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Ayaka Shimizu* (shimizu@nat.gunma-ct.ac.jp), Gunma National College of Technology, 580 Toriba-cho, Maebashi-shi, Gunma 371-8530, Japan. *The warping matrix for knots.*

Let D be an oriented knot diagram on the 2-sphere, and let b be a base point of D . A *warping crossing point* of D with b is a crossing point of D such that we meet the crossing point as an under-crossing first when we travel D from b . The *warping degree* of D with b is the number of the warping crossing points of D with b . In this talk we define the *warping matrix* of D by using warping degrees. We show that we can recreate D from the warping matrix of D , and investigate the property of warping matrix. (Received February 18, 2015)