

Appendix 2

MORNING LECTURES

E BOMBIERI

General weight functions in the linear sieve.
Arithmetical theory of G-functions.

P ERDOSⁿ

Unsolved problems.

C HOOLEY

Some problems of Waring's type.

L.-K. HUA and Y WANG

Applications in numerical analysis of diophantine approximation and uniform distribution in many dimensions.

H IWANIEC

The general setting of the combinatorial sieve of Rosser and the iterative sieve of Buchstab.
The bilinear form of the remainder term in the linear sieve.
Application to various questions about primes and almost-primes.

H MONTGOMERY

Squarefree numbers.
Bernstein's Inequality for finite intervals.
Size of the error term in the prime number theorem.

C.-d. PAN

A new mean value theorem and its applications.

S J PATTERSON

The distribution of general Gauss sums over prime arguments.

A SELBERG

Sixty years of sieve methods.
Results on the value distribution of zeta functions and similar functions.

W SCHMIDT

Diophantine inequalities for forms of odd degree.

(i) Modular functions

- A O L Atkin Modular functions and the Fischer-Griess monster.
- H Stark An analogue of the Mertens conjecture for Dirichlet series associated with cusp forms.
- W Li On a theorem of Hecke-Weil-Jacquet-Langlands.
- A Good Taylor coefficients of cusp forms at points within the upper half plane.

Two other talks (the titles of which I cannot trace) were given by Professors Terras and Vigneras.

(ii) Zeta function, Dirichlet L-functions and zero density theory

- D R Heath-Brown Mean values of the zeta function, and divisor problems.
- M Jutila Zeros of L-functions near the critical line.
- J Pintz Irregularities in the distribution of primes.
- D Wolke Almost primes in short intervals.
- S T Lou Zeros of the zeta function on the line $\sigma = \frac{1}{2}$.
- Y Motohashi Elementary proof of Vinogradov's zero-free region.
- K Ramachandra Some remarks on mean value theorems.
- R J Cook Sums of differences between consecutive primes.
- D J Newman Yet another proof of the prime number theorem.

(iii) Sieves

- H Diamond Iterative methods.
- Y Motohashi Latest form of Montgomery's sieve.
- G Greaves A weighted form of Brun's sieve.
- S Graham An upper bound weighted sieve.
- J Friedlander Selberg's formula for progressions.

(iv) General L-functions

- D Goldfeld Mean values of L-functions: applications to elliptic curves.
- H Joris Generalised Lerch series.
- A Odlyzko Unconditional bounds associated with the Čebotarev density theorem.
- D McQuillan Polynomial lattices and the Dedekind zeta function.

(v) Diophantine approximation

- G Halasz Roth's method in the theory of irregularities of distribution.
- R Tijdeman Some connections between diophantine approximation and analytic number theory.
- C Viola Applications of diophantine approximation to Fourier analysis.
- J Pitman Simultaneous pairs of diagonal inequalities.

(vi) Exponential and character sums

- R C Vaughan An elementary method in prime number theory.
- G Kolesnik Estimation of exponential sums in several variables.
- J H Mueller On the differences between consecutive primes.
- E Bombieri Exponential sums in finite fields.
- D R Heath-Brown Bounds for L-functions: a q-analogue of Van der Corput's method and a t-analogue of Burgess's method.

(vii) Miscellaneous analytic topics

- P Shiu A Brun-Titchmarsh theorem for multiplicative functions.
- P T Bateman Some applications of tauberian theorems of Delange.
- P Erdős On a conjecture of Newman-Erdős.
- M N Huxley The number of solutions of a congruence to a prime power modulus.

- R Pleasants The number of prime factors of binomial coefficients.
- E Wirsing Characterising the logarithm.
- I Katai A characterisation of the logarithm of n .
- A O L Atkin Some amateur reflections on primality and factorization.
- K.-H. Indlekofer Limiting distributions and mean values of multiplicative functions.
- W Schwarz Remarks on Elliott's theorem on mean values of multiplicative functions.
- J.-M. Deshouillers Distribution of $\theta^n \pmod{\mathbb{F}_q[x]}$ for some rationals θ in $\mathbb{F}_q\{x^{-1}\}$.
- G Tenenbaum Distribution of divisors.