

# 鹿児島大学数理情報科学談話会

第 2 3 2 回

日時：2019 年 1 月 7 日（月） 10:30 – 11:30

場所：理学部 2 号館 404 室

講師：Marek Kaluba 氏

(Adam Mickiewicz University)

題目：On property  $(T)$  for  $\text{Aut}(F_n)$  and  $SL_n(\mathbb{Z})$

## Abstract:

We prove that  $\text{Aut}(F_n)$  has Kazhdan's property  $(T)$  for every  $n \geq 6$ . Together with a previous result of Kaluba, Nowak, and Ozawa, this gives the same statement for  $n \geq 5$ .

We also provide explicit lower bounds for the Kazhdan constants of  $\text{SAut}(F_n)$  (with  $n \geq 6$ ) and of  $SL_n(\mathbb{Z})$  (with  $n \geq 3$ ) with respect to natural generating sets. In the latter case, these bounds improve upon previously known lower bounds whenever  $n > 6$ .