

abstract

COMPUTER SCIENCE/DISCRETE MATH I

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

I will present a result that shows hardness of weak PAC-learning intersection of two halfspaces using a hypothesis which is an intersection of k halfspaces for any (fixed) integer k . Specifically, for every integer k and an arbitrarily small constant $\epsilon > 0$, unless $NP = RP$, no polynomial time algorithm can distinguish whether there is an intersection of two halfspaces that correctly classifies a given set of labelled points in \mathbb{R}^n , or whether any intersection of k halfspaces can correctly classify at most $1/2 + \epsilon$ fraction of the points. Joint work with Rishi Saket.