

THE ROYAL COMMISSION ON HISTORICAL MANUSCRIPTS

Report on correspondence and papers of

HAROLD DAVENPORT

(1907-1969)

mathematician

deposited in the library of
Trinity College, Cambridge

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CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

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Catalogue of the papers and correspondence of

HAROLD DAVENPORT FRS

(1907 - 1969)

Compiled by:

Jeannine Alton

Peter Harper

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Deposited in the Library of Trinity College, Cambridge

1986

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| LIST OF CONTENTS | | <u>Items</u> | <u>Page</u> |
|-------------------------|--|--------------|-------------|
| GENERAL INTRODUCTION | | | 4 |
| SECTION A | BIOGRAPHICAL AND PERSONAL | A.1 - A.137 | 8 |
| SECTION B | SCHOOL AND UNIVERSITY NOTEBOOKS AND LECTURE NOTES | B.1 - B.92 | 21 |
| SECTION C | LECTURES AND ADDRESSES | C.1 - C.193 | 31 |
| SECTION D | PUBLICATIONS | D.1 - D.213 | 55 |
| | Introduction to Section D | | |
| SECTION E | RESEARCH NOTES AND DRAFTS | E.1 - E.135 | 78 |
| SECTION F | FACULTY OF MATHEMATICS, CAMBRIDGE | F.1 - F.17 | 92 |
| SECTION G | CORRESPONDENCE | G.1 - G.373 | 95 |
| | Introduction to Section G | | |
| BIBLIOGRAPHY | | | 125 |
| INDEX OF CORRESPONDENTS | | | 131 |

GENERAL INTRODUCTION

PROVENANCE

The material was received from Mrs. Davenport at various dates 1983 - 84. A little additional material was received from Professor B. J. Birch in 1986.

OUTLINE OF THE CAREER OF HAROLD DAVENPORT

Davenport was born and educated in Accrington, where his gifts for mathematics and chemistry were early recognised. At the age of sixteen he was awarded scholarships to attend Manchester University (1924 - 27) winning first-class honours and the respect of such tutors as L. J. Mordell and E. A. Milne. The latter encouraged him to enter for a scholarship at Trinity College Cambridge, where he read for the Tripos (1927 - 29), began research with J. E. Littlewood, won a Rayleigh Prize (1931) and a Trinity Fellowship (1932 - 37). Another important event of this period was Davenport's acceptance of an invitation by H. Hasse to stay with him in Marburg, a visit which enabled Davenport to meet several distinguished German mathematicians and to learn the language thoroughly. His first university post was a return to Manchester as Assistant Lecturer (1937 - 41) and in 1941 he was appointed to his first Chair at University College of North Wales, Bangor. In 1945 Davenport, who had married Anne Lofthouse in 1944, moved to University College London as Astor Professor. His first American visit, to Stanford in 1947 - 48, occurred during the London period and was followed by many later transatlantic journeys of varying duration. It was also from the Mathematics Department of University College that Davenport launched the new journal Mathematika (1953). In 1958 he was elected Rouse Ball Professor of Mathematics and Fellow of Trinity College, Cambridge, where he died in 1969.

DESCRIPTION OF THE COLLECTION

The collection, which is substantial, covers most aspects of Davenport's life and work. Less fully represented are his extensive travels for visits and conferences (which can sometimes only be deduced from a jotted heading on a lecture script) and his work for the London Mathematical Society. His contributions to his subject, as

student, teacher, writer and researcher, are however very well documented and the collection as a whole is of pedagogical interest.

Section A (Biographical and personal) includes Davenport's own unpublished reminiscences and reflections on his life's work, made shortly before his death with the assistance of his wife and his colleague - D.J. Lewis (A.8 - A.10). Other documentation on his career includes, unusually, his examination scripts and marks awarded at Manchester University in 1927, preserved by his principal tutor, L.J. Mordell (A.30, A.31).

Section B (School and university notebooks and lecture notes) is an interesting record of the state of the art in mathematical teaching at Manchester 1924 - 27 (B.23 - B.54) and Cambridge 1927 - 32 (B.55 - B.92), comprising as it does notes, carefully taken and carefully preserved by Davenport, of lecture courses, class work and exercises.

Section C (Lectures and addresses) is a substantial section representing Davenport's own contribution to the teaching of mathematics from the 1930s as a Research Fellow in Cambridge through his various university appointments and invitation lectures abroad, including the lectures at Michigan, later published in book form (C.115 - C.124). Several of these contain sets of problems and solutions, and some examination material. On a less technical note is the address given in 1947 at Accrington Grammar School, Davenport's old school (C.131). Conversely, a new generation in the filiation of mathematics is represented by the notes on Davenport's lectures at London in 1946 made by C.A. Rogers, his research student, collaborator and eventual successor in 1958 as Astor Professor (C.167).

Section D (Publications) includes drafts, sometimes accompanied by correspondence with collaborators (see especially D.110-D.120) or publishers, for Davenport's many papers. These have been linked wherever possible to the numbered list in the Bibliography appended to the Royal Society Memoir by C.A. Rogers and others (Biographical Memoirs of Fellows of the Royal Society, 17, 1971); a copy of the Bibliography is reproduced with permission on pp. 125-130.

In addition, there is considerable material relating to work not listed in the official bibliography; this includes Davenport's books on The higher arithmetic (D.89 - D.92) and Multiplicative number theory (D.170 - D.182), book reviews (D.208), unpublished work (D.201 - D.203) and a posthumous publication (D.207).

Section E (Research notes and drafts) is so titled for convenience only. It contains a variety of material: paginated narrative sequences perhaps intended for lectures or papers, notes and calculations often on problems arising from work by others, and miscellaneous shorter unidentified notes. There is in consequence some potential overlap with other sections, notably C and D. Of interest is the collaborative work with Helmut Hasse arising from Davenport's period in Marburg (E.1 - E.15). There are also Davenport's notes of lectures and talks by others (E.103 - E.126) which include mathematicians of an older generation (K. Mahler, L.J. Mordell, C.L. Siegel), friends and contemporaries (P. Erdős, H.A. Heilbronn), pupils and successors (B.J. Birch, J.W.S. Cassels, C.A. Rogers, K.F. Roth). Another interesting link in the pedagogic chain is J.E. Littlewood's extended list of 'Research Problems' and Davenport's 'Comments' (E.131)

Section F (Faculty of Mathematics, Cambridge) is relatively scanty but includes a little material on research, examinations and the newly-created Department of Applied Mathematics and Theoretical Physics.

Section G. (Correspondence) contains several substantial sequences, though the general practice of longhand correspondence often produces tantalising gaps. Once again, Davenport's links as student, teacher and collaborator with several generations can be traced. Early correspondence with E.A. Milne (G.206) and L.J. Mordell (G.208) show their recognition and fostering of Davenport's talent, and that with E. Bombieri (G.28 - G.39), D.J. Lewis (G.175 - G.184) and C.A. Rogers (G.268 - G.278), among many others, indicate his continuing contributions.

Special mention must be made of Davenport's close connection with German mathematicians, several of whom he met during his early visits to Marburg and elsewhere and whom he helped and encouraged when they were forced to emigrate. Correspondence with H.A. Heilbronn (G.123 - G.142), H. Kober (G.165), K. Mahler (G.194 - G.201), R. Rado (G.257) may be cited as examples. There is also correspondence with H. Hasse (G.116 - G.122) who remained in Germany. Davenport's command of the language is evident both in the correspondence and in the drafts for lectures and papers elsewhere in the collection.

ACKNOWLEDGEMENTS

We are especially grateful to Mrs. Anne Davenport for her initial work in assembling the material and making it available, for invaluable provision of notes and information, for her instant recall of names, facts or handwriting, and for her unfailing help and encouragement throughout the compilation of this catalogue.

We gratefully acknowledge the help of Professor B. J. Birch in providing information and identifying documents, and in making available his own collaborative correspondence with Davenport as well as material on posthumous publications and the Royal Society Memoir.

Oxford 1986

Jeannine Alton
Peter Harper
Margaret Erskine

SECTION A BIOGRAPHICAL AND PERSONAL A.1 - A.137

| | |
|-------------|----------------------------|
| A.1 -A.7 | Obituaries and tributes |
| A.8 -A.14 | Autobiographical writings |
| A.15 -A.91 | Career, honours and awards |
| A.92 -A.129 | Diaries |
| A.130-A.132 | Miscellaneous items |
| A.133-A.137 | Photographs |

A.1-A.7 OBITUARIES AND TRIBUTES

- A.1 Obituary from The Times, 10 June 1969; additional tribute by L. J. Mordell, ibid., 19 June 1969.
- A.2 Entry for Who's Who in Europe, sent by publishers for correction; received after Davenport's death.
- A.3 Tributes by L. J. Mordell and by C. A. Rogers (reprints from Acta Arithmetica, 1971).
- A.4 Correspondence and material relating to Memoir of Davenport by C. A. Rogers, D. A. Burgess, H. Halberstam and B. J. Birch (Biographical Memoirs of Fellows of the Royal Society, 17, 1971).

Includes 2pp. plan allocating work between collaborators, correspondence, drafts of various sections of Memoir.
- A.5 Reprint of Memoir.

Reprint of revised version of above for Bulletin of the London Mathematical Society, 4 (1972).
- A.6 H. Halberstam's entry for Davenport for Dictionary of National Biography, 1961-70.

1p. photocopy giving reference to Davenport from T. E. B. Howarth's 'Cambridge between Two Wars'.

Biographical and personal

- A.7 Typescript biographical notes made by Mrs. Davenport after her husband's death, in the form of chronological lists, as follows:
- Visits made by German, and other, mathematicians from 1933 onwards, initially at Davenport's rooms in Trinity College, Cambridge.
- Visits to conferences, foreign universities and institutions, 1931-68.
- Students supervised by Davenport at Cambridge, 1959-69.
-
- A.8-A.14 AUTOBIOGRAPHICAL WRITINGS
- Davenport, although very ill, made notes on his early life and his work, with the assistance of his wife and D.J. Lewis, in 1969; he died in June of that year (see Memoir, p.165). The reminiscences can be found at A.8-A.10.
- Some, probably earlier, ms. notes on his career survive, as well as notes on his impressions of America and some humorous writings.
- A.8 'Reminiscences'
- Ms. draft of account of his own career in mathematics. The latest reference is 1958.
- A.9 'Reminiscences of Harold Davenport, dictated to A.D.'
- Typescript made by Mrs. Davenport of her husband's account of his early life to 1929, with reference to his childhood, family background and his undergraduate days at Manchester.
- A.10 Typescript of Davenport's comments on his own published papers, 1-120 (see Bibliography), dictated to his wife and D.J. Lewis, 1969.
- A.11 4pp. miscellaneous ms. autobiographical notes, n.d.
- A.12 Typescript notes re impressions of American institutions, from visit of 1947-48.
- A.13 'Come to Russia', 1966.
- 2pp. ms., humorously describing the fate of the tourist in Moscow. prompted by visit to a conference there, September 1966.

Biographical and personal

- A.14 Ms. notes, made on file-cards, redefining certain concepts, such as 'inflation' and 'education', n.d.
- Davenport's letter to Editor of The Times re 'inflation', 1968.
Cutting only.
- 1p. ms. list of non-mathematical quotations, possibly for use in speeches.
-
- A.15-A.91 CAREER, HONOURS AND AWARDS
- SCHOOL CAREER, 1917-24
- A.15-A.18 Accrington Grammar School (until 1921, The Municipal Secondary School), termly reports 1917-24.
- A.15 December 1917-July 1919 A.17 July 1921-December 1922
- A.16 December 1919-April 1921 A.18 March 1923-July 1924
-
- A.19 Two letters from Lancashire Education Committee, 1920, re 'Open Junior Exhibitions', one of which was awarded to Davenport.
-
- A.20-A.23 Educational certificates, 1922-24, issued by Joint Matriculation Board.
- A.20 'List of Successful Candidates, School Certificate Examination, July 1922'.
- A.21 School Certificate, July 1922.
- A.22 Matriculation Certificate, July 1922.
- A.23 Higher School Certificate, July 1924.
(See A.27 for questions papers.)

