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**Robert C. Haraway III\*** (bobbycyiii@fastmail.com), **Neil R. Hoffman**, **Eric Sedgwick**  
and **Saul Schleimer**. *Knot diagram recovery in exponential time*. Preliminary report.

The most common combinatorial representation of knots is the diagram, a 4-regular planar graph with crossing information at the vertices. However, one may also represent a knot by a triangulation of its exterior. The problem of constructing a triangulation from a diagram of a knot can be solved in polynomial time. The same is not true for the reverse problem of knot diagram recovery. A family of torus knots shows that knot diagram recovery is not solvable in polynomial space, let alone polynomial time.

In joint work with Neil Hoffman, Eric Sedgwick, and Saul Schleimer, we show that knot diagram recovery is solvable in exponential time. (Received August 14, 2020)