

Otto-von-Guericke-Universität Magdeburg  
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

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über das Thema

## Proudfoot-Speyer degenerations of scattering equations

**Zeit:** Dienstag, 5. November 2024, 13.00 Uhr, G03-315

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Prof. Dr. Thomas Kahle

**Abstract:** We study scattering equations of hyperplane arrangements from the perspective of combinatorial commutative algebra and numerical algebraic geometry. We formulate the problem as linear equations on a reciprocal linear space and develop a degeneration-based homotopy algorithm for solving them. We investigate the Hilbert regularity of the corresponding homogeneous ideal and apply our methods to Cachazo-He-Yuan scattering equations. This is a joint work with Viktoriia Borovik and Simon Telen.