Biographical and personal

- A.24 Letters from headmaster, 1924, 1927.
Letter from old school friend, signed Bottomley, 1934.
- A.25 Invitation to the 'Prize Distribution', 1947, at which Davenport gave the address (for text see C.131).
Also included here is local newspaper with report.

THE VICTORIA UNIVERSITY OF MANCHESTER, 1924-27

- A.26 Letters to Davenport re various scholarships, from the University and Lancashire Education Committee, 1924.
- A.27-A.29 Examination papers taken by Davenport, 1924-26.
- A.27 Entrance Scholarships, May 1924.
Higher School Certificate Examination, July 1924. See also A.23.
- A.28 Honours School of Mathematics, Part I, May 1925.
'Christmas Terminal Examinations', December 1925.
- A.29 Honours School of Mathematics, Part II, May 1926.
- A.30, A.31 Two examination scripts written by Davenport for the Honours School of Mathematics, Part III, May 1927, set, marked and preserved by L. J. Mordell, who sent them to Mrs. Davenport in 1971.
Covering note (A.30), gives names of other examiners, Bailey, Milne and Chapman, which papers they set and Davenport's marks for each.
- A.32 Degree Day programme, July 1927. See also A.134, A.135.

Biographical and personal

TRINITY COLLEGE, CAMBRIDGE, 1927-36

Davenport was an Affiliated Student, 1927-29, taking a second 'first' degree, and in 1932 was awarded a research fellowship.

- A.33 Correspondence from Trinity College, 1926-29, re scholarship, status as an Affiliated Student, award of exhibition and the Walker Prize (1929).
- A.34 Letter from the Victoria University of Manchester, July 1927, re scholarship and other arrangements.
- A.35 Trinity College classlists, 1928; inter-college examination paper, n.d.; ms. note of 'May Marks'; battels bill for Michaelmas Term, 1929.
- A.36 'The continuation of analytic functions', 1928.
Ms. of essay submitted by Davenport for Yeats and Rouse Ball Prizes.
- A.37 Dissertation submitted for a fellowship, 1932.
Typescript only, in three parts.
- A.38 Three letters of congratulation, 1929 and n.d., on Cambridge successes, including two from former mathematics mistress, A. Heap (see Memoir, p.159).
- A.39 Telegram announcing election to fellowship at Trinity, 1932; letters and telegrams of congratulation.
- A.40 M.A. certificate, Cambridge, 1933.
- A.41 Note from J.J. Thomson, 1936, re weekend visit to 'Christ-Church', asking Davenport 'to represent the College'.
Also included are two notes re mathematical problems from J.E. Littlewood, n.d. (see Memoir, p.160).

Biographical and personal

- A.42 Application for academic post (possibly assistant lectureship at Manchester), 1936.
- Ms. and typescripts of testimonials by G.H. Hardy, and typescript testimonial by A.S. Besicovitch.
- Typescript curriculum vitae and bibliography.

UNIVERSITY OF MANCHESTER, 1937-41

'On the expiry of his Trinity Fellowship in 1937, Davenport was appointed by Mordell to an Assistant Lectureship in Manchester' (Memoir, p.161).

- A.43 'Conditions of Appointment' for post of assistant lecturer, 1937.
- Announcement of appointment, n.d. (press-cutting only).
- A.44 Sc.D. certificate, Cambridge, 1938.
- A.45 Letter of application for Chair of Mathematics, University of Durham, 1939, with bibliography.
- A.46-A.49 Fellowship of Royal Society, 1940.
- A.46 Receipts from Royal Society for fees.
- A.47-A.49 Letters of congratulation.
- A.47 A - G A.49 O - T, and first names only
- A.48 H - N

Biographical and personal

- A.50 Recommendation by L.J. Mordell to promote Davenport to Lecturer, n.d., probably 1941.

Letter announcing re-appointment as Assistant Lecturer, 1941.

- A.51 Letter of congratulation on award of Adams Prize of University of Cambridge, 1941.

See also D.5-D.15.

UNIVERSITY COLLEGE OF NORTH WALES, BANGOR, 1941-45

- A.52 Application for Chair of Mathematics, U.C.N.W., 1941

Ms. and typescripts of testimonials from G.H. Hardy and L.J. Mordell, brief curriculum vitae and covering letter.

'Memorandum' re terms of engagement.

Folder includes 1941 bibliography found with this application.

- A.53 Correspondence from Principal, U.C.N.W., re appointment, July, September 1941.

Four letters of congratulation.

- A.54 Letter of thanks from D.R. Pye, Director of Scientific Research, Ministry of Aircraft Production, 1942, to Davenport and staff at Bangor, re 'the bomb ballistic computations'.

- A.55 Three letters from Vice-Chancellor, University of Manchester, November 1944-February 1945, re possibility of Davenport's succeeding L. J. Mordell as Fielden Professor of Pure Mathematics.

Biographical and personal

- A.56 Correspondence, chiefly from D.R. Pye and G.B. Jeffery, University College London, December 1944-April 1945, re appointment to Astor Chair of Mathematics.

The letters run from the initial approach to Davenport to his formal appointment. Davenport declined the possibility of the Manchester post (A.55) in favour of London.

- A.57 Letters of congratulation on appointment to Astor Chair.

- A.58 Invitation to Davenports to attend farewell dinner given by colleagues at U.C.N.W., June 1945.

2pp. ms. speech, probably given at the dinner, by Davenport.

UNIVERSITY COLLEGE, LONDON, 1945-58

See A.56, A.57 for correspondence re appointment and congratulatory letters.

- A.59 Typescript outline of mathematics teaching at University College for 1945-46.

Invitation to Davenport's inaugural lecture 'The Geometry of Numbers', 6 June 1946. See C.164.

- A.60 Letter from Stanford University, 1947, inviting Davenport to go as Visiting Professor for academic year 1947-48

Letter accompanying cheque for Berwick Prize of the London Mathematical Society, 1954.

Letter inviting Davenport to accept Presidency of the London Mathematical Society, 1957.

Biographical and personal

ROUSE BALL CHAIR OF MATHEMATICS, UNIVERSITY OF
CAMBRIDGE, 1958-69

See Section F for other material on Cambridge and the Faculty of
Mathematics.

A.61 Brief correspondence re appointment, December 1957-February 1958.

A.62-A.66 Letters of congratulation:

A.62 A - C

A.65 P - R

A.63 D - J

A.66 S - W and unidentified

A.64 L - O

A.67 5pp. ms. of speech given by Davenport at 'Presentation' to him,
18 June 1958, at University College, London.

THE ROYAL SOCIETY'S SYLVESTER MEDAL, 1967

A.68 Letters from Royal Society informing Davenport of the award, inviting
him to attend Anniversary Meeting to receive medal and to Anniversary
Dinner, November 1967; invitation cards.

A.69 Menu and seating plan of 1967 Anniversary Dinner.

A.70-A.72 Letters of congratulation:

A.70 A - H

A.72 First names and unidentified

A.71 M - T

A.73 Letter inviting Davenports to Midsummer Banquet of Lord
Mayor of London, 1968.

Biographical and personal

- A.74, A.75 Honorary D.Sc., Nottingham, 1968.
- A.74 Correspondence re arrangements, etc., programme,
lunch menu.
- A.75 Press-cuttings.

DAVENPORT'S DEATH

After a period of illness following the removal of a lung, Davenport died on 9 June 1969. (Memoir, p.165.)

- A.76-A.89 Letters of condolence:
- | | | | |
|------|-------|------|--------------|
| A.76 | A | A.83 | M, O |
| A.77 | B | A.84 | P |
| A.78 | C | A.85 | Q, R |
| A.79 | D | A.86 | S |
| A.80 | E - G | A.87 | T, V |
| A.81 | H | A.88 | W |
| A.82 | J - L | A.89 | Unidentified |

- A.90 Material re Memorial Service, Trinity College, and London Mathematical Society Memorial Meeting.

- A.91 Scrapbook, containing almost exclusively newspaper cuttings re Davenport's career, 1924-1969. The cuttings include some non-mathematical items, such as reports on Accrington Grammar School prize-giving ceremonies. Some loose items.

Biographical and personal

DIARIES, 1924-69

These are all small pocket diaries, mainly university diaries covering the academic year, used chiefly to record appointments and addresses.

| | | | |
|-------|---------|-------|---------|
| A.92 | 1924 | A.95 | 1927-28 |
| A.93 | 1924-25 | A.96 | 1928-29 |
| A.94 | 1925-26 | | |
| A.97 | 1932-33 | A.100 | 1935-36 |
| A.98 | 1933-34 | A.101 | 1939 |
| A.99 | 1934-35 | | |
| A.102 | 1942 | A.106 | 1945-46 |
| A.103 | 1943 | A.107 | 1946-47 |
| A.104 | 1944 | A.108 | 1949 |
| A.105 | 1945 | A.109 | 1950 |
| A.110 | 1951 | A.115 | 1955-56 |
| A.111 | 1952 | A.116 | 1956-57 |
| A.112 | 1953 | A.117 | 1957-58 |
| A.113 | 1953-54 | A.118 | 1958-59 |
| A.114 | 1954-55 | A.119 | 1959-60 |
| A.120 | 1960-61 | A.125 | 1965-66 |
| A.121 | 1961-62 | A.126 | 1966-67 |
| A.122 | 1962-63 | A.127 | 1967-68 |
| A.123 | 1963-64 | A.128 | 1968-69 |
| A.124 | 1964-65 | A.129 | 1968-69 |

Biographical and personal

MISCELLANEOUS ITEMS

- A.130 2pp. typescript note of German and Italian mathematicians, listed according to whether they left or remained in their posts before and during World War II, and their political bias. n.d.
- The first category, 'German refugee mathematicians', including G. Szegő and H. Heilbronn, gives names, subject speciality, former posts and present whereabouts. Davenport states that all were anti-Nazis.
- The second category, 'Mathematicians who stayed in Germany', gives name, pre-war post and extent to which individual was involved in Nazi regime. The third category is 'Collaborators'.
- The fourth category, 'Italian mathematicians', from information given by B. Segre (Manchester), gives a list of mathematicians 'dismissed by the Fascists in 1938' and another of anti-fascist mathematicians.
- See Memoir, p.161.
- A.131 Letter from Secretary of English Speaking Union, 1958, thanking Davenport for suggesting possible members of a selection committee.
- Letter from Union Mathématique Internationale, 1964, asking Davenport to serve on committee to choose candidates for Fields medals in 1966.
- A.132 Postcards sent by friends and colleagues living or visiting abroad, 1948-69. Not indexed.

Biographical and personal

A.133-A.137 PHOTOGRAPHS

- A.133 Photographs of Davenport, 1911-1968.
One print (c.1920) shows Davenport with his sister and 'Marion'.
- A.134, A.135 Graduation, Victoria University of Manchester, 1927.
- A.134 Two portrait photographs of Davenport.
- A.135 Mounted group photograph, probably of mathematics graduates.
- A.136 Miscellaneous group photographs, all including Davenport.
Includes one print of Davenport, P. Erdős and L. J. Mordell (n.d.), one of 'Professor Mordell's Seminar' (1938) and one of Davenport, Besicovitch and Littlewood (1967).
- A.137 International Congress of Mathematicians, Harvard conference, 1950.
Group photograph.

SECTION B SCHOOL AND UNIVERSITY NOTEBOOKS AND LECTURE
NOTES B.1 - B.92

- B.1 -B.22 ACCRINGTON GRAMMAR SCHOOL, 1921-24
- B.23-B.54 THE VICTORIA UNIVERSITY OF MANCHESTER, 1924-27
- Notebooks
- Lecture and class notes
- B.55-B.92 TRINITY COLLEGE, CAMBRIDGE, 1927-32
- Notebooks
- Lecture notes

B.1-B.22 ACCRINGTON GRAMMAR SCHOOL, 1921-24

With one exception (B.22), these notebooks contain Davenport's notes and diagrams on physics, chemistry and mathematics, presumably work for the School Certificate (B.1, B.2) and the Higher School Certificate (B.3-B.17), although several are undated. Only B.22 shows Davenport's non-mathematical interests, containing extracts from various writers and drafts of two speeches, possibly delivered to a school debating society. For Davenport's school reports 1919-1924 see A.15-A.18.

