1116-05-1512   **W Timothy Gowers***, Centre for Mathematical Sciences, Wilberforce Road, Cambridge, CB3 0WB, United Kingdom. *Quasirandom sets, quasirandom graphs, and applications.*

In this lecture I shall discuss a few applications of discrete Fourier analysis on finite Abelian groups. I shall also talk about quasirandom graphs, explaining what they are and why they are useful. The two topics are closely related, and I shall explain why. Finally, as a way of motivating certain generalizations of Fourier analysis to be discussed in the second and third lectures, I shall give examples of problems that do not yield to the basic technique discussed here. (Received September 20, 2015)