

LINK CORRESPONDING TO CLOSED 3-MANIFOLD

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Let \mathbb{L} be the set of oriented link types on links in S^3 , and \mathbb{L}^f be the set of colored link types. Let \mathbb{M} be the set of oriented types on closed connected oriented 3-manifolds. It is well-known that Dehn surgery induces a surjection

$$D : \mathbb{L}^f \longrightarrow \mathbb{M}.$$

In this talk, we observe that there are various right inverses

$$\mathbb{M} \longrightarrow \mathbb{L}^f$$

of D , and in some case, this right inverse lifts to an injection

$$\mathbb{M} \longrightarrow \mathbb{L}.$$