

The Mathematics Research Center
Distinguished Lecturer Series
presents

James Maynard

(Oxford University)



James Maynard received his PhD in 2013 from the University of Oxford under the supervision of Roger Heath-Brown and is currently a Fellow by Examination at Magdalen College, Oxford. James is primarily interested in classical number theory, in particular the distribution of prime numbers. His research focuses on using tools from analytic number theory, particularly sieve methods, to study primes. James has been appointed as a Clay Research Fellow for a term of three years beginning 1 July 2015.

Lecture 1: **Thursday, January 21-4:30pm in 380-W**
“The distribution of primes: Linear equations in primes”

Many of the most famous and most important questions on the distribution of primes can be cast as solving systems of linear equations with prime variables. The twin prime conjecture, Goldbach’s conjecture, k -term arithmetic progressions of primes, and most questions about small gaps between primes can all be seen in this manner, as well as several questions with applications to diophantine geometry or cryptography. We will describe some of the progress on these questions, with a particular emphasis on establishing weak forms of some of these questions which has led to new results on bounded gaps between primes and large gaps between primes, amongst other things.

(Reception at 3:30pm, before the talk, in the 4th floor lounge)

Lecture 2: **Tuesday, January 26-3:00pm in 384-H**
“The distribution of primes: Large gaps between primes”

Lecture 3: **Friday, January 29-3:00pm in 384-H**
“The distribution of primes: Prime values of polynomials”