Quantum Topology Seminar

Unknotting operations, crosscap numbers, and volume bounds
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Abstract: (Continued from last week.) In this talk, we introduce two invariants to compute the crosscap number for any alternating knot. One of the two invariants is given by band surgery and the other one is of splicing. For the former, it is easy to see the correspondence between band surgeries and crosscap numbers. For the latter, though the proof is more technical than the former, we have a general argument of computations for crosscap numbers including those of alternating knots and some non-alternating knots. Further, we discuss a relationship between our invariants and known bounds with respect to the Jone polynomial or hyperbolic volume bounds. This is a joint work with Yusuke Takimura (Gakushuin Boys’ Junior High School).

Thursday, August 27 at 4:00 PM in Zoom