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SPEAKER: Marco Lops
DATE: Thursday, May 14th
TIME: 4:30 pm
TITLE: Diversity and Energy Integration in Statistical MIMO Radar

ABSTRACT: MIMO radars with widely spaced antennae at both the receiver and the transmitter – also referred to as Statistical MIMO Radars - have been receiving vibrant attention in recent years. This talk is aimed at discussing the transmission policies in surveillance applications, and in particular to shedding some light on the inherent trade-off between (angular) diversity and energy integration: not unexpectedly, there is no uniformly optimum (with respect to the signal-to-noise ratio available to the receiver and to the target scattering probability density function) transmit policy, which poses some questions as to the real usefulness of pursuing transmit diversity in MIMO detection, at least as far as the target scattering is Gaussian. Some new - still un-published - results for the case of non-Gaussian scattering targets are given, showing that waveform design under the Gaussian assumption is robust.

BIO: Marco Lops was born and educated in Naples (Italy), where he received both his “Laurea” and his PhD degrees from University “Federico II”. He was assistant professor and associate professor at the Department of Electronic and Telecommunication Engineering of “Federico II”, and, since 2000, he has been professor with DAEIMI (University of Cassino, Italy). His research interests are in detection and estimation, with emphasis on digital communications and radar applications. He is currently adjunct professor with Columbia University (NYC), and was visiting professor with the University of Minnesota (Minneapolis) during the fall semester 2008.

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