- B.1 'Chemistry', dated 14 September 1920.
- B.2 'Physics Notebook', dated 14 September.
- B.3 'Practical Chemistry', dated September 1922.
- B.4 'Practical Physics', dated September 1922.
- B.5 'Inorganic Chemistry [1]', dated September 1922.
- B.6 'Inorganic Chemistry [2]', dated February 1923.
- B.7 'Physics [1]', dated September 1922.
- B.8 'Physics [2]', dated March 1923.

School and university notebooks and lecture notes

- B.9 'Physics', n.d., probably 1923.
- B.10 'Practical Organic Chemistry', dated April 1923.
- B.11 'Physical Chemistry', n.d., perhaps 1922-23.
- B.12 'Light', dated September 1923.
- B.13 'Organic Chemistry [1]', dated September 1923.
- B.14 'Organic Chemistry [2]', n.d., perhaps 1923-24.
- B.15 'Physics'; first entry dated 14 September 1923.
- B.16 Untitled notebook containing physics theorems, n.d., perhaps 1923-24.
- B.17 'Mathematical Problems', n.d.
Some loose enclosures, one dated March 1924.
- B.18 'Hydrostatics &c.', n.d.
- B.19 'Chemistry Notes', n.d.
- B.20 'Mathematics', n.d.
Davenport's Accrington address (inside front cover) replaced by address in Manchester.
- B.21 Untitled notebook, n.d., containing mathematical problems.
- B.22 'Extracts from various writers', n.d.
Two loose enclosures: ms. drafts of speeches 'Should Capital Punishment be Abolished?' and re question 'whether Science or Art contributes the more to civilisation'.

School and university notebooks and lecture notes

B.23-B.54 THE VICTORIA UNIVERSITY OF MANCHESTER, 1924-27

B.23-B.30 NOTEBOOKS

These hard-back notebooks have been arranged by the covering titles with which Davenport labelled them; only two, B.24 and B.29, can be dated (1924-25 and 1925-26 respectively). None are indexed and only two are paginated (B.29, B.30).

B.23 'Mathematics IVa'.

B.24 'Mathematics IVb'.

Note on inside front cover: '1st year BSc Hons. Maths Notes'.

B.25 'Maths. Va'.

B.26 'Maths. Vb'.

B.27 'Maths. Vb (continued)'.

B.28 'Applied Mathematics B'.

B.29 'Applied Maths. D'.

Note on inside front cover: 'Second year BSc. Honours Maths notes'.

B.30 'Applied Maths D (cont'd)'.

School and university notebooks and lecture notes

B.31-B.54 LECTURE AND CLASS NOTES

These are loose ms. pages of notes on the literature, notes on lecture courses and class work and exercises by Davenport. Many bear an indication of the course number, or of the person giving the lectures and/or supervising the work. The material was kept in bulky wallet folders labelled by Davenport; the contents have been removed and where appropriate preserved in more than one folder for ease of reference. The original folders are at B.54.

See B.85-B.87 for notes originally made at Manchester and subsequently used at Cambridge.

B.31, B.32 'Misc. notes & exs. (Lamb &c) 1925-6'.

Contents of a folder so inscribed.

B.31 Ms. notes, mainly on Strings, some headed 'Routh', some dated 1925, 1926.

B.32 Extensive sequence of notes, all headed 'Lamb'.

B.33-B.35 'Exs. 1926-7 and misc.notes 1925-6'.

Contents of a folder so inscribed.

B.33 Ms. notes, all headed 'Maths VI b', all dated October 1926-May 1927.

B.34 Ms. notes, variously titled, including 'Study of Certain Transformations. Duporcq Chap. VI' and 'Quadrics'.

B.35 Ms. notes, variously titled, including 'Higher Geometry', and two paginated sequences: 'Real Numbers' (1-5) and 'Infinite Sequences of Real Numbers' (1-4).

B.36, B.37 'Summarised notes real var. & exs. VI a 1926-7'.

Contents of a folder so inscribed.

B.36 Ms. notes, variously titled, chiefly on integrals and series, some dated 1927.

B.37 Ms. notes, all headed 'Maths VI a', all dated October 1926-May 1927.

School and university notebooks and lecture notes

- B.38, B.39 'Tensor & potential theory 1926-7'.
Contents of a folder so inscribed.
- B.38 Ms. notes on tensors and vectors.
- B.39 Ms. notes, some on 'sources and doublets', some on motion.
Includes sequence labelled 'Applied Maths E', dated October 1926-
March 1927.
- B.40-B.43 'Dynamics 1926-7'.
Contents of a folder so inscribed.
- B.40 Ms. notes, chiefly on motion of a rigid body.
- B.41, B.42 Extensive sequence of notes on various dynamics topics.
- B.43 Sequence of notes labelled 'Applied Maths E', dated
October 1926-May 1927.
Several pages have tutors' comments (two hands); work of 31 January
1927 includes separate page of comments.
- B.44, B.45 'Hydrodynamics & elasticity 1926-7'.
Contents of a folder so inscribed.
- B.44 Ms. notes, on strain and wave motion.
- B.45 Ms. notes, on potential theory and ellipsoids, with
sequence of notes labelled 'Applied Maths E', dated October 1926-
April 1927; several pages marked by tutor, with occasional comment.
- B.46, B.47 'Differential geometry 1926-7'.
Contents of a folder so inscribed.
Extensive sequence of notes on various aspects of topic, variously
sub-titled, including 'Conditions for a helix' and 'Developable Surfaces'.
- B.48, B.49 'Complex variable notes 1926-7'.
Contents of a folder so inscribed.
- B.48 Extensive sequence of notes, variously sub-titled, including
'Complex numbers'.
- B.49 Sequence of notes entitled 'Complex Integration'.

School and university notebooks and lecture notes

- B.50, B.51 'Real variable notes 1926-7'.
Contents of a folder so inscribed.
- B.50 Extensive sequence of notes, headed 'Mathematics VI a',
variously sub-titled, including 'Infinite Series' and 'Uniform Con-
vergence of Infinite Products'.
- B.51 Three sequences of notes: 'Integrals with parameters',
'Fourier Series' and 'Double Integrals'.
- B.52, B.53 'Differential eqns. 1927'.
Contents of a folder so inscribed.
- B.52 Two sequences of notes: 'Differential Equations' and
'Elliptic Functions'.
- B.53 Extensive sequence of notes entitled: 'Differential Equations',
variously sub-titled, including 'Properties of Legendre's Polynomials'
and 'Solution of eqns. by definite integrals'.
- B.54 Davenport's original folders from B.31-B.53.

School and university notebooks and lecture notes

B.55-B.92 TRINITY COLLEGE, CAMBRIDGE, 1927-32

B.55-B.64 NOTEBOOKS

These hard-back notebooks, excepting B.63, B.64, all contain lecture notes. Davenport usually labelled the fly-leaves with the name of the lecturer, the subject of the course, and the date. These labels are used here, and his descriptions are preserved in the entries.

B.63 and B.64 are exceptions as they are without identification, but it is probable that they come from this period in Davenport's career.

B.55 'Mr. Pollard Aggregates and functions. Theory of Integration. Systems of orthogonal functions. 1927-8'.

S. Pollard was Davenport's Director of Studies for pure mathematics. See Memoir, pp.159-60.

B.56 'Mr. White 1927-8'.

B.57 'Mr. Besicovitch 1927-8. Measurability and the theory of measurable sets. Almost periodic functions'.

A.S. Besicovitch was Davenport's Director of Studies for pure mathematics. See Memoir, pp.159-60.

B.58 'Combination of observations. Prof. Eddington Michaelmas Term 1928'.

B.59 'Fourier's series and other representations of functions Prof. Hobson. Michaelmas Term 1928'.

B.60 'General Dynamics Mr. Pars. Jesus. Michaelmas Term 1928'.

B.61 'Mr. Steen. Classical Theory of Numbers. Lent Term 1928'.

B.62 'Binary forms. Dr. A. Young 1928-29'.

18pp. misc. ms. notes enclosed.

B.63, B.64 Two untitled notebooks, n.d., probably from Davenport's period as undergraduate in Cambridge.

School and university notebooks and lecture notes

B.65-B.92 LECTURE NOTES, ETC.

These are loose ms. pages of notes, chiefly of lectures attended by Davenport. Usually they bear the name of the lecturer and the title of the course, and some are dated. The material was kept in wallet folders labelled by Davenport; the contents have been removed and, where appropriate, preserved in more than one folder for ease of reference. The original folders are at B.89.

B.80-B.84 are not lecture notes but were probably compiled from textbooks, while B.85-B.87 were probably originally made at Manchester and brought by Davenport to Cambridge for reference.

B.65-B.72, B.78-B.84 are dated; the other notes are not, although they are probably of the 1927-29 Cambridge period.

B.90-B.92 are lecture, and other, notes from Davenport's post-graduate period, 1929-32.

B.65, B.66 'Mr. Pars. Dynamics'.

Contents of a folder so inscribed.

Extensive sequence of ms. notes headed 'General Dynamics. Mr. Pars. Michaelmas Term 1928'.

B.67-B.70 'Mr. Richmond. Curves & surfaces'.

Contents of a folder so inscribed.

B.67 'Algebraic Geometry. Mr. Richmond. Michaelmas Term 1928'.

Extensive sequence of ms. notes, variously sub-titled.

B.68 'Curves and surfaces of orders 3 and 4. Mr. Richmond. Lent Term 1929'.

Extensive sequence of ms. notes, variously sub-titled.

B.69 'Kummer's quartic surface'.

12pp. ms. notes.

B.70 Set of ms. notes (not in Davenport's hand) mostly headed 'Kummer's Surface', some also headed 'Richmond', and dates 7-12 March 1929.

School and university notebooks and lecture notes

- B.71, B.72 'Mr. Hall. Groups'.
Contents of a folder so inscribed.
89pp. ms. notes and 1p. 'Summary' headed 'Theory of groups.
Mr. P. Hall. King's, Lent Term 1929'.
B.71 pp.1-45.
B.72 pp.46-89, with summary.
- B.73, B.74 'Pollard. Volume and surface integrals'.
Contents of a folder so inscribed.
Extensive sequence of ms. lecture notes, variously sub-titled.
- B.75-B.77 'A.S. Ramsey. Electricity'.
Contents of a folder so inscribed.
B.75 Miscellaneous ms. notes, some titled.
B.76, B.77 Extensive sequence of ms. notes headed 'Solenoids'.
- B.78, B.79 'Ramsey, F.P. Foundations of mathematics'.
Contents of a folder so inscribed.
B.78 Extensive ms. notes headed 'Kinds of definitions' and
'Other views on the Foundations of Mathematics'.
B.79 13pp. miscellaneous notes and calculations, 1 page dated
2 February 1928.
- B.80-B.84 'Lattice points (Steen)'.
Contents of a folder so inscribed. Pencilled note on folder reads:
'Cam. undergrad. 27-29'.
B.80 Extensive sequence of notes, headed 'Chapter I' and
'Chapter II'.
B.81 5pp. ms. notes and calculations.
B.82 Ms. notes and calculations, paginated 22-39.
B.83 Ms. notes and calculations, paginated 45-77.
B.84 8pp. ms. notes and calculations.
Sequence of notes, headed 'Chapter III'.

School and university notebooks and lecture notes

- B.85-B.87 'Series $\int\int$ '.
- Contents of a folder so inscribed. These are probably notes originally made in Manchester as part of Davenport's degree course (see B.25) and later used at Cambridge.
- B.85 'Double Integral over an area'.
- 11pp. ms. notes and calculations, found with cover of Manchester University examination script.
- B.86 'Va Linear differential equations'.
- 43pp. sequence of ms. notes and calculations, variously sub-titled.
- B.87 'Infinite series'
- Extensive sequence of ms. notes and calculations, variously sub-titled.
- B.88 'A.P. Functions'.
- Contents of a binder so inscribed.
- 'Almost periodic functions'.
- Sequence of ms. notes and calculations, variously sub-titled.
- 'A.P. functions of a complex variable'.
- Sequence of ms. notes and calculations, variously sub-titled.
- B.89 Davenport's original folders from B.65-B.88.
- B.90-B.92 Lecture notes made by Davenport at Cambridge after taking his B.A. degree.
- B.90, B.91 Two series of lecture notes, found together with note 'Notes of lectures attended at Cambridge'.
- B.90 'Summable series'.
- B.91 'Inequalities'.
- B.92 'Hardy Fourier series' 1932.
- Hard-back binder so inscribed, containing typescript lecture notes from a course given by G.H. Hardy, Lent Term 1932.
- Includes ms. notes and calculations, some titled 'Uniqueness Theory' and 'Lebesgue Integral'.

