Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Algebra und Geometrie spricht

Herr Lutz Warnke

(Georgia Institute of Technology)

über das Thema

The density of Costas arrays decays exponentially

Zoom-Koordinaten: Meeting ID: 951 9966 2620 / Passcode: 461614

Zeit: Dienstag, 6. Juli 2021, 14.00 Uhr

Zu diesem Vortrag laden wir alle Interessierten herzlich ein.

Dr. Yuri Santos Rego

Abstract: Costas arrays arise in radar and sonar engineering applications: formally they are simply permutation matrices in which the vectors joining different pairs of ones are all distinct. It is natural to ask how many Costas arrays there are, and we shall prove that the density of Costas arrays among permutation matrices decays exponentially. Perhaps surprisingly, the proof uses ideas from random graph theory and probabilistic combinatorics. The talk is aimed at a general audience. Based on joint work with Bill Correll, Jr (Maxar Technologies) and Christopher Swanson (Ashland University).