

# List of papers

Ayaka SHIMIZU  
January 12, 2024

## Publications (Peer reviewed)

- [1] A. Shimizu, The warping degree of a knot diagram, *J. Knot Theory Ramifications* 19 (2010), 849–857.
- [2] A. Shimizu, The warping degree of a link diagram, *Osaka J. Math.* 48 (2011), 209–231.
- [3] A. Shimizu, The complete splitting number of a lassoed link, *Topology Appl.* 159 (2012), 959–965.
- [4] N. Ito and A. Shimizu, The half-twisted splice operation on reduced knot projections, *J. Knot Theory Ramifications* 21, 1250112 (2012) [10 pages].
- [5] A. Shimizu, The warping polynomial of a knot diagram, *J. Knot Theory Ramifications* 21, 1250124 (2012) [15 pages].
- [6] A. Shimizu, Region crossing change is an unknotting operation, *J. Math. Soc. Japan*, 66 (2014), 693–708.
- [7] K. Hayano, A. Shimizu and R. Shinjo, Region crossing change on spatial-graph diagrams, *J. Knot Theory Ramifications* 24, 1550045 (2015) [12 pages].
- [8] A. Kawauchi and A. Shimizu, Quantization of the crossing number of a knot diagram, *Kyungpook Math. J.* 55 (2015), 741–752.
- [9] A. Shimizu, The reductivity of spherical curves, *Topology Appl.* 196 (2015), 860–867.
- [10] A. Shimizu, The warping matrix of a knot diagram, *Contemporary Mathematics* 670 (2016), 337–344.
- [11] T. Akiyama, A. Shimizu and R. Watanabe, The rank of a warping matrix, *Topology Appl.* 206 (2016), 228–240.
- [12] K. Horiguchi, A. Shimizu, R. Watanabe and Y. Yaguchi, Axis systems of link projections, *J. Knot Theory Ramifications* 26, 1750043 (2017) [12 pages].
- [13] A. Kawauchi and A. Shimizu, On the orientations of monotone knot diagrams, *J. Knot Theory Ramifications* 26, 1750053 (2017) [15 pages].
- [14] K. Oshiro, A. Shimizu and Y. Yaguchi, Up-down colorings of virtual-link diagrams and the necessity of Reidemeister moves of type II, *J. Knot Theory Ramifications* 26, 1750073 (2017) [17 pages].
- [15] Y. Onoda and A. Shimizu, The reductivity of spherical curves Part II: 4-gons, *Tokyo J. Math.* 41 (2018), 51–63.
- [16] S. Jablan and A. Shimizu, On the warping sum of knots, *J. Knot Theory Ramifications*

- 27, 1843002 (2018) [8 pages].
- [17] Y. Gokan, H. Katsumata, K. Nakajima, A. Shimizu and Y. Yaguchi, A note on the cross-index of a complete graph based on a linear tree, *J. Knot Theory Ramifications* 27, 1843010 (2018) [24 pages].
- [18] S. Nelson, K. Oshiro, A. Shimizu and Y. Yaguchi, Biquandle virtual brackets, *J. Knot Theory Ramifications* 28, 1940003 (2019).
- [19] A. Kawauchi, A. Shimizu and Y. Yaguchi, Cross-index of a graph, *Kyungpook Math. J.* 59 (2019), 797—820.
- [20] K. Kashiwabara and A. Shimizu, A note on unavoidable sets for a spherical curve of reductivity four, *Kyungpook Math. J.* 59 (2019), 821—834.
- [21] A. Shimizu and R. Takahashi, Region crossing change on spatial theta-curves, *J. Knot Theory Ramifications* 29 (2020), 2050028.
- [22] A. Shimizu, Prime alternating knots of minimal warping degree two, *J. Knot Theory Ramifications* 29 (2020), 2050060.
- [23] A. Shimizu, Unknotting operations on knots and links, *J. Knot Theory Ramifications* 30, (2021), 2171001.
- [24] A. Ohya and A. Shimizu, Lower bounds for the warping degree of a knot projection, *J. Knot Theory Ramifications* 31 (2022), 2250091.
- [25] Y. Funakoshi, K. Noguchi and A. Shimizu, Unknottability of spatial graphs by region crossing changes, *Osaka J. Math.*, 60 (2023), 671—682.

## **Preprint**

- [26] D. Chumpungam and A. Shimizu, Boolean algebra on region crossing change and an inequality of the region unknotting number, preprint (arXiv: 2309.10590).
- [27] T. Oshikiri, A. Shimizu and J. Tamura, Region crossing change on origami and link, preprint.

## **Book**

- [28] A. Kawauchi, K. Kishimoto and A. Shimizu, Knot theory and game (in Japanese), Asakura Publishing Co. Ltd. (2013).