

# *Flexibility of curves on a single-sheet hyperboloid*

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# Flexibility of curves on a single-sheet hyperboloid

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**Abstract** Hyperbolic towers are towers in the shape of a single-sheet hyperboloid, and they are interesting in architecture. In this paper, we deal with the infinitesimal bending of a curve on a hyperboloid of one sheet; that is, we study the flexibility of the net-like structures used to make a hyperbolic tower. Visualization of infinitesimal bending has been carried out using *Mathematica*, and some examples are presented and discussed.

**Keywords** Curve · Hyperbolic tower · Hyperboloid · Infinitesimal bending · Shukhov tower

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