

Colloquium

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REPRESENTATIONS OF CLASSICAL LIE ALGEBRAS AND COMBINATORICS OF THEIR BRANCHING RULES

Friday, February 15, 2019
3:00 p.m. in ES-143
(tea & coffee at 2:00 p.m. in ES-152)

ABSTRACT. The theory of crystal basis provides a powerful tool to study combinatorial structure of representations of quantum groups. In this talk, we introduce a combinatorial model for irreducible characters of classical Lie algebras of type BCD, which is obtained by applying the crystal basis theory to higher level fermionic Fock space. As one of its applications, we explain how classical branching rules for irreducible characters of classical Lie groups in a stable range of highest weights, including the well-known Littlewood restriction rule, can be extended to arbitrary range in a bijective way.