



University of Pavia

Ph.D. School of Electrical and Electronics Engineering and Computer Science

SEMINAR

Wanted and unwanted signatures in multi-dimensional data

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Aula Seminari "Ex Elettronica", Piano D

Abstract: In our first two lectures, we considered target detection of sub-pixel targets. In reality, sub-pixel targets can be spread over several pixels. By analyzing the RIT blind test data, we show that the efficacy of an algorithm will be greatly affected by the spread. When the background may be contaminated by unwanted signals, we will consider a new approach for target detection, the Likelihood Ratio Test. We will discuss the philosophy of the tests, and the algorithms which are developed to detect targets in such situations.

Bio: Stanley R. Rotman was born in Boston, Massachusetts, in 1958. He received the B.S., M.S. and Ph.D. degrees in Electrical Engineering from the Massachusetts Institute of Technology, in 1979, 1980 and 1985, respectively. His present position is full professor at Ben-Gurion University of the Negev, Dept. of Electrical and Computer Engineering, Beer-Sheva, Israel. He is a senior member of IEEE and a fellow of SPIE. For the last decade, Prof. Stanley Rotman has been developing state-of-the art hyperspectral data analysis techniques for military and industrial applications. This includes innovative spectral target detection algorithms for tracking targets in four-dimensional space, new algorithms for sub-pixel target detection in spectral images, and new segmentation techniques for multipixel multispectral target detection in clutter.

Organizer

Proff. Paolo Gamba/Fabio Dell'Acqua

Ph.D. Coordinator

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Seminar in English

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