

Collaborative Signal Processing and Data Fusion in Wireless Sensor Networks

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Abstract

Collaborative signal processing for networks made up of a large number of sensors with limited capabilities has received much recent attention. A number of sensor networks are being implemented where data fusion is a key component. Applications include military command and control, robotics, critical infrastructures and smart systems such as buildings and bridges. This talk will present a brief overview of multi-sensor data fusion followed by a discussion of collaborative signal processing in wireless sensor networks with emphasis on distributed detection and decision fusion.



Biography: Pramod K. Varshney received the B.S. degree in electrical engineering and computer science (with highest honors), and the M.S. and Ph.D. degrees in electrical engineering from the University of Illinois at Urbana-Champaign in 1972, 1974, and 1976 respectively. Since 1976 he has been with Syracuse University, Syracuse, NY where he is currently a Distinguished Professor of Electrical Engineering and Computer Science and the Research Director of CASE: the New York State Center for Advanced Systems and Engineering. His current research interests are in distributed sensor networks and data fusion, detection and estimation theory, wireless communications, image processing, and remote sensing. He is an IEEE Fellow and has received numerous awards. He serves as a distinguished lecturer for the AES society of the IEEE. He was the President of International Society of Information Fusion during 2001.