Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

Mario Bauer
(Universität Konstanz)

über das Thema

Chow ring of complete quadrics

Zeit: Dienstag, 2. Juli 2024, 13.00 Uhr, G02-210 oder
per Zoom Meeting ID 971 4945 5855, passcode 490213

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Dr. Julian Vill

Abstract: The *variety of complete quadrics* $CQ(V)$ over V, where V is a $\mathbb{C}$-vector space of finite dimension n, is defined as the Zariski-closure of the image of the rational map

$$f : \mathbb{P}(S^2 V) \dashrightarrow \mathbb{P}(S^2 V) \times \mathbb{P}\left(S^2\left(\overset{2}{\bigwedge} V\right)\right) \times \ldots \times \mathbb{P}\left(S^2\left(\overset{n-1}{\bigwedge} V\right)\right)$$

that sends a symmetric matrix to the collection of all its minors. $CQ(V)$ is a smooth, irreducible, projective variety of dimension $\frac{1}{2}(\dim(V)+1)\dim(V)$.
In this talk I'll show that the Lefschetz algebra $L^*(CQ(V))$ of $CQ(V)$, which is the subalgebra of the Chow Ring $A^*(X)_{\mathbb{Q}}$ generated by divisor classes, fails to have symmetric dimensions when $\dim(V)$ is 5 or 6, i.e. $\dim_{\mathbb{Q}}(L^k(CQ(V))) \neq \dim_{\mathbb{Q}}(L^{\dim(CQ(V))-k}(CQ(V)))$ in general.