SECTION C LECTURES AND ADDRESSES C.1 - C.193

- C.1 -C.4 CAMBRIDGE, 1930s
- C.5 -C.12 MANCHESTER, 1937-41
- C.13 -C.16 UNIVERSITY COLLEGE OF NORTH WALES,
BANGOR, 1941-45
- C.17 -C.51 UNIVERSITY COLLEGE, LONDON, 1945-58
- C.52 -C.97 CAMBRIDGE, 1958-69
- C.98 -C.129 LECTURES ABROAD
- C.130-C.158 SOCIETIES, CONFERENCES, etc.
- C.159-C.193 MISCELLANEOUS AND UNDATED LECTURES

C.1-C.4 CAMBRIDGE, 1930s

Not dated, but probably 1933-37 during Davenport's period as research fellow at Trinity College.

C.1, C.2 'Algeb. Functions'

Contents of a folder so inscribed, n.d.

C.1 Extensive paginated ms. draft of a series of lectures on algebraic functions.

C.2 Extensive paginated ms. draft of a series of lectures, probably a continuation of C.1.

Folder includes 3pp. paginated ms. notes and calculations, and label from original folder.

C.3 'Functions of a complex variable', n.d.

Extensive ms. draft of a series of lectures.

C.4 Extensive ms. draft of a series of lectures, from a folder originally labelled 'Algebra'.

Lectures and addresses

C.5-C.12 MANCHESTER, 1937-41

The only lecture and teaching material surviving from this period was found in an envelope labelled 'Notes Maths VIII 1940-41'.

C.5 Duplicated examination paper 'Pure mathematics VIII', December 1940; ms. draft, including solutions to problems set.

9pp. ms. draft headed 'VIII Linear Differential equations' related to the above.

C.6 Duplicated examination paper 'Pure Mathematics VIII', March 1941; ms. draft, including solutions to problems set.

1p. ms. 'Schemes of Marking' and 1p. ms. 'VIII Homework'.

C.7 'D. equations of first order but not first degree', n.d.

6pp. draft of a lecture.

C.8 'Infinite series'.

Ms. draft of course of lectures.

C.9 'Functions of two variables'.

Ms. draft of a lecture.

C.10 'Notes on exs.'

Ms. draft, probably for a lecture, giving solutions to various problems and examples.

C.11 'Fourier series'.

Ms. draft of a lecture.

C 12 'Solutions in series'

5pp. ms. draft, probably of a lecture.

11pp. miscellaneous ms. drafts, variously titled.

Lectures and addresses

C.13-C.16 UNIVERSITY COLLEGE OF NORTH WALES, BANGOR, 1941-45

These notes cannot be dated exactly, but all are from the 1941-45 period. All are lecture notes, with no other teaching material.

- C.13 'Fourier series'.
Ms. draft of a series of lectures, originally from a folder labelled 'Bangor'.
- C.14 'Differential equations'.
Ms. draft of a series of lectures.
- C.15 'Differential geometry'.
Ms. draft of a series of lectures.
- C.16 'Infinite series and integrals'.
Ms. draft of a series of lectures.

C.17-C.51 UNIVERSITY COLLEGE, LONDON, 1945-58

This material was probably all intended for teaching undergraduates, and many lecture drafts are accompanied by reading lists and in some cases by lists of students' names. There are not only finished drafts, both manuscript and typescript, but also notes and calculations. Only C.17-C.34 can be dated exactly.

- C.17 1p. ms. list of topics, probably for a course of lectures, dated 1945-46.
 'Ideas for the future', n.d.
 1p. ms. list of topics, probably for lectures.

Lectures and addresses

- C.18-C.20 'The natural numbers', 1946.
Ms. draft of a course of lectures, some pages dated January 1946.
- C.18 9 topics, variously titled.
- C.19 4 topics, variously titled.
- C.20 6 topics, variously titled, with 1p. ms. notes for 'Summer term' lecture course.
- C.21 'First Year Special Analysis'.
6pp. ms. draft of an introductory lecture to first year undergraduates, found with C.18-C.20.
- C.22, C.23 'The geometry of numbers', ?1948
- C.22 Ms. draft for a course of lectures.
- C.23 Rough notes and calculations.
- C.24 '3rd yr Theory of Numbers. Supplementary to "Higher Arithmetic"', 1952-53.
2pp. ms. outline of a lecture course, giving dates of lectures, with 2pp. ms. notes and calculations.
- 'Quadratic forms (supplementary to "Higher Arithmetic")'.
2pp. ms. notes and calculations.
- 'Theory of Numbers'.
1p. ms. list of students' names and addresses.
- C.25, C.26 'Classical achievements in pure mathematics', ?1952.
Extensive typescript and ms. draft of course of 5 lectures.
- C.25 1p. ms. list of the lectures; introductory remarks and lectures 1-3.
- C.26 Lectures 4 and 5.
- Folder also includes 'The fundamental theorem of algebra', given to the Bangor Mathematical Society, 4 December 1952.

Lectures and addresses

- C.27-C.29 'Various topics in the theory of numbers', 1953-54.
94pp. paginated typescript draft of a course of lectures.
- C.27 pp.1-41
- C.28 pp.42-79
- C.29 pp.80-94, and 5pp. diagrams.
- C.30 'Remarks to S I class', 1955.
5pp. ms. notes of introductory talk to undergraduate class.
- C.31-C.34 'Introduction to the analytic theory of numbers', 1956-57.
- C.31, C.32 Ms. draft, paginated [1]-66, of a course of lectures.
2 folders.
- C.33 Ms. draft, paginated 83-133.
- C.34 2pp. lists of signatures, probably of those attending the
lecture course; 5pp. ms. notes.
- C.35 'Theory of numbers (Third year course)', n.d.
4pp. ms. draft, probably of first lecture of a course.
- C.36-C.40 'The geometry of numbers', n.d.
Contents of a folder inscribed 'G of N (UCL)'.
- C.36, C.37 Duplicated typescript with a few ms. corrections.
2 folders.
- C.38, C.39 Another copy.
- C.40 2pp. list of topics headed 'Geometry of numbers'.
1p. ms. note of 'Further topics'.

Lectures and addresses

C.41-C.51

Miscellaneous notes and drafts for lectures, originally kept in an unlabelled binder. The material has been preserved in its original order but has been divided into folders for ease of reference. The numbers in the headings of e.g. C.46, C.47, C.48 probably refer to lectures from extended courses.

C.41 Miscellaneous ms. notes and calculations, including sequence paginated 9-12, concerning work by Dirichlet.

C.42 'Indefinite forms'.

Ms. draft for lecture.

C.43 'Elem. Theory of Numbers'.

32pp. ms. draft for lecture series; with 1p. ms. reading list.

Folder includes 3pp. miscellaneous ms. notes and calculations.

C.44 'Continued fractions'.

6pp. ms. draft of a lecture, with 1p. ms. reading list.

C.45 'Number theory. Outline course'.

2pp. ms. list of lecture titles.

'Examples on number theory'.

6pp. ms. problems and solutions.

'Theory of numbers. Literature'.

1p. ms. reading list.

C.46 '5. Gauss's Sum'.

8pp. ms. draft of a lecture, probably one of a series.

'Higher power residues'.

4pp. ms. draft, probably unfinished, of a lecture.

1p. ms. notes outlining a course of lectures.

C.47 'II Divisibility and the primes', 'III Congruences', 'IV Quadratic residues'.

3pp. ms. outlines of lectures.

'5 (k/P) as a function of P'.

2pp. ms. draft.

Lectures and addresses

C.48 '2. Gauss's lemma'.

2pp. ms. draft.

'3. The law of quadratic reciprocity'.

3pp. ms. draft.

'4. An algorithm for $\left(\frac{a}{p}\right)$ '.

2pp. ms. draft.

C.49 Miscellaneous ms. notes, drafts and calculations, all untitled.

C.50 Miscellaneous ms. notes, including pp.33-39 only of draft for lecture.

C.51 Inside cover of original binder, with ms. calculations.

Lectures and addresses

C.52-C.97 CAMBRIDGE, 1958-69

All the material here was used for teaching, probably of both undergraduates and postgraduates. Several lectures include lists of problems to be attempted by the students (see especially C.62, C.97); it was Davenport's custom to hand these out at the beginning of a lecture course.

Some lecture material also includes outlines of the topics to be covered, ms. notes and calculations, and drafts of earlier work, used in the production of the lecture.

C.52-C.54 'Analysis II. Cambridge lectures'.

Contents of a folder so inscribed.

C.52, C.53 'Analysis II 1959-60'.

69pp. ms. draft of a lecture course, with 1p. list of dates of lectures and topics to be covered. Includes letter of thanks, 1960, from colleague for loan of notes. (C.52). 2 folders.

C.54 'The Gamma Function'.

Miscellaneous shorter notes and drafts.

C.55-C.59 'Diophantine Approximation', 1961-62.

C.55-C.57 78pp. ms. draft of course of lectures. C.55 includes 4pp. outlines of topics to be covered, 1p. list of students' names and 3pp. preliminary draft and notes. 3 folders.

C.58 Shorter notes and calculations.

C.59 10pp. draft, possibly of an optional lecture for the end of the course, on Cassels's theorem.

Folder includes reprint of Bibliog. 111.

C.60-C.62 'Functions of a complex variable (Easter term, 1962)'.

C.60, C.61 46pp. ms. draft for course of lectures. 2 folders.

C.62 'Problems'; 'Solutions'.

Includes original folder, inscribed with calculations.

Lectures and addresses

- C.63-C.66 'Theory of numbers (Introductory Part III)', ?1963.
- C.63-C.65 83pp. ms. draft for lecture series, 1p. dated 1963.
C.65 includes 1p. ms. reading list. 3 folders.
- C.66 11pp. ms. draft; miscellaneous ms. notes and calculations.
- C.67 'Two problems of Mordell', 1964.
10pp. ms. draft of a seminar paper, given 25 February 1964.
- C.68-C.72 'The geometry of numbers (Lent Term, 1964)'.
- C.68-C.70 103pp. ms. draft for lecture course. 3 folders.
- C.71 Miscellaneous shorter notes and drafts on topics to be covered.
- C.72 9pp. ms. notes and calculations.
- Also included here are 1p. ms. notes in an unidentified hand and reprints by K. Mahler.
- C.73-C.75 'Diophantine approximation (Michaelmas term, 1964-5)'.
- C.73, C.74 71pp. ms. draft for lecture course. C.73 includes
1p. list of pupils, October-December 1964. 2 folders.
- C.75 Miscellaneous ms. notes and calculations.
- C.76, C.77 'Theory of numbers (Part II, Optional)', 1964-65.
- C.76 6pp. ms. draft for lecture.
1p. typescript outline of lecture course, dated October 1964, with 1p.
ms. list of topics to be covered in each lecture.
- C.77 5pp. ms. of questions, problems and examples.
2pp. typescript entitled 'Theory of numbers (Part II), 1964-65 Problems'.
2pp. typescript entitled 'Theory of numbers (Part II), 1964-5 Outline
Solutions'.

