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Bounding ℓ-torsion in class groups of certain number fields

By a theorem of Brauer-Siegel, the class number of a number field F can be bounded by $O_\epsilon(\mathrm{Disc}(F)^{1/2+\epsilon})$. Therefore the ℓ-torsion in class groups can be trivially bounded by $O_\epsilon(\mathrm{Disc}(F)^{1/2+\epsilon})$. In this talk, I will introduce a non-trivial bound on ℓ-torsion for certain family of number fields with a fixed Galois group.