

Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

Dr. Lorenzo Baldi
(Inria Paris)

über das Thema

Non-negative Polynomials on Real Plane Curves

Zeit: Donnerstag, 22. Juni 2023, 15.15 Uhr, G03-223 oder
per Zoom Meeting ID 971 4945 5855, passcode 490213

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Dr. Sebastian Debus

Abstract: The set of homogeneous polynomial (forms) which are non-negative on a given real projective variety form a convex cone. Motivated from the explicit description of this convex cone in the case of the projective line, we focus on the case of real projective plane curves.

We describe the correspondence between the faces of the convex cone of non-negative forms with effective divisors (i.e. collections of points in the curve, counted with multiplicity), and we then focus on the case of plane cubics C . We then provide explicit certificates of non-negativity on C (in the sense of Krivine-Stengle) for all the non-negative quadratic forms.

Based on an ongoing work with G. Blekherman and R. Sinn.