# Non-orientable slice surfaces and inscribed rectangles.

Peter Feller

*ETH Zurich*

`peter.feller@math.ch`

We consider the complexity of non-orientable locally-flat surfaces in the four-ball $B^4$ and in $S^1 \times B^3$ with boundary a prescribed torus knot and discuss differences between the locally-flat and smooth setup.

Our investigation is motivated by the following old metric problem posed by Toeplitz over a hundred years ago: Does every Jordan curve (the image of a continuous injection from the circle to the Euclidean plane), contain four points that form the corners of a square.

Based on joint work with M. Golla.