

# 早稲田大学整数論セミナーの予定 (2017年度 第5回)

日時：2017年5月19日（金）16:30～18:00

場所：〒169-8555 東京都新宿区大久保3-4-1  
早稲田大学西早稲田キャンパス（旧・大久保キャンパス）  
61号館4階413室 (61-413)

講演者：Soma Purkait (東京理科大)

タイトル：Newforms of half-integral weight: the minus space counterpart

アブストラクト：We study genuine Hecke algebra of the double cover  $\widetilde{\mathrm{SL}}_2(\mathbb{Q}_p)$  with respect to certain open compact subgroups. We translate certain elements of this Hecke algebra to obtain classical operators on the space of cusp forms of half-integral integral weight. We use these operators to identify the “minus space” of level  $4M$ ,  $M$  odd and square-free. Our minus space is the counterpart of Kohnen’s plus space in the sense that it is Hecke isomorphic to  $S_{2k}^{\mathrm{new}}(2M)$ . In an analogy with our work in the integral weight setting we show that the minus space is characterized as a common eigenspace of certain finite set of operators with given eigenvalues. This is a joint work with Prof. E. M. Baruch.