

Title: [Beyond the Probability Hypothesis Density \(PHD\) Filters](#)

Speaker: Professor Ba-Ngu Vo, University of Melbourne, Australia

Date: Thursday July 2, 2009

Time: 12:00 - 13:00 PM

Place: GTRI CCRF1 Conference Room

Refreshments: 11:40 AM

Abstract - In recent years Mahler's Finite Set Statistics (FISST) approach to multi-target tracking has attracted substantial interest mainly through the developments of the PHD/cardinalized PHD (CPHD) filters. However, FISST is much more powerful and extends beyond the PHD/CPHD filters. This talk explores a number of tractable tracking solutions derived from FISST, including, joint detection and tracking (of a single target) using Bernoulli random sets, multi-target tracking using multi-Bernoulli random sets, and multi-target smoothing with the PHD.

Biography - Ba-Ngu Vo received his Bachelor degrees jointly in Science and Electrical Engineering with first class honors at the University of Western Australia in 1994, and PhD at Curtin University of Technology in 1997. He has held various research positions in Australia and overseas before joining the department of Electrical and Electronic Engineering at the University of Melbourne in 2000, where he is currently an Associate Professor. Dr. Vo's research interests include optimization, signal processing, and multi-target tracking. He is best known for contributions to particle and analytic solutions of the PHD and CPHD filters.

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For more information: Contact [Mahendra Mallick](#) at mahendra.mallick@gtri.gatech.edu, 404-407-8711.