

Department of Mathematics, BGU

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## BGU Probability and Ergodic Theory (PET) seminar

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*On Thursday, July 6, 2023*

*At 11:10 – 12:00*

*In 101-*

Tomer Sher (Ben Gurion University of the Negev, Israel)

will talk about

### **On a conjecture Regarding the uniform distribution in the generalized coupon collector problem**

Abstract: The Coupon Collector's Problem (CCP) reads as follows: how many drawings are needed on average in order to complete a collection of  $n$  types of coupons, if at each step a single coupon is drawn uniformly randomly with replacement, independently of all the other drawings? This problem was introduced by De-Moivre over 300 years ago. We will discuss about a generalization of the problem, where instead of drawing a single coupon each time we draw a "package" of coupons of size  $s$  and ask the following question: how does the distribution over the collection of possible packages affect the expected number of drawings needed to complete a collection?