

1096-22-1810 **Brendan Kelly*** (kelly@math.utah.edu). *Finiteness Properties of Arithmetic Groups.*

A group G can fail to be FP_n but at the same time $H^n(G; \mathbb{Q})$ can be finite dimensional. The group $\mathbf{SL}_n(\mathbb{Z}[t])$ is not FP_n . It is an open question if $H^n(\mathbf{SL}_n(\mathbb{Z}[t]); \mathbb{Q})$ is finite dimensional. This talk will present recent work on answering this question by showing a family of subgroups of $\mathbf{SL}_n(\mathbb{Z}[t])$ where the cohomology is infinite dimensional. The primary technique is studying the action of $\mathbf{SL}_n(\mathbb{Z}[t])$ on the building for $\mathbf{SL}_n(\mathbb{Q}((t^{-1})))$. This work is joint with Morgan Cesa. (Received September 16, 2013)