Lectures and addresses

- C.78 'The basic inequality of the large sieve method', 1 November 1966.
10pp. ms. draft for seminar paper.
- C.79 'Dirichlet's L-functions. (Michaelmas term 1966-7)'.
21pp. draft for lecture, with 1p. ms. calculations.
- C.80-C.85 'Additive number theory', ?1967-68.
- C.80-C.82 119pp. ms. draft for lecture course. 3 folders.
- C.83 Miscellaneous ms. notes and calculations, including 4pp. paginated sequence re paper by B.J. Birch.
- C.84 'Waring's problem'.
Ms. draft, probably for lecture, paginated 4-23.
- C.85 'Mordell's finite basis theorem'.
6pp. ms. draft for lecture, with 3pp. ms. notes and calculations.
- C.86-C.88 'Cambridge Lectures (additive)', n.d.
60pp. ms. draft for course of 3 lectures from folder labelled as above.
- C.86 'Waring's problem'.
The first page of this lecture was used as the cover illustration of the 5th edition of Davenport's The Higher Arithmetic (1982), although the text does not appear elsewhere in the book.
- C.87 'The Hardy-Littlewood method'.
- C.88 'The Asymptotic formula: Vinogradov'.
Includes 5pp. alternative version.
- C.89-C.91 'The distribution of the primes', n.d.
95pp. ms. draft for course of lectures. 3 folders.

Lectures and addresses

- C.92-C.95 'The Riemann Zeta-function', n.d.
- C.92 11pp. ms. draft for lecture, probably a continuation of
'last term's course on the distribution of primes' (C.89-C.91).
- C.93, C.94 69pp. ms. draft for lecture course. 2 folders.
- C.95 Miscellaneous ms. notes and calculations.
- C.96 'References for equations in many variables', n.d.
3pp. ms. list, possibly to accompany a course of lectures.
- C.97 'Davenport: Theory of Numbers', n.d.
Two typescript drafts, 3pp. and 2pp., of list of problems.
- 'Davenport: Geometry of Numbers', n.d.
Two typescript drafts, 3pp. and 2pp., of list of problems.

C.98-C.129 LECTURES ABROAD

Davenport made many visits abroad (see Mrs. Davenport's biographical notes at A.7). The material here is from three universities with which he had particularly close connections: Stanford, Göttingen and Michigan. Visits to these institutions were for varying periods up to a full academic year, and could involve teaching and examining as well as lecturing.

| | |
|-------------|---------------------------------|
| C.98 -C.107 | Stanford University, California |
| C.108-C.114 | Göttingen |
| C.115-C.129 | University of Michigan |

Lectures and addresses

C.98-C.107 Stanford University, California, 1947-48, 1950.

Davenport was invited by Gabor Szegő (see A.60) to spend the year 1947-48 at Stanford as a visiting professor, and he returned there in 1950 (see also Memoir, p.162).

C.98-C.102 'Group theory (Stanford)', 1948.

Lecture and teaching material, from an envelope so inscribed.

C.98 27pp. ms. draft for course of lectures, variously sub-titled.

C.99 13pp. ms. draft for course of lectures, variously sub-titled, with 1p. ms. calculations.

C.100 'Abelian groups'.

2 ms. drafts for lecture, 8pp. and 5pp.

C.101 'Sylow's Theorem', 9pp. ms. draft.

'Theory of groups', 5pp. ms. draft.

C.102 1p. ms. 'Groups Literature'; 1p. ms. 'Group Theory. Outline of Course'; 3pp. ms. 'Examples on groups'; etc.

C.103 Programme of meeting of American Mathematical Society, April 1948, mentioning lecture by Davenport.

C.104 'Selected Topics in the Geometry of Numbers', Summer Quarter, 1950.
67pp. typescript notes made by G. Hedrick.

C.105-C.107 'Draft T. of nos Stanford', n.d.

Contents of an envelope so inscribed.

C.105 'Analytic Theory of Numbers'.

Ms. draft of a course of lectures, variously sub-titled.

C.106 'Additive number-theory'.

Ms. draft for course of lectures, with note on first page 'Analytic number theory ctd.'.

C.107 'The Hardy-Littlewood method'.

22pp. ms. draft for lecture.

Lectures and addresses

C.108-C.114 Göttingen, 1954 and 1966.

In 1966, Davenport was Gauss Professor der Mathematik an der Akademie der Wissenschaften zu Göttingen (see Memoir, p.164), visiting Göttingen from May to August (see Mrs. Davenport's biographical notes at A.7). He had lectured there previously in February 1954.

Virtually all the material here is in German. Davenport had a good command of the language, and had made many German friends and colleagues, particularly among the refugees arriving in Cambridge in the 1930s (see Memoir, p.161).

See also G.299-G.303 for material relating to Davenport's appointment and visit to Göttingen in 1966.

C.108 Correspondence with C.L. Siegel, December 1953-January 1954, re invitation to give a talk to the 'Mathematische Gesellschaft'. Davenport chose as his subject 'Simultaneous Diophantine Approximation'.

10pp. ms. draft for lecture, dated February 1954, in German, in several hands.

C.109-C.113 Lectures delivered May-August 1966, originally found together in an envelope labelled 'Lectures Göttingen'. All are in German.

C.109 'Ausgewählte Fragen der Zahlentheorie'.

33pp. ms. draft.

C.110 'Schlecht approximierbare Zahlen'.

32pp. ms. draft; 1p. ms. notes.

C.111 'Die Verteilung der quadratischen Reste und Nichtreste'.

20pp. ms. draft.

C.112 'Über $y^2 - x^3$ '

9pp. ms. draft, paginated 38-46.

C.113 'Gleichungen und Identitäten'.

19pp. ms. draft; 9pp. miscellaneous ms. notes and calculations (2pp. in English).

Lectures and addresses

- C.114 'Topics for Göttingen'.
1p. ms. list of topics, probably for lectures given in 1966.

C.115-C.129 University of Michigan, 1962-68

Davenport had a fruitful association with Michigan, where he was a frequent visitor in the 1960s. His principal collaborator was D.J. Lewis; Davenport's lectures at Michigan in 1962 on 'Analytic methods for Diophantine equations and Diophantine inequalities' were published in 1963 (see C.115, G.175-G.184, and Memoir, p.167).

- C.115 'Analytic methods for Diophantine equations and Diophantine inequalities', 1963.

Bound photocopy of a course of lectures given at Michigan in the Fall Semester, 1962.

Folder includes letter from publishers, 30 July 1963, outlining publication agreement.

C.116-C.124 'Michigan Lectures'.

Contents of a folder so inscribed.

- C.116 'Analytic methods for Diophantine equations and inequalities', 1962.

26pp. ms. draft.

- C.117 'Goldbach's Problem'.

16pp. ms. draft.

- C.118 'Vinogradov's result on sums of 3 primes'.

16pp. ms. draft.

- C.119-C.121 Variously titled and paginated shorter ms. drafts. 3 folders.

- C.122 Untitled ms. draft paginated 24-40A.

- C.123 Questions papers, etc.

- C.124 Original folder inscribed with calculations.

Lectures and addresses

- C.125 'Modular fns' 'Notes of seminar Mich. 1965?'
- Extensive ms. notes and calculations, originally found in a folder so inscribed.
- C.126-C.129 Series of 4 lectures, given 3-7 September 1968.
- C.126 'Diophantine approximation: an introductory survey'.
15pp. duplicated typescript with ms. corrections.
- C.127 'Badly approximable numbers'.
11pp. duplicated typescript with ms. corrections.
- C.128 'Dirichlet's theorem'.
17pp. duplicated typescript with ms. corrections.
- C.129 'A problem of Diophantus'.
15pp. photocopy of ms. draft.

C.130-C.158 SOCIETIES, CONFERENCES, ETC.

The material here consists mainly of drafts for lectures given at conferences and to societies, including undergraduate clubs. It does not however present a complete record of Davenport's many visits and conferences.

C.152-C.156 contain material which cannot be accurately dated, and C.157, C.158 consist of invitations and programmes. Of particular interest is C.131, Davenport's address given at the prize day of his old school.

- C.130 'La géométrie des nombres', Brussels, 1946.
19pp. duplicated typescript draft (in French); two programmes of lectures, April-May 1946, of Institut des Hautes Études de Belgique.
- C.131 Address given at Accrington Grammar School prize day, 26 March 1947.
8pp. ms. draft and 1p. notes; letter from headmaster, 20 March 1947, re arrangements; programme. See also A.25.

Lectures and addresses

- C.132 'Some American Impressions', Presidential address to the Mathematical and Physical Society, University College, London, 29 October 1948.
11pp. typescript draft.
- C.133, C.134 'G.H. Hardy', 1948 and n.d.
- C.133 4pp. untitled ms. draft of a lecture, delivered in 1948.
7pp. ms. draft and notes for a talk to an unnamed society re Hardy's Collected Papers, n.d.
Davenport was on the London Mathematical Society committee set up to edit Hardy's papers, and did much work for it (see Memoir, p.165)
11pp. ms. draft and notes, partially paginated, for a talk to an unnamed undergraduate society re Hardy's career and publications, n.d.
- C.134 Reprint of E.C. Titchmarsh's L.M.S. memoir of G.H. Hardy, with 1p. ms. notes by Davenport.
3pp. photocopy of Hardy's 1914 paper on Riemann functions.
- C.135 'A great Oxford mathematician' (H. J. S. Smith), Invariant Society, Oxford, 3 May 1950.
11pp. typescript draft with ms. corrections.
- C.136, C.137 'Diophantine Approximation', 1952, 1954.
- C.136 14pp. ms. draft of version delivered to British Mathematical Colloquium, Greenwich, July 1952.
- C.137 7pp. ms. draft of version delivered to Oxford Mathematical Society, 3 March 1954.
4pp. ms. draft and notes re Diophantine approximation.
4pp. ms. draft re lattice points.
- C.138 Rough outline of 'informal' talk at Queen Mary College, London, 4 February 1954. 2pp. ms. only.
- C.139 'Problèmes d'empilement et de recouvrement', Rome 1955.
41pp. typescript draft for lecture (in French).

Lectures and addresses

- C.140 'Indefinite quadratic forms in many variables', St. Andrews, September 1956.
4pp. ms. draft for lecture or talk.
- C.141 'Some recent work'.
Lecture to the theory of numbers group at the British Mathematical Colloquium, Nottingham, 11 September 1957.
7pp. typescript draft and 4pp. miscellaneous ms. notes and calculations found with it.
- C.142 'Analytical number theory', ?1958.
4pp. ms. notes also headed 'Edinburgh $\frac{1}{4}$ hour', for short talk at International Congress of Mathematics, August 1958. See also D.121.

'The nature of mathematics', 1958.
8pp. ms. draft for talk given to the Trinity Mathematical Society, 20 November 1958.
- C.143 'Equations in integers', New Pythagoreans, 21 January 1959.
6pp. ms. draft; ms. notes and calculations.
- C.144 Speech given at dinner of Mathematical and Physical Society, University College London, 5 March 1959. See also C.160.
5pp. ms. notes.
- C.145 'Les équations diophantiennes à plusieurs variables' and 'Les inégalités diophantiennes à plusieurs variables', lectures delivered at the Faculté des Sciences, Université de Paris, 6 and 7 April 1959.
Duplicated typescript drafts; letter of thanks from P. Dubreil, 20 July 1959.
- C.146 'Dirichlet', 1959.
4pp. and 8pp. ms. drafts for talk given in the centenary year of Dirichlet's death; 1p. ms. notes made by Davenport from talk given by Kummer in 1860.

Lectures and addresses

- C.147 'Diophantine approximation', lecture delivered at the British Mathematical Colloquium, Southampton, 13 April 1962.
15pp. ms. draft.
- C.148 Copy of report by Davenport on a visit to Poland, 18-30 March 1963, under arrangements for exchange visits of scientists between Polish Academy of Sciences and Royal Society.
Davenport gave 3 lectures during his visit and worked with A. Schinzel.

Conference at Oberwolfach, 1-5 April 1963 (after Polish visit).
8pp. duplicated 'Tagungsbericht'. See p.4 for abstract of Davenport's lecture on 'Diophantine equations in many variables'.
- C.149 'Irrational numbers', lecture to the Tensor Club, 6 February 1964.
14pp. ms. draft and calculations.
- C.150 'Report on visit to the University of Vienna', 6-19 April 1964.
1p. ms. draft.

'Diophantische Gleichungen in mehreren Unbekannten', 15 April 1964, given during visit to Vienna.
2 ms. drafts, 6pp. and 14pp., with first page only of an early draft, all in German.
- C.151 'Quelques découvertes récentes dans la théorie des nombres', lecture given at the Université de Grenoble, 16 June 1967.
Bound copy of lecture; 3pp. ms. notes entitled 'Brighton', found with it.

