



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Machine Learning and Statistics Seminar

Room 1 ,Ziskind Building  
on Wednesday, Feb 24, 2016  
at 11:15

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Real-time bidding and regret minimization

Abstract:

In real-time bidding (RTB), ad exchanges run second-price auctions in a few milliseconds, allowing publishers to sell ad spaces to advertisers on a per-impression basis. The fact that RTB allows the accurate tailoring of impressions to the features of each individual user, has fueled the demand for algorithmic platforms that serve the needs of either the seller or the buyer. In this talk, we focus on the problem, faced by the seller, of dynamically optimizing the reserve price in each auction with the goal of maximizing overall revenue. We cast this problem in a regret minimization setting, and describe computationally efficient algorithms achieving regret of order  $T^{1/2}$  under various assumptions both on the information available to the seller and on the mechanism generating bids. Joint work with Claudio Gentile (Varese) and Yishay Mansour (Tel-Aviv).