Title: The representation theory of Clifford tensor-powers, from Howe to How

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Series: Quantum Foundations

Date: September 12, 2019 - 10:00 AM

URL: http://pirsa.org/19090101

Abstract: Schur-Weyl duality, arising from tensor-power representations of the unitary group, is a big useful hammer in the quantum information toolbox. This is especially the case for problems which have a full unitary invariance, say, estimating the spectrum of a quantum state from a few copies. Many problems in quantum computing have a smaller symmetry group: the Clifford group. This talk will show how to decompose tensor-power Clifford representations through a Schur-Weyl type construction. Our results are also relevant for the theory of Howe duality between symplectic and orthogonal groups.