Lectures and addresses

C.152-C.156 Undated lectures for societies or conferences.

C.152 'Packing and covering by spheres'.

2 ms. drafts, both 7pp., of a talk, one labelled 'copies Harvard lecture'.

'Problems of packing and covering'.

9pp. typescript draft, perhaps a later version related to Bibliog. 160.

C.153 'Simultaneous Diophantine approximation'.

2 ms. drafts, both 4pp.

5pp. typescript draft, with ms. corrections, of 'Congress lecture'.

C.154 'Kongruenzen vom additiven Typ'.

12pp. ms. draft.

C.155 'The large sieve inequality'.

12pp. ms. draft of 'Lecture delivered somewhere'.

C.156 'Un problème d'approximation Diophantienne'.

12pp. ms. draft.

C.157, C.158 Invitations and programmes.

C.157 Announcements of 2 London Mathematical Society lectures delivered by Davenport, 1946 and 1968.

Programme of the Mathematical Association, 1949-50.

C.158 Letter inviting Davenport to session of International Congress of Mathematicians, 18 June 1949.

Programme of conference at Brussels, 1955.

Programme of conference at Rome, 1968.

Lectures and addresses

C.159-C.193 MISCELLANEOUS AND UNDATED LECTURES

Included here are two collections of lecture material (C.159-C.170 and C.182-C.193) which have been kept together in the order in which they were found. The first of these collections is chiefly material concerning the geometry of numbers, while the second is far more miscellaneous in character, being mostly notes and calculations. C.171-C.181 consists of miscellaneous lectures which cannot be dated, although most have titles.

C.159-C.170 'G of N lectures'.

This collection of lecture notes was found together in a folder inscribed as above. Most deal with the geometry of numbers and some are dated (1946-59). They have been kept in their original order.

Of particular interest is C.167, C.A. Rogers's notes of a course of lectures given by Davenport, and an account of the seminar and discussion of the lectures.

C.159 'Marshall Hall's Theorem on Continued Fractions', n.d.

12pp. ms. draft, probably of a lecture, with 1p. ms. diagram.

C.160 'General Functions', delivered to the Mathematical and Physical Society, University College London, 5 March 1959. See also C.144.

16pp. ms. notes.

C.161 'Some doubts about mathematics', delivered to the 'Archimedeans', (a Cambridge undergraduate society), 23 November 1949.

10pp. typescript draft with ms. corrections.

C.162 Mathematical and Physical Society dinner, UCL, 9 March 1956.

7pp. ms. draft for speech.

C.163 'Progress in number-theory since 1930', n.d.

9pp. ms. draft of and notes for a talk.

C.164 'Inaugural lecture', probably given on appointment as Astor Professor of Mathematics, University College, London, 1945.

Various ms. and typescript drafts.

C.165 'Abstract of Lecture on the Geometry of Numbers', delivered to the A.M.A., Berkeley, 24 January 1948.

2pp. typescript.

Lectures and addresses

C.166 'A theorem of Minkowski', lecture delivered at Berkeley,
1 April 1948.

8pp. ms. draft.

C.167 'The Geometry of Numbers'.

Ms. notes made by C.A. Rogers from Davenport's lectures at University College, London, 1946, with 'an informal account of the meetings of a seminar held at University College, and includes a summary of the discussion of the various lectures'.

C.168 'Non-homogeneous problems in the Geometry of Numbers',
delivered at Cambridge seminar, 8 February 1946.

5pp. ms. draft.

C.169 'La géométrie des nombres', n.d.

18pp. typescript draft for lecture, with ms. corrections (in French).

C.170 'The Geometry of Numbers', n.d.

22pp. ms. draft for lecture, an English version (probably earlier) of C.169.

Includes label from original folder.

C.171 57pp. typescript draft, with ms. corrections, for course of lectures, n.d.
Note on first page 'P.G. lectures ?U.S.'

C.172 'Abundant numbers', n.d.

12pp. ms. draft for lecture.

C.173 'Solved and unsolved problems of mathematics'.

2 ms. drafts, 6pp. and 5pp., of a talk.

'Some unsolved problems'.

12pp. ms. draft of a talk.

'Solved and unsolved problems'.

7pp. typescript draft, with ms. corrections, of a lecture; 1p. ms. notes.

Lectures and addresses

- C.174 'Some curious series'.
17pp. ms. draft of and notes and calculations for a talk.
- C.175 'Diophantine equations in many variables'.
19pp. ms. draft for lecture.
- C.176 'Jarnik and Walfisz'.
10pp. ms. draft for lecture; 3pp. ms. calculations.
- C.177, C.178 'Diophantine approximation'.
C.177 1p. ms. outline of course of 5 lectures.
21pp. incomplete ms. draft of a series of lectures, paginated 1-13, 95-100.
C.178 21pp. miscellaneous ms. notes and calculations.
- C.179 'Geometry of Numbers'.
11pp. ms. notes for 3 lectures.
- C.180 'Plans for G. of N. course'.
9pp. ms. notes and calculations.
Included here is a 1p. ms. list of topics, probably for a lecture course,
headed 'Hilbert'.
- C.181 9pp. untitled ms. draft of a lecture re 'some of the most important
applications of analysis to the theory of numbers'.

3pp. untitled ms. draft of an after-dinner speech re nature of mathematical
progress.

Lectures and addresses

C.182-C.193 'Misc. math.'

Contents of a folder so inscribed, described by Professor B. J. Birch (February 1986) as: 'a mixed bag of lecture notes for various courses given mainly at University College. Some of the material was eventually published in "Multiplicative Number Theory"' (see D.170-D.182).

The material has been kept together in the order in which it was found.

C.182 2pp. miscellaneous ms. notes and calculations.

6pp. ms. notes and calculations headed '5. The coefficients in a period of forms'.

C.183 4pp. ms. draft headed 'The reduction of a pair of linear forms'.

2pp. ms. notes and calculations.

Reprint of Bibliog. 75.

C.184 5pp. ms. draft headed 'Representation of numbers as sums of squares'.

2pp. miscellaneous ms. calculations.

C.185 5pp. paginated sequence of ms. notes and calculations.

3pp. sequence of ms. notes and calculations.

6pp. miscellaneous ms. notes and calculations.

C.186 6pp. miscellaneous ms. draft and calculations.

3pp. ms. draft headed 'Chapter 6. Characters'.

5pp. miscellaneous ms. notes and calculations.

C.187 'Zeta-function and L-functions'.

19pp. ms. draft.

C.188 'Cyclotomy'.

13pp. ms. draft and calculations.

C.189 5pp. sequence of ms. notes.

5pp. ms. draft and notes headed 'The Riemann-Zeta function'.

5pp. ms. draft and notes headed 'Alternative treatment of the Zeta-function'.

Lectures and addresses

C.190 6pp. miscellaneous ms. notes and calculations.

2pp. ms. draft headed 'The prime-number theorem'.

1p. ms. calculations.

5pp. sequence of notes.

C.191 'Geometry of numbers'.

15pp. ms. draft.

C.192 'Algebraic numbers'.

17pp. ms. draft.

C.193 Miscellaneous shorter notes, drafts, tables, etc., one draft headed 'Chapter VI. A method of Carlitz'.

SECTION D PUBLICATIONS D.1 - D.213

Davenport published nearly 200 papers, as well as three books. Most of the material in this Section consists of drafts of the published papers, frequently without any other material such as notes or calculations. In some cases however these do survive and in others there is more than one draft. Some correspondence is included here, for example, D.112 - D.116.

The sequence incorporates material of other kinds, such as the Adams Prize Essay (D.5 - D.15), the books The higher arithmetic (D.89 - D.92) and Multiplicative number theory (D.170 - D.182), reviews by Davenport (D.208), and some unpublished material, such as 'On writing mathematical papers' (D.201 - D.203).

Material published after Davenport's death can be found at D.204 - D.207, and his 'collected works' are represented at D.210 - D.213.

The material has been arranged in chronological order, and where applicable the Bibliography number of the Royal Society Memoir has been given, as well as the date of publication.

For additional correspondence and material exchanged with collaborators in publications, see the relevant entries in Section G and also E 1 - E 15 (work with H. Hasse).

- D.1 'On certain exponential sums', 1933 (Bibliog. 5).
19pp. typescript draft (incomplete), with ms. corrections; 4pp. typescript draft.
- D.2 'On the product of three linear homogeneous forms (II)', 1938 (Bibliog. 25).
31pp. typescript draft with ms. corrections; 1p. ms. calculations.
- D.3 'On the product of three homogeneous linear forms (III)', 1939 (Bibliog. 26).
37pp. typescript draft with ms. corrections.
- D.4 'On Waring's problem for fourth powers', 1939 (Bibliog. 35).
30pp. ms. draft.

Publications

- D.5-D.15 Adams Prize Essay for 1939-40.
- The essay contains material published in various papers, 1938-46 (including D.2-D.4).
- The material here includes early drafts of certain chapters (D.5, D.6), the whole text, probably as submitted to the judges (D.8-D.14) and a little correspondence.
- D.5, D.6 Early ms. drafts of various chapters of the essay, found together in an unlabelled folder.
- D.5 2 ms. drafts, 3pp. and 5pp., for 'Chapter VI On a conjecture of Mordell'.
- 9pp. ms. draft and calculations for 'Chapter VII Minkowski's conjecture and Remak's theorem'.
- D.6 9pp. ms. draft headed 'W.P.'.
- 2pp. ms. draft for 'Chapter VI On sums of pos. & neg. 4th powers'.
- D.7 1p. ms. 'Contents of Essay'; 3pp. typescript abstract dated 31 December 1940.
- D.8-D.14 Ms., typescript and printed text of the essay. As the material for many chapters had already been published, much of the essay was presented in the form of pages from the printed texts pasted onto file paper. Originally found in two ring-binders, the material has been divided into folders for ease of reference.
- D.8-D.11 'Part One. On the Geometry of Numbers'.
- Introduction, Chapters I-VII, in 4 folders.
- D.12-D.14 'Part Two. On Waring's problem'.
- Introduction, Chapters I-VII, in 3 folders.
- D.15 Brief correspondence re Adams Prize Essay, 1941, 1942. Includes letter of 29 May 1941 informing Davenport of award.
- D.16 'On sums of positive integral kth powers', with P. Erdős, 1939 (Bibliog. 36).
- 4pp. ms. draft (Erdős's hand).
- D.17 'On linear fractional substitutions with large determinant', 1940 (Bibliog. 32).
- 6pp. ms. draft.

Publications

- D.18 'Note on the product of three homogeneous linear forms', 1941
(Bibliog. 39).
4pp. ms. draft.
- D.19 'On a conjecture of Mordell concerning binary cubic forms', 1941
(Bibliog. 40).
12pp. typescript and ms. draft.
- D.20-D.22 'On sums of positive integral k th powers', 1942 (Bibliog. 34).
D.20 4pp. ms. notes.
D.21 18pp. ms. draft.
D.22 6pp. galley-proof, with ms. corrections.
- D.23 'On Waring's problem for fifth and sixth powers', 1942 (Bibliog. 37).
14pp. ms. draft.
- D.24, D.25 'On the minimum of a binary cubic form', 1943 (Bibliog. 41).
D.24 4 ms. drafts, 6pp., 7pp., 10pp. and 11pp.
D.25 1p. ms. calculations, 14pp. typescript draft.
- D.26, D.27 'On the product of three homogeneous linear forms (IV)', 1943
(Bibliog. 42).
D.26 Ms. draft paginated 1-45 (p.24 missing).
D.27 32pp. ms. draft.
- D.28 'On the minimum of a ternary cubic form', 1944 (Bibliog. 43).
10pp. ms. draft.

