



GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

3-Dimensional Topological QFTs from Non-Semisimple Modular Categories

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Room 6635 South Hall

Abstract: The famous Reshetikhin-Turaev construction of 3d TQFTs has as an input data a modular tensor category that is assumed to be semi-simple. In middle of 90's Lyubashenko has proposed a reasonable non-semisimple version of modular categories and it was later shown that they produce mapping class group representations with new features not present in the RT construction. Examples of such categories are given by small quantum groups. However, a proper TQFT construction for Lyubashenko's theory was missing. In this talk, I will present our recent construction that provides such TQFTs with input data given by any not necessarily semi-simple modular category over a field.

Information about future meetings of this seminar can be found at
<http://web.math.ucsb.edu/~drm/GTPseminar/>