1036-11-147 **Henryk Iwaniec***, Department of Mathematics, 110 Frelinghuysen Rd, Piscataway, NJ 08854-8019. Recent trends and advances in sieve methods.

In this talk I will discuss new ideas and potential in modern sieve theory. In particular I will focus on implementations of harmonic analysis to sieve technology. Some applications to diophantine equations will be mentioned. (Received January 21, 2008)