Satellite operations and concordance homomorphisms

Two knots are (smoothly) concordant if they cobound a (smooth) annulus in $S^3 \times I$. The concordance classes of knots form a group called the concordance group. Conjecturally, satellite operations do not induce interesting endomorphisms of the concordance group. We use some standard techniques in Heegaard Floer homology to confirm this conjecture for a large number of satellite operations. If time, we will discuss one of the tools, which gives some relationship between Heegaard Floer homology and the Torelli group. This is joint work with Allison Miller and Juanita Pinzon-Caicedo.

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