding vehicle is a focus of this research. By using only a single eye camera, a particle filter based car following algorithm for this purpose is proposed, and its results will be shown. In addition, an approach to estimating the height of the road by using built-in sensors of a smart-phone such as an accelerometer and a GPS is proposed. It also uses a 3-D digital road map data, if available, as another input data. The results will be shown.

Biography:

Takayoshi Yokota is a Full Professor in the Department of Information and Electronics, Graduate School of Engineering, Tottori University, Japan since April 2012. From April 2009 to March 2012, he was a Professor of Advanced Transport Logistics Lab (Hanshin Expressway) in the Department of Urban Management at the Graduate School of Engineering, Kyoto University, Japan. From April 1984 to 2009, he worked at Hitachi Research Laboratory, Hitachi Ltd, Japan as a researcher, a chief researcher and a senior manager, responsible for the R&D of intelligent transport systems such as real time traffic information systems, traffic control systems and navigation systems. He was born in Ibaraki prefecture in 1956. He received his B.S., M.S. and Ph.D from Tokyo Institute of Technology in 1979, 1981, and 1984. His current research interests include analysis, modeling, spatio-temporal information processing and sensor fusion.