

embeds
in a compact
Lie group

cocompact
lattices in
higher-rank
simple linear
Lie gps

Whitehead
on examples

$SO_5(\mathbb{Z}[i])$

groups of
diagonalizable
matrices over \mathbb{C}

all cyclic
subgps are
virtual
retracts

\mathbb{Z}^2



virtually
special

lamplighter
group

linear in positive
characteristic

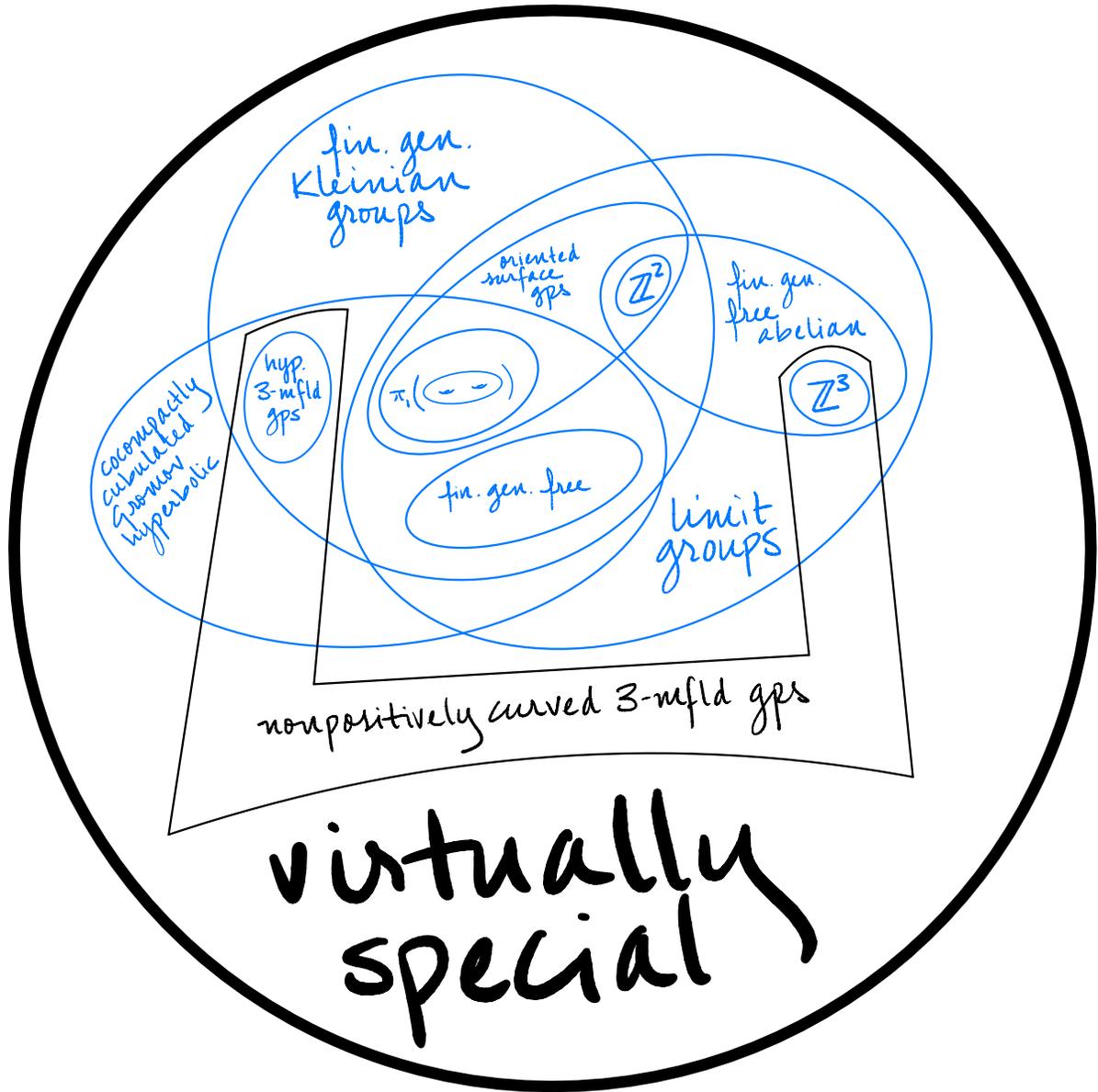
linear with no infinite-
order unipotents

does not contain an infinite-
order element that is mapped
to a virtually unipotent matrix
under any fin. dim.
representation

all cyclic subgps
undistorted



$\pi_1(T)$



fin. gen. Kleinian groups

oriented surface gps

\mathbb{Z}^2

fin. gen. free abelian

\mathbb{Z}^3

cocompactly cubulated 3-manifolds hyperbolic

hyp. 3-mfld gps

$\pi_1(S^2)$

fin. gen. free

limit groups

nonpositively curved 3-mfld gps

virtually special