Algebra and Number Theory Seminar

Title: Relative difference sets and APN functions

Speaker: Marc Roeder (NUI Galway)

Date: Mon 3rd November 2008 at 4:00PM

Location: Mathematical Sciences Seminar Room

Abstract: Relative difference sets (RDS) describe finite geometries with large automorphism groups. Difference sets are well studied and there are computational methods for constructing and (sometimes) classifying them. We will present a difference set construction corresponding to almost perfect non-linear (APN) functions and discuss the possibilities of gaining knowledge by translating problems from APN to RDS and back again.