Oberseminar
zur
Algebra und Algebraischen Kombinatorik

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„Kronecker coefficients, plethysm coefficients, and geometric complexity theory"

We discuss the connection between rectangular Kronecker coefficients and geometric complexity theory, an approach towards fundamental lower bounds questions in theoretical computer science. Interestingly this approach can be used to prove an inequality between rectangular Kronecker coefficients and plethysm coefficients. As our main Kronecker positivity result we disprove a key approach conjectured by Mulmuley and Sohoni. This is joint work with Greta Panova.

We prove that the computational hardness of deciding whether or not a Kronecker coefficient is positive is #P-hard and thus a polynomial time algorithm for this task can only exist if P=NP. From this perspective Kronecker coefficients differ greatly from the well-known Littlewood-Richardson coefficients, where positivity can be decided in polynomial time. This is joint work with Ketan Mulmuley and Michael Walter.

Montag, 28.11.2016
ab 14:00 Uhr, Raum a410
Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

Institut für Algebra, Zahlentheorie
und Diskrete Mathematik