**SwissMAP**
The Mathematics of Physics
National Centre of Competence in Research

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# Facets of Temperley-Lieb algebra"10:30-11:00 Coffee Break

*Friday 1 July 2022 09:30 (1 hour)*

Skein modules were defined by Przytycki and Turaev as a way to generalize the Jones polynomial and the Kauffman bracket to links in manifolds other than the 3-sphere. In this talk I will review some recent structural results, such as the fact that the skein module of a closed 3-manifold is finite-dimensional for generic quantum parameters. I will also describe a work in progress joint with Gunningham which relates skein modules for generic quantum parameters to the cohomology of a certain perverse sheaf on the character stack of the 3-manifold. This allows one to generalize skein modules to finite 3-dimensional Poincare complexes and compute them for those with a finite fundamental group.

**Presenter:**   KHOVANOV, Mikhail