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Title: Heegaard genus and Dehn filling.

Abstract: The context of the talk is the general question of the behavior of Heegaard genus under two distinct Dehn fillings on a 3-manifold with torus boundary; more specifically we consider the case where one of the fillings is S^3. The result is that there is a function $w(g)$ such that if K is a hyperbolic knot in S^3, and some non-integral Dehn surgery on K gives a non-Haken manifold of Heegaard genus g, then the tunnel number of K is at most $w(g)$. We will also discuss the special case $g = 2$ and its relevance to the conjecture that any Seifert fibered Dehn surgery on a hyperbolic knot in S^3 must be integral. (Joint work with Ken Baker and John Luecke.)