

Publication List

Nicholas J. Owad

1. *The tunnel number of all 11 and 12 crossing alternating knots*, with F. Castellano-Macías*, Submitted. [arXiv:1908.01693](#) [math.GT] Explicit computation of the tunnel numbers of all alternating 11 and 12 crossing knots. The result of leading an undergraduate research project.
2. *Families of not perfectly straight knots*. Accepted for publication in *The Journal of Knot Theory and its Ramifications*, 2019. [arXiv:1804.04799v2](#) [math.GT] We present the first families of knots known to have straight number strictly higher than crossing number.
3. *Straight Knots*. Submitted. [arXiv:1801.10428v2](#) [math.GT] The diagrammatic invariant straight number is introduced and some of its properties are examined, including its relation to crossing number.
4. *Bridge spectra of cables of 2-bridge knots*. *The Journal of Knot Theory and its Ramifications*, **27** (02), (2018): 1850012. We calculate the bridge spectra of cables of 2-bridge knots.
5. *Bridge spectra of cables of 2-bridge knots*. Ph.D. Thesis, 2016.
6. *Self-intersecting polygons*. Undergraduate senior thesis, Kutztown University of Pennsylvania, 2010.

Works in Progress

1. *Random straight links*. In preparation for submission with A. Tsvietkova.
2. *Large volume links*. In progress with J. Purcell.
3. *Patterns in knot types*. In progress with H. Chapman.
4. *Snail links and fiberedness*. In progress with M. Hirasawa.
5. *Combinatorial neural codes of mouse visual cortical areas*. In progress with T. Burns* and F. Castellano-Macías*.

* - student collaborators