

## **abstract**

GEOMETRIC PDE SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

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In this talk, I will discuss several topics related to transverse knots in contact 3-manifolds. I will introduce a conjecture on the maximal self-linking number of a topological knot in the standard contact 3-sphere. I will show how to apply braid theory, the HOMFLY polynomial, and the Khovanov-Rozansky homology in order to address the conjecture. I will further discuss the computation of the self-linking number using open-book decomposition and its application to contact geometry. Talk will be accessible to non-topologists.