## ON THE MINIMAL GENUS OF KNOTS VIA BRAIDZEL SURAFCES

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ABSTRACT. A notion of braidzel surfaces has introduced by L. Rudolph as a generalization of pretzel surfaces on his study of the quasipositivity for pretzel surfaces. The speaker showed that any knot bounds an orientable braidzel surface. By this fact, we define the "genus" for knots with respect to their braidzel surfaces. The minimal genus among all oriented braidzel surfaces for a knot K is defined to be the *braidzel genus* for K, denoted by  $g_b(K)$ . In this talk, we discuss relationships among the braidzel genus and other 'genus' for knots.

## References

[1] T. Nakamura, Notes on braidzel surfaces for links, preprint, (2004).

[2] L. Rudolph, Quasipositive pretzels, Topology Appl. 115 (2001), no.1,115–123.

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