

# Shannon capacity and privileged users

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## Abstract

I will show that for any fixed  $t$  and any family  $F$  of subsets of  $T = \{1, 2, \dots, t\}$ , there are  $t$  graphs  $G_1, G_2, \dots, G_t$ , so that for every subset  $I$  of  $T$ , the Shannon capacity of the disjoint union  $\cup_{i \in I} G_i$  is "large" if  $I$  contains a member of  $F$ , and is "small" otherwise.

The lecture will include the relevant definitions, the precise quantitative meaning of "large" and "small", as well as a brief discussion of the consequences in Information Theory and in Ramsey Theory.

Joint work with Eyal Lubetzky.

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