

# BI-CO MATHEMATICS COLLOQUIUM

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*“Kloostermania in confined spaces”*

Monday, September 24, 2012

Talk at 4:00 – E309

Tea at 3:30 – KINSC Math Lounge, H208

**Abstract:**

Positive integers less than a given prime come in pairs of multiplicative inverses. Are these pairs correlated in some way or are they as random as possible? The answer to this and many other exciting questions is encoded in Kloosterman sums, an important class of complete exponential sums with connections ranging from prime numbers and multiplicative number theory to quadratic forms, number fields, Bessel functions, algebraic geometry, and spectral theory of automorphic forms. In this talk, we will meet and play with Kloosterman sums and also learn about a new result concerning the distribution of these sums when the modulus is confined to any prescribed congruence class.

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