

Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

Herr Do Trong Hoang

(z. Z. Magdeburg)

über das Thema

The second power of the squarefree monomial ideals

Ort: Otto-von-Guericke-Universität Magdeburg, Gebäude 02, Raum 20

Zeit: Dienstag, 28. Mai 2019, 13.00 Uhr

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Prof. Dr. Thomas Kahle

Abstract: Let D be a simplicial complex over $[n] = \{1, \dots, n\}$. We associate to D the squarefree monomial ideal $I := I_D$ in the polynomial ring $R = k[x_1, \dots, x_n]$, with k a field. In this talk, we will give the characterizations for Cohen-Macaulayness as well as Serre (S2) property of I^2 . We will show that Cohen-Macaulay and (S2) properties are equivalent for the quadratic squarefree monomial ideals. An example of a squarefree monomial ideal I such that I^2 satisfies Serre condition (S2) but is not Cohen-Macaulay will be presented. This is joint recent work with Giancarlo Rinaldo (Trento, Italy) and Naoki Terai (Saga, Japan).