Durham Symposium: Geometry and Physics

11-21 July

Wednesday, 11 July

R. Penrose — Space-time structure: old problems and new developments

J. Charap — Particles and gauge fields - an introductory survey

Thursday, 12 July

E. T. Newman — Space-time asymptotics and self-dual complex vacuums

S. Coleman — Renormalization

C. J. Isham — Curved space and quantum field theory

Friday, 13 July

D. Olive — Magnetic monopoles

J. G. Glimm — Statistical mechanics and quantum field theory: an elementary introduction

S. W. Hawking — Space-time foam

Saturday, 14 July

G. 't Hooft — Quantization of gauge theories

S. S. Chern — Characteristic classes

Monday, 16 July

G. B. Segal — 2-dimensional quantum field theories

H. Osborn — CP^n-models

M. F. Atiyah — Instantons and topology

Tuesday, 17 July

A. Jaffe — Renormalization

S. Coleman — Spontaneous symmetry breaking

W. Nahm — The Macdonald identities

Wednesday, 18 July

I. M. Singer   Functional determinants

R. Penrose   Elementary twistor theory

G. Sparling   Mass and the conformal group

Thursday, 19 July

R. Jackiw   Classical Yang-Mills equations

G. W. Gibbons   Gravitational instantons: a survey

M. F. Atiyah
N. J. Christ   }   The index theorem in Minkowski space
G. W. Gibbons

Friday, 20 July

L. O'Raifeartaigh   The Weinberg-Salam model

I. T. Todorov   A new approach to flavour

P. Goddard   Multi-instanton determinants

Seminar sessions included:

G. 't Hooft   Current problems in gauge theories

S. S. Chern   Bäcklund transformations

M. F. Atiyah   Green's functions for self-dual metrics