

The Department of Automatic Control & Systems Engineering is pleased to announce the following seminar:

Assignment Algorithms for Large-Scale Target Tracking

Speaker: Prof. T. Kirubarajan

Department of Electrical and Computer Engineering, Communications Research Laboratory, McMaster University, Canada

Tuesday August 3 @ 12:00 noon

Location: Sir Henry Stephenson Building, Lecture Theatre LT02

In this presentation we discuss the use of various assignment techniques for data association for large-scale multitarget tracking. The assignment approaches discussed include the (pseudo) polynomial-time solvable 2-D (two dimensional) assignment problem, the NP-hard S-D ($S > 2$) assignment problem, and the m-best (top m hypotheses) 2-D and m-best S-D assignment problems. Various well-known and recently developed optimal, suboptimal, static and dynamic assignment algorithms are also discussed. Extensions of assignment algorithms to closely-spaced object tracking are also presented. In addition, tracking results on large-scale air as well as ground surveillance problems are presented.

Dr Kirubarajan is a Professor of Electrical and Computer Engineering at McMaster University, Hamilton, Ontario, where he holds the Canada Research Chair in Information Fusion. His research interests are in estimation, target tracking, and multisource information fusion with application to defence, communications, and biomedical engineering, and is recognised for his contribution in multiple model estimation techniques. He did his undergraduate studies in Engineering at Cambridge University and his PhD at the University of Connecticut with Professor Bar-Shalom.