

SPCOMIT Seminar Invitation

Title: Mean-Cyclic-Error Lower Bounds via Integral Transform of Likelihood-Ratio Function

Speaker: Eyal Nitzan (BGU)

Abstract

In this work, we consider non-Bayesian periodic parameter estimation and present a new class of mean-cyclic-error (MCE) lower bounds based on integral transform of the likelihood-ratio (LR) function. The MCE bounds in this class are valid for any cyclic-unbiased estimator, in the Lehmann sense, with uniform cyclic performance. Based on the general class of MCE bounds, we propose a novel MCE bound, which utilizes the periodic nature of the problem via the kernel of Fourier series. The proposed bound is based on discrete samples of the LR function in both the frequency and parameter domains and is shown to be tractable and useful for periodic parameter estimation. The proposed bound is compared to the MCE of the maximum-likelihood estimator and to existing MCE bounds in the problem of frequency estimation.

Eyal Nitzan is a PhD student of Prof. Joseph Tabrikian and Dr. Tirza Routtenberg.

The seminar will take place on **Wednesday, 6-7-2016, 11:10, in room 102 building 33.**