

Extending branched covers of S^3 over B^4

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Given a branched cover $f : M \rightarrow S^3$ with branch set a knot K , when does f extend to a cover $\hat{f} : W^4 \rightarrow B^4$ branched along a smooth surface with boundary K ? I will give a necessary and sufficient condition (or two) for the existence of such an extension.

(joint work with Kent Orr)