

Stabilizing Heegaard splittings of composite tunnel number two knots

JUNG HOON LEE

Suppose $K\sharp K'$ is a composite tunnel number two knot where both K and K' are tunnel number one knots. Let t_1, t_2 be unknotting tunnels of K and t'_1, t'_2 be unknotting tunnels of K' . Then we give some condition such that the two genus three Heegaard splittings induced by these tunnel systems become isotopic by one stabilization. On the other hand, we construct infinitely many examples such that $\overline{S^3 - N(K\sharp K' \cup t_1 \cup t'_1 \cup t_2)}$ is not a genus four handlebody and give candidates of two splittings which cannot be made isotopic by a single stabilization.

KONKUK UNIVERSITY