

TORSION IN 1-CUSPED PICARD MODULAR GROUPS

Fudan Topology Seminar

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Time: Tue, Mar. 7th, 15:00-16:00

Venue: Room 1704, East Main Guahuang Tower

Abstract: We discuss a systematic effective method to construct coarse fundamental domains for the action of the Picard modular groups $PU(2,1,O_d)$. We demand that the ring O_d of algebraic integers in $Q(i\sqrt{d})$ has class number one, i.e. $d=1,2,3,7,11,19,43,67,163$. The computations can be performed quickly up to the value $d=19$. As an application of this method, we classify conjugacy classes of torsion elements, deduce short presentations for the groups, and construct neat subgroups of small index. This is joint work with M. Deraux.