

## **Effective geometry change under drilling and filling**

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It has been known since the late 1970s that the hyperbolic geometry of a manifold with a short geodesic is "close" to that of the manifold with the geodesic drilled. There have been several results quantifying this statement, including work of Hodgson and Kerckhoff, applied to give the Drilling theorem of Brock and Bromberg, which gives a bilipschitz map between the manifolds away from the drilled/filled curve. However, the Drilling theorem is not explicit. Thus, while it has important applications for limiting manifolds and existence results, it is difficult to apply it to particular classes and examples of manifolds. In this talk, I will discuss results making the Drilling theorem explicit, and outline some consequences.

This is joint work with D. Futer and S. Schleimer.