SwissMAP
The Mathematics of Physics
National Centre of Competence in Research

Contribution ID: **8** Type: **not specified**

Braids, Dualities and more subfactors

Thursday 30 June 2022 15:00 (1 hour)

{Abstract:}\textit{The famous Schur-Weyl duality states that the commutant of the action of $Gl(V)$ on $V^{\otimes n}$ is generated by the obvious action of the symmetric group S_n on $V^{\otimes n}$. We will first give a survey of quantum groups $U_q\mathfrak{g}$ and representations V, where the commutant of the action of $U_q\mathfrak{g}$ on $V^{\otimes n}$ is (almost) generated by the braid group B_n. In the case of spin representations of $U_q\mathfrak{so}_N$, these braid representations are best described in the context of another q-deformation $U'_q\mathfrak{so}_n$ of $U\mathfrak{so}_n$.
This q-deformation can be embedded into $U_q\mathfrak{sl}_n$ as a coideal subalgebra. It can also be used to construct more examples of subfactors which correspond to the embedding $SO(n) \subset SU(n)$ in the classical limit $q \to 1$.}

Presenter: WENZL, Hans