

Department of Electrical and Computer Engineering

Title: «How to communicate via a binary erasure channel with feedback without repeated ones?»

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Tuesday, 18th October 2016, 18:00 – 19:00
Room XOD02 – B109, New Campus – University of Cyprus

Abstract:

In this talk we will present a simple and fundamental problem: communicating via a memoryless binary erasure channel with feedback without consecutive 1's. First, we will present the problem as a puzzle and provide a simple solution. We will prove its optimality using only counting, logic and basic probability arguments. Then we will show how we obtained the solution using information theory tools (such as the Directed information) and optimization tools (such as Dynamic Programming).

The whole talk will be based on simple and fundamental ideas in communication. The basic problem of source coding and channels coding will be presented as part of the talk. No prior knowledge is assumed.

Based on Joint work with Oron Sabag, Navin Kashyap .

Biography:

Haim Permuter received his B.Sc. (summa cum laude) from Ben-Gurion University (BGU) and Ph.D. from Stanford University, both in Electrical Engineering, in 1997 and 2008, respectively. Between 1997-2004, he served as a scientific research officer in an R&D unit in the Israeli Defense Forces. In summer 2002 he worked for IBM, Almaden research center. He is a recipient of several rewards including Eshkol Fellowship, Wolf Award, Fulbright Fellowship, Stanford Graduate Fellowship, Allon Fellowship and the ERC grant. Haim joined the faculty of Electrical Engineering Department at BGU in Oct 2008, and is now an associate professor.