Mathematics Department Colloquium

Organizer: Maciej Zworski

Thursday, 4:10–5:00pm, 60 Evans

Dec. 1 **Andrew Granville**, Université de Montréal

Character sums

Bounds on sums of Dirichlet characters are central to many of the key results and conjectures of analytic number theory; and generalizations of those bounds pertain in an analogous way to many of the analytic results and conjectures of arithmetic geometry. There are just three basic results in this area and they date back to 1919 (the Polya–Vinogradov Theorem), 1962 (Burgesss Theorem) and 1972 (the Bombieri–Vinogradov Theorem) without major improvements. In this lecture we review these results and then discuss recent developments due to Soundararajan and the speaker.