1007-20-218   **Dan Margalit***, 155 S 1440 East, Salt Lake City, UT 84111, and **Mladen Bestvina** and
                    Kai-Uwe Bux. *Finiteness properties of the Torelli group for Out(F_3).*

Let K_n be the kernel of the natural map from $\mathrm{Out}(F_n)$ to $\mathrm{GL}(n, \mathbb{Z})$. This group was studied by Nielsen (1918) and Magnus (1934), who showed that K_n is finitely generated. We give a simple topological approach to the theorem of Krstìc and McCool (1997) that K_3 is not finitely presented. Further, we show that the second homology of K_3 is not finitely generated. With an eye towards understanding this group in higher rank, we approach the problem from a Morse theoretic point of view. (Received February 22, 2005)

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