Publications

- D.29 'The reduction of a binary cubic form (I)', 1945 (Bibliog. 45).
8pp. typescript draft with ms. corrections.
- D.30 'The reduction of a binary cubic form (II)', 1945 (Bibliog. 46).
12pp. ms. draft; 8pp. typescript draft with ms. corrections.
- D.31 'On the minimum of $x^3 + y^3 + z^3$ ', 1946 (Bibliog. 44).
2 ms. drafts, 5pp. and 6pp.
- D.32 'Simultaneous Diophantine approximation', with K. Mahler, 1946
(Bibliog. 47).
8pp. ms. draft; 6pp. typescript draft.
- D.33 'On a theorem of Tschebotareff', 1946 (Bibliog. 48).
2 ms. drafts, each 7pp.
- D.34 'On indefinite quadratic forms in five variables', with H. Heilbronn,
1946 (Bibliog. 49).
12pp. ms. draft (Heilbronn's hand); 9pp. ms. draft.
- D.35 'The product of \underline{n} homogeneous linear forms', 1946 (Bibliog. 50).
8pp. ms. draft.
- D.36 'Non-homogeneous binary quadratic forms', 1946 (Bibliog. 51).
7pp. and 8pp. ms. drafts.

Publications

- D.37 'Theory of Numbers', 1946-47.

Davenport was approached, initially by E.A. Milne, to write a book on this subject as one of a series of mathematical works for the interested layman. The book was published in 1952 as 'The higher arithmetic'. See D.89-D.92.

4 letters from E.A. Milne, 1946, outlining the proposed series, the level of mathematics to be aimed for and the publishers' terms.

Letter from Hutchinson & Co., publishers, 1947, enquiring re Davenport's progress, with his reply apologising for the delay, due to pressure of work.

'The Natural Numbers'.

5pp. typescript draft, probably of introduction to the book.

6pp. untitled typescript draft, paginated 15-20.

- D.38 'On the product of three non-homogeneous linear forms', 1947 (Bibliog. 52).
20pp. typescript draft, with ms. corrections.

- D.39 'Asymmetric inequalities for non-homogeneous linear forms', with H. Heilbronn, 1947 (Bibliog. 55).

Letter to Heilbronn, 27 June 1946, re modification to a proof.

5pp. untitled ms. draft, partially paginated, labelled '55A'.

Included here is 'A problem in the geometry of numbers', with H. Heilbronn, 6pp. ms. draft labelled 'essentially published', probably 1947 or a little later.

- D.40 'On a theorem of Markoff', 1947 (Bibliog. 57).
5pp. ms. draft.

- D.41 'On Hlawka's theorem in the geometry of numbers', with C.A. Rogers, 1947 (Bibliog. 58).

Postcard from Rogers, 3 January 1947, re solution to an equation, and 3pp. ms. notes; 11pp. ms. draft, 1p. labelled 'Prelim to 58'; 10pp. ms. 'final' draft.

Publications

- D.42 'The Geometry of Numbers', 1947 (Bibliog. 59).
4pp. typescript draft.
- D.43 'A historical note', 1947 (Bibliog. 60).
2pp. typescript draft with ms. corrections.
- D.44 'Non-homogeneous binary quadratic forms II', 1947 (Bibliog. 61).
14pp. typescript draft with ms. corrections.
- D.45 'Non-homogeneous binary quadratic forms III', 1947 (Bibliog. 62).
9pp. typescript draft.
- D 46 'Sur une extension d'un théorème de Minkowski', 1947 (Bibliog. 64).
2pp. ms. draft.
- D.47, D.48 'Non-homogeneous binary quadratic forms IV', 1947 (Bibliog. 66).
D.47 11pp. ms. notes and calculations, 1p. labelled 'Prelim to 66'.
D.48 24pp. ms. draft.
- D.49 'The geometry of numbers', 1947 (Bibliog. 67).
10pp. typescript draft.
- D.50 'Non-homogeneous ternary quadratic forms', 1948 (Bibliog. 63).
34pp. ms. draft.
- D.51 'Note on indefinite ternary quadratic forms', 1948 (Bibliog. 71).
4pp. typescript draft with ms. corrections.

Publications

- D.52 'On the equation $ax^2 + by^2 + cz^2 = O$ ', 1948 (Bibliog. 72).
5pp. typescript draft with ms. corrections, with 1p. ms. addition.
- D.53 'On indefinite ternary quadratic forms', 1949 (Bibliog. 56)
14pp. typescript draft with ms. corrections, with 1p. ms. addition.
- D. 54 'On the product of two power series', with G. Pólya, 1949 (Bibliog. 69).
9pp. typescript draft; 10pp. ms. and typescript draft.
- D.55 'On a result of Wald', with G. Pólya, 1949 (unpublished).
2 ms. drafts, 6pp. and 5pp.; letter from Wald, 19 September 1949,
to Pólya.
- D.56 'A divisor problem', 1949 (Bibliog. 73).
11pp. ms. draft.
- D.57 'On the series for $L(1)$ ', 1949 (Bibliog. 73).
5pp. typescript draft with ms. corrections.
- D.58 'On a theorem of Khintchine', 1950 (Bibliog. 68).
18pp. typescript draft with ms. corrections.
- D.59 'Indefinite binary quadratic forms, and Euclid's algorithm in real
quadratic fields', 1950 (Bibliog. 70).
25pp. typescript draft with ms. corrections.
- D.60-D.62 'Euclid's algorithm in real quadratic fields', with H. Chatland, 1950
(Bibliog. 74)
- D.60 'A Theorem proving the existence of an Euclid's Algorithm
in certain real quadratic fields', by P. Varnavides.
9pp. ms. draft, with letter, 18 May 1948, re publication of paper.

Continued

Publications

- D.60 (Cont'd.) 'On the Euclidean algorithm in quadratic number fields', by H. Chatland.
4pp. typescript draft, with letter, 28 May 1949, re queries made by Davenport.
- D.61 3pp. ms. notes and calculations.
4pp. ms. draft entitled '3. Proof of the Theorem'.

'The field $k(\sqrt{193})$ '
5pp. typescript draft, labelled 'sent to Chatland as a model for the calculation in 74'.
- D.62 'Euclid's algorithm and the class-number'
2pp. ms. draft.

'Euclid's algorithm in real quadratic fields',
14pp. typescript draft.
- D.63 'Euclid's algorithm in cubic fields of negative discriminant', 1950
(Bibliog. 76).
23pp. typescript draft with ms. corrections, with 7pp. ms. additions.
- D.64-D.66 'Indefinite binary quadratic forms', 1950 (Bibliog. 77).

D.64 13pp. ms. draft, labelled 'prelim to 77'.

D.65 11pp. and 6pp. ms. drafts, both labelled 'prelim to 77'.

D.66 12pp. typescript draft with ms. corrections, with note from editor, T.W. Chaundy, re corrections.
- D.67 'Diophantine inequalities with an infinity of solutions', with C.A. Rogers, 1950 (Bibliog. 79).
59pp. typescript draft with ms. corrections; 1p. ms. list of contents.
- D.68 'On the critical determinants of cylinders', with C.A. Rogers, 1950
(Bibliog. 81).
5pp. typescript draft with ms. corrections.

Publications

- D.69 'Euclid's algorithm in certain quartic fields', 1950 (Bibliog. 82).
34pp. typescript draft with ms. corrections.
- D.70 'Note on a binary quartic form', 1950 (Bibliog. 83).
10pp. typescript draft with ms. corrections.
- D.71 'L'algorithm d'Euclide dans certains corps algébriques', 1950
(Bibliog. 84).
7pp. typescript draft, in English, labelled 'basis of lecture at Paris
congress Sept 1949'; 9pp. ms. draft (in French).
- D.72 'Study and Research in Mathematics', 1950 (Bibliog. 85).
9pp. typescript draft.
- D.73 'Sums of three positive cubes', 1950 (Bibliog. 87).
6pp. ms. draft; 7pp. typescript draft.
- D.74, D.75 'Recent progress in the geometry of numbers', 1950 (Bibliog. 91).

D.74 5pp. ms. draft with 3pp. ms. notes; 15pp. ms. draft
labelled 'Second draft (used at lecture)' and 'Congress lecture'.

D.75 13pp. typescript draft with ms. corrections.
- D.76 'On a principle of Lipschitz', 1951 (Bibliog. 88).
5pp. typescript draft labelled 'prelim to 88', with 4pp. ms. notes;
6pp. typescript draft.
- D.77 'On the class-number of binary cubic forms (I)', 1951 (Bibliog. 89).
8pp. typescript draft, entitled 'On binary cubic forms', labelled 'preliminary
to 89'; 11pp. typescript draft.

Publications

- D.78 'On the class-number of binary cubic forms (II)', 1951 (Bibliog. 90).
7pp. typescript draft.
- D.79 'On sequences of positive integers', with P. Erdős, 1951 (Bibliog. 92).
6pp. typescript and ms. draft.
- D.80 'Prime Numbers', 1951 (Bibliog. 96).
10pp. typescript draft with ms. corrections.
- D.81 'Sur un système de sphères qui recouvrent l'espace à n dimensions',
1951 (Bibliog. 98).
4pp. typescript draft, in English, entitled 'Note on a theorem of Rogers';
with covering note to Rogers, 22 May 1951, labelled 'Preliminary to 98';
3pp. typescript draft (in French).
- D.82 'Note on normal decimals', with P. Erdős, 1952 (Bibliog. 93).
8pp. photocopy of typescript draft.
- D.83 'Linear forms associated with an algebraic number-field', 1952 (Bibliog. 94).
15pp. ms. and typescript draft.
- D.84 'Note on a result of Chalk', 1952 (Bibliog. 95).
12pp. photocopy of typescript draft.
- D.85 'The covering of n dimensional space by spheres', with R.P. Bambah,
1952 (Bibliog. 97).
7pp. ms. and typescript draft.
- D.86 'The covering of space by spheres', 1952 (Bibliog. 99).
20pp. typescript draft.

Publications

- D.87 'Simultaneous Diophantine approximation', 1952 (Bibliog. 100).
15pp. typescript draft with ms. corrections.
- D.88 'The distribution of quadratic and higher residues', with P. Erdős, 1952 (Bibliog. 101).
16pp. photocopy of typescript draft.
- D.89-D.92 'The Higher Arithmetic', 1952. See also D.37.
The book, which became a very popular textbook, reached its fifth edition in 1982. 'It has undoubtedly been a source of joy and inspiration to many mathematicians both amateur and professional' (Memoir, p.167).
See C.86 for cover illustration of fifth edition.
- D.89 'Old material for book'.
Contents of a folder so inscribed, consisting of extensive ms. notes and drafts kept in their original order. Continuous sequences have been clipped together for ease of reference. Some material probably dates from 1947.
Professor B. J. Birch has contributed (February 1986) the following explanatory note:
'All of this can be regarded as material for his book on "Higher Arithmetic", though only a small proportion of these notes survived into the printed version.
Probably the material was "tested" in lectures at UCL (and maybe Bangor).'
- D.90 Correspondence with Hutchinson's University Library, publishers, 1951-57.
Correspondence with reviewers, L. Schoenfeld and P.T. Bateman, 1953, with 1p. ms. note of where reviews appeared.
- D.91, D.92 General correspondence with colleagues and others, 1952-61, arranged in alphabetical sequence.
- D.91 B - G D.92 L - W

Publications

- D.93 'The minimal points of a positive definite quadratic form', with
G.L. Watson, 1954 (Bibliog. 103).
5pp. typescript draft with ms. corrections.
- D.94 'Simultaneous Diophantine approximation', 1954 (Bibliog. 104).
34pp. typescript draft.
- D.95 Mathematika, vol.1, part 1, June 1954.
Davenport was responsible for the founding of this journal (see Memoir,
p.164), and remained an editor throughout his life. The first issue
contained 2 papers by him (Bibliog. 103 and 104).
Proof copy with Davenport's ms. corrections, including 1p. ms. notes.
- D.96 'Simultaneous Diophantine approximation', 1954 (Bibliog. 106).
5pp. typescript draft.
- D.97, D.98 'On a theorem of Furtwängler', 1955 (Bibliog. 105).
D.97 15pp. ms. draft.
D.98 19pp. typescript draft with ms. corrections.
- D.99-D.101 'Products of inhomogeneous linear forms', with H.P.F. Swinnerton-
Dyer, 1955 (Bibliog. 107).
D.99 2 letters from H.P.F. Swinnerton-Dyer, 1954, re publication
of paper, with 2pp. ms. notes and calculations entitled ' $n = 5$, $r = 1$,
 $s = 2$ ', and labelled 're 107'.
5pp. untitled ms. draft, with 2pp. ms. calculations.
D.100 33pp. untitled ms. draft (Swinnerton-Dyer's hand), labelled
'first version'.
D.101 44pp. typescript draft with ms. corrections.

