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Leibniz
Universität
Hannover

Oberseminar zur Algebra und Algebraischen Kombinatorik

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„Discovering new hook length formulas via Littlewood decomposition“

Partitions of positive integers are widely studied in Combinatorics, Number Theory and Representation Theory. Motivated by the Nekrasov–Okounkov formula on hook lengths, Han conjectured a polynomiality property for a summation involving the hook lengths of partitions, which was generalized and proved by Stanley.

In this talk, the concept of t -difference operator for functions of partitions is introduced based on the Littlewood decomposition. As an application, we prove a generalization of Stanley's result. Actually, we set up a formal method to establish many new and classic hook length formulas for partitions, including the marked hook length formula, the Okada–Panova formula, and the Fujii–Kanno–Moriyama–Okada formula. Many new hook length formulas for bar partitions, self-conjugate partitions and double distinct partitions are also derived.

This work is joint with Prof. Guo–Niu Han (Strasbourg) and Prof. Paul–Olivier Dehaye (Zürich).

Dienstag, 09.02.2016
ab 14:15 Uhr, Raum a410
Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

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