

Colloquium

An embedding of the universal Askey-Wilson algebra into $U_q(\mathfrak{sl}_2) \otimes U_q(\mathfrak{sl}_2) \otimes U_q(\mathfrak{sl}_2)$

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地 點：應數系多媒體教室(理 408 室)

摘 要：

The Askey-Wilson algebras were used to interpret the algebraic structure hidden in the Racah-Wigner coefficients of the real forms of $U_q(\mathfrak{sl}_2)$. In this talk, I will display an injective homomorphism of a universal analog Δ_q of Askey-Wilson algebras into $U_q(\mathfrak{sl}_2) \otimes U_q(\mathfrak{sl}_2) \otimes U_q(\mathfrak{sl}_2)$ behind the application. Moreover, I will give the decomposition rules for 3-fold tensor products of irreducible Verma $U_q(\mathfrak{sl}_2)$ -modules and of finite-dimensional irreducible $U_q(\mathfrak{sl}_2)$ -modules into the direct sums of finite-dimensional irreducible Δ_q -modules. On each irreducible component the defining generators of Δ_q act as a Leonard triple.