Publications

- D.102 'The solubility of certain Diophantine inequalities', with K.F. Roth, 1955 (Bibliog. 108).
24pp. paginated draft.
- D.103 'Rational approximations to algebraic numbers', with K.F. Roth, 1955 (Bibliog. 109).
15pp. typescript draft with ms. corrections.
- D.104 'Le recouvrement de l'espace par des sphères', 1955 (Bibliog. 110).
12pp. ms. draft.
- D.105 'Indefinite quadratic forms in many variables', 1956 (Bibliog. 112).
26pp. typescript draft with ms. corrections.
- D.106 'Note on irregularities of distribution', 1956 (Bibliog. 113).
8pp. ms. draft.
- D.107, D.108 'Indefinite quadratic forms in many variables II', 1958 (Bibliog. 114).
D.107 34pp. ms. draft.
D.108 Proofs, with ms. corrections.
- D.109 'Indefinite quadratic forms in many variables (III)', with B.J. Birch, 1958 (Bibliog. 118).
See also D.112-D.120.
6pp. typescript draft, with ms. corrections by both authors.
- D.110, D.111 'On a theorem of Davenport and Heilbronn', with B.J. Birch, 1958 (Bibliog. 119).
See also D.112-D.120.
D.110 6pp. ms. draft (in Birch's hand), entitled 'Davenport's version of "A theorem of Davenport & Heilbronn"'.
19pp. ms. draft (in Davenport's hand), labelled 'superseded'.

Publications

- D.111 37pp. typescript draft with ms. corrections.
- D.112-D.116 Correspondence with B.J. Birch, June 1957-July 1958, re joint papers (Bibliog. 118 and 119).
Since Davenport collaborated with Birch on these two papers published in 1958, and as an accurate division of this material between them would be impossible, it has been arranged in a single chronological sequence.
- | | | | |
|-------|-------------------------|-------|------------------------|
| D.112 | June, July 1957 | D.115 | January, February 1958 |
| D.113 | August 1957 | D.116 | March-July 1958 |
| D.114 | September-December 1957 | | |
- D.117-D.120 Notes and drafts found with D.109-D.116, probably related to Bibliog. 118 and 119.
- D.117 2 ms. drafts, 5pp. and 11pp.
- D.118 2 ms. drafts on same subject, 7pp. (with 4pp. ms. notes) and 6pp.
- D.119 Miscellaneous ms. notes, drafts and calculations.
- D.120 Ms. notes by Birch.
- D.121 'The work of the Fields medallists. Dr. K.F. Roth', 1958 (Bibliog. 121).
5pp. typescript draft with ms. corrections; set of page-proofs.
- D.122-D.128 'Cubic forms in 32 variables', 1959 (Bibliog. 116).
- D.122 74pp. ms. draft.
- D.123, D.124 2 copies of 75pp. typescript draft, both with different ms. corrections.
- D.125 25pp. ms. draft, paginated 73-97, and headed '8 Synthesis'.
- D.126 14pp. ms. draft headed 'Cubic Forms. "Absolute" lemmas'.

Publications

D.127 1p. ms. notes headed 'History of cubic forms in 32 (later 16) variables'; 26pp. ms. draft headed 'B. Certain exponential sums'.

D.128 16pp. ms. draft headed 'G. Synthesis'.

(D.127, D.128 are the contents of a folder inscribed 'Cubic forms (old) historical interest'.)

D.129-D.131 'Indefinite quadratic forms', with D. Ridout, 1959 (Bibliog. 120).

D.129 8pp. ms. and typescript draft and notes, partially paginated, including 1p. in another hand.

D.130 26pp. ms. draft.

D.131 Set of page-proofs with ms. corrections.

D.132 'Some recent progress in analytic number theory', 1960 (Bibliog. 123).

12pp. typescript draft with ms. corrections; copy of J. Lond. Math. Soc., April 1960, including paper.

D.133 'On a theorem of P. J. Cohen', 1960 (Bibliog. 125).

2 ms. drafts, 7pp. and 8pp.

D.134 'Über einige neuere Fortschritte der additiven Zahlentheorie', 1960 (Bibliog. 127).

2 ms. drafts, 15pp. and 16pp.

D.135, D.136 'On Weyl's inequality and Waring's problem for cubes', with S. Chowla, 1961 (Bibliog. 124).

D.135 29pp. ms. draft.

D.136 8pp. ms. draft 're 124' and 5pp. ms. draft.

Publications

- D.137 'A note on binary cubic forms', 1961 (Bibliog. 126).
2 ms. drafts, 9pp. and 11pp; correspondence.
- D.138 'Equations of the form $f(x) = g(y)$ ', with D.J. Lewis and A. Schinzel, 1961
(Bibliog. 129).
13pp. ms. and typescript draft with ms. corrections.
- D.139 'Cubic forms in 29 variables', 1962 (Bibliog. 130).
23pp. typescript draft with ms. corrections.
- D.140, D.141 'The addition of norm forms', with B.J. Birch and D.J. Lewis, 1962
(Bibliog. 131).
D.140 13pp. ms. draft.
D.141 16pp. ms. draft, with 5pp. ms. notes.
- D.142 'A note on Diophantine approximation', 1962 (Bibliog. 133).
7pp. typescript draft with ms. corrections.
- D.143 'Exponential sums in many variables', with D.J. Lewis, 1962
(Bibliog. 135).
34pp. ms. draft with covering note to 'Bryan' (Birch).
- D.144 'Cubic forms in sixteen variables', 1963 (Bibliog. 134).
Set of galley-proofs with ms. corrections.
- D.145, D.146 'Notes on congruences (I)', with D.J. Lewis, 1963 (Bibliog. 136).
D.145 2 typescript drafts with ms. corrections, 9pp. and 12pp.
D.146 Set of page-proofs with ms. corrections; 2pp. ms. notes.

Publications

- D.147 'Notes on congruences (II)', with D.J. Lewis, 1963 (Bibliog. 137).
15pp. ms. draft with corrections.
- D.148 'Homogeneous additive equations', with D.J. Lewis, 1963 (Bibliog. 138).
46pp. ms. draft with corrections; note to publisher.
- D.149 'A problematic identity', 1963 (Bibliog. 140).
6pp. ms. draft.
- D.150 'A note on Diophantine approximation (II)', 1964 (Bibliog. 144).
15pp. ms. draft with corrections.
- D.151, D.152 'Two problems concerning polynomials', with A. Schinzel, 1964
(Bibliog. 146).
D.151 13pp. ms. draft; 12pp. typescript draft with ms. corrections.
D.152 5pp. ms. notes by A. Schinzel, dated 9.3.64, possibly
work for this paper (or for Bibliog. 145).
- D.153 'Non-homog. cubic eqns', with D.J. Lewis, 1964 (Bibliog. 148).
10pp. ms. draft, beginning: 'This is an account of a paper by Lewis
and myself which has been submitted to PLMS'.
- D.154, D.155 'On a theorem of Mrs. Turán', 1965 (Bibliog. 153).
D.154 8pp. heavily-corrected ms. draft, and photocopy of original
version without corrections.
D.155 7pp. photocopy of ms. draft with ms. corrections, and a
covering letter to B.J. Birch, 8 July 1964.
- D.156 ' $y^2 - x^3$ ', ?1965.
6pp. ms. draft with 2pp. ms. notes, labelled 'Early version, eventually
published as 159'.

Publications

- D.157 7pp. untitled ms. draft, labelled 'm/s of 158 (first folio missing)',
 ?1966.
- D.158 'Looking back', 1966 (Bibliog. 162).
 16pp. typescript with ms. corrections.
- D.159 'Small differences between prime numbers', with E. Bombieri, 1966
 (Bibliog. 163).
 33pp. photocopy of ms. draft, marked up for print.
- D.160 'A note on certain arithmetical constants', with A. Schinzel, 1966
 (Bibliog. 165).
 7pp. typescript draft with ms. corrections.
- D.161 'Cubic equations of additive type', with D.J. Lewis, 1966 (Bibliog. 167).
 68pp. typescript draft with ms. corrections.
- D.162 'Notes on congruences. III', with D.J. Lewis, 1966 (Bibliog. 169).
 8pp. typescript draft, with 1p. ms. list of references and 1p. ms.
 calculations.
- D.163 'Eine Bemerkung über Dirichlets L -Funktionen', 1966 (Bibliog. 171).
 17pp. ms. draft with corrections.
- D.164-D.169 'Diophantine approximation and sums of roots of unity', with A. Schinzel,
 1967 (Bibliog. 166).
- D.164 Correspondence, chiefly with A. Schinzel, re paper,
 November 1965-October 1966.
- D.165 Miscellaneous ms. notes and drafts.

Publications

D.166 'A problem connected with Diophantine approximation'.
6pp. ms. draft.

'Diophantine approximation and roots of unity'.
8pp. ms. draft.

D.167 21pp. ms. draft with corrections, labelled 'Versions of 166'.

D.168 15pp. ms. draft with corrections.

D.169 Photocopy of typescript draft, with ms. corrections and additions.

D.170-D.182 'Multiplicative number theory', 1967.

The book 'contains an extremely readable account of the analytic approach to the theory of the distribution of primes in arithmetic progressions' (Memoir, p.167). Davenport submitted a revised ms. in 1969 but the second edition (revised by H.L. Montgomery) did not appear until 1980.

For related material see C.182-C.193.

D.170-D.174 238pp. ms. draft with corrections. 5 folders.

D.170 includes covering note from publisher, August 1967, returning 'dead' material (now at D.170-D.177).

D.175 4pp. typescript index with ms. corrections.

D.176, D.177 Corrected proofs.

D.178-D.182 Photocopy of original ms. draft, with ms. corrections for revised version. 5 folders.

D.178 includes letter from Davenport, 4 April 1969, to Yu. V. Linnik re corrections, also mentioning that he was in hospital.

D.183 'On the large sieve method', with E. Bombieri, 1968 (Bibliog. 172).

17pp. ms. draft with corrections.

For correspondence and further drafts see G.37.

Publications

- D.184, D.185 'On the representation of positive integers as sums of three cubes of positive rational numbers', with E. Landau, 1968 (Bibliog. 174).
This paper was published in a memorial volume to Landau; the work had actually been done in 1935.
- D.184 Ms. notes and calculations, including 2 paginated sequences, 5pp. and 4pp.
6pp. notes by Landau.
- D.185 5pp. ms. draft; corrected proofs.
Also included is a letter from Marianne Landau on the death of her husband.
- D.186, D.187 'Bases for finite fields', 1968 (Bibliog. 175).
- D.186 Extensive ms. drafts and calculations.
- D.187 38pp. ms. draft with corrections.
- D.188 'A theorem on linear forms', with W.M. Schmidt, 1968 (Bibliog. 177).
23pp. photocopy of typescript draft.
- D.189-D.193 'A note on Thue's theorem', 1968 (Bibliog. 180).
- D.189 23pp. ms. draft 'Note on the Thue-Siegel Theorem'.
- D.190 3pp. ms. draft on 'Siegel's Theorem'.
- D.191 6pp. and 11pp. drafts and calculations on 'Thue's Theorem'.
- D.192 26pp. ms. draft.
- D.193 Corrected version of D.192 (photocopy).
- D.194, D.195 'Some inequalities involving trigonometrical polynomials', with E. Bombieri, 1969 (Bibliog. 181).
For correspondence re paper see G.38.
- D.194 23pp. ms. draft.
- D.195 14pp. photocopy of 'note on the large sieve inequality', with E. Bombieri. Early version of Bibliog. 181.

Publications

- D.196, D.197 'Correspondence with Baker relevant to 182, and two m/s'.
Contents of a folder so inscribed.
- D.196 Three letters from Davenport to A. Baker, July, September 1967, re material for joint paper published in 1969 (Bibliog. 182).
(Information from Professor B. J. Birch, February 1986.)
- D.197 'The numerical determination of rational approximations'.
6pp. draft.
- 'A non-homogeneous linear form in 2 variables'.
4pp. ms. draft.
- D.198 'Approx. to a real number by alg-integers', with