



IEEE KW Section



IEEE Aerospace & Electronic Systems Society (AEES)
Distinguished Lecture

TARGET TRACKING AND DATA FUSION: How to Get the Most Out of Your Sensors

Dr. Bar-Shalom, University of Connecticut

Date: Oct. 24, 2005

Time: 14:30 pm, EST

Location: Davis Center 1304, University of Waterloo

Abstract: This talk describes the evolution of the technology of tracking objects of interest (targets) in a cluttered environment using remote sensors. Approaches for handling target maneuvers (unpredictable motion) and false measurements (clutter) are discussed. Advanced (“intelligent”) techniques with moderate complexity are described. The emphasis is on algorithms which model the environment and the scenarios of interest in a realistic manner and have the ability to track low observable (LO) targets. The various architectures of information processing for multi-sensor data fusion are discussed. Applications are presented from Air Traffic Control (data fusion from 5 FAA radars for 800 targets) and underwater surveillance for a LO target.

Yaakov Bar-Shalom: Yaakov Bar-Shalom received the B.S. and M.S. degrees from the Technion, Israel Institute of Technology, in 1963 and 1967 and the Ph.D. degree from Princeton University in 1970, all in electrical engineering. Currently he is Board of Trustees Distinguished Professor in the Dept. of Electrical and Computer Engineering and Marianne E. Klewin Professor in Engineering at the University of Connecticut and Fellow of IEEE. His current research interests are in estimation theory and target tracking and has published 7 books, over 300 papers and book chapters in these areas. He has been consulting to numerous companies and government agencies, and originated the series of Multitarget Multisensor Tracking short courses. He served as General Chairman of FUSION 2000 and President of ISIF in 2000 and 2002. He is co-recipient of the M. Barry Carlton Award for the best paper in the IEEE Transactions on Aerospace and Electronic Systems in 1995 and 2000 and in 2002 he received the J. Mignona Data Fusion Award from the DoD JDL Data Fusion Group.

Invited by Dr. Zhen (Jack) Ding and Dr. Reza Dizaji

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