UNIVERSITY OF DELAWARE
DEPARTMENT OF MATHEMATICAL SCIENCES
DISCRETE MATHEMATICS SEMINAR

Monday October 11, 2004, 2.30pm, Room 203 Ewing Hall

Quasiregular collineation groups of projective planes of order a power of 2

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Quasiregular collineation groups provide a way to study projective planes. Dembowski and Piper classified all quasiregular collineation groups, listing a total of eight possibilities. These groups are equivalent to relative difference sets, a subject of independent interest. In this talk, we survey some of the connections between relative difference sets and quasiregular collineation groups, and we discuss some recent computer-generated examples that could lead to the first constructions in forty years.