THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Foundations of Computer Science Colloquium

Room Pekeris, Ziskind Building
on Tuesday, May 01, 2018
at 14:30

NOTE UNUSUAL DATE AND ROOM

Igor Shinkar
UC Berkeley

Probabilistic Checking against Non-Signaling Strategies from Linearity Testing

Abstract:

Non-signaling strategies are collections of distributions with certain non-local correlations that have been studied recently in the context of delegation of computation. In this talk I will discuss a recent result showing that the Hadamard based PCP of [ALMSS'92] is sound against non-signaling strategies. As part of the proof, we study the classical problem of linearity testing [BLR'93] in the setting of non-signaling strategies, and prove that any no-signaling strategy that passes the linearity test with high probability must be close to a quasi-distribution over linear functions.

Joint work with Alessandro Chiesa and Peter Manohar (UC Berkeley).