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# The twisting number of a ribbon knot is bounded below by its doubly slice genus

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## Abstract

I will report on joint work with Peter Feller in which we show that a certain quantity associated to a ribbon knot  $K$  called the twisting number is bounded below by the doubly slice genus of  $K$ , which is the smallest genus of an unknotted surface in the 4-sphere whose intersection by the equatorial 3-sphere gives  $K$ . As applications, we answer a question of Tanaka by showing that the twisting number can be arbitrarily large, and determine previously unknown doubly slice genera for some knots in the knot tables.

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