

Einladung

Würzburger Mathematisches Kolloquium

Julius-Maximilians-Universität Würzburg • Institut für Mathematik

Gábor Péter Nagy

University of Szeged, Hungary / Giovanni-Prodi-Gastprofessor in diesem Semester

Curves, Arcs and Codes over Finite Fields

Dienstag, 02. Dezember 2025 • 14:15 Uhr

Seminarraum SE41 • Humboldt-Bau (Emil-Fischer-Straße 41, 97074 Würzburg)

Der Vortrag wird auch als Zoom-Meeting übertragen: go.uni-wue.de/ifmcolloquium-zoom

Abstract. The Hermitian curve, defined by the equation $X^{q+1} = Y + Y^q$ over the finite field $\mathbb{F}_{q^2}$ with q^2 elements, occupies a prominent position in various areas of mathematics, including finite geometry, coding theory, and the study of higher-dimensional algebraic surfaces. This talk will provide an overview of some recent advances in three distinct areas related to the applications of Hermitian curves: the construction of (k, n) -arcs in Galois planes, the determination of parameters for 1-point Hermitian codes, and the development of hemisystems on the Hermitian surface in three-dimensional space. Rather than delving into technical proofs, our emphasis will be on explaining the underlying problems, their background, and the significance of these results.

