

# Einladung

In der Reihe „Chemnitzer Mathematisches Colloquium“ der Fakultät für Mathematik der TU Chemnitz spricht

**Herr Prof. Dr. Rainer Sinn (Universität Leipzig)**

über das Thema

## **Sums of Squares: Theory and Applications.**

Der Vortrag findet am

**Donnerstag, dem 22. Juni 2023, um 16:00 Uhr, im Raum 2/B202**

statt.

Ich möchte Sie hiermit recht herzlich zu dieser Veranstaltung einladen. Das Kolloquium wird von Herrn Prof. Dr. Christian Lehn geleitet.

### **Abstract:**

Recently, a new perspective arose in real algebraic geometry on a fundamental problem that led to the development of real algebra, the theory of ordered algebraic structures, in the first place: Hilbert's 17th Problem. It was one of the first to be solved by Artin, already in the 1920s. Connections to algebraic geometry have by now extended Hilbert's and Artin's work in new directions. Through the language of algebraic geometry, sums of squares include, in the combinatorial setup, positive semidefinite completion problems arising in discrete geometry and maximum likelihood estimation. I will explain some of the results and new developments with concrete examples and some history.

Prof. Dr. Daniel Potts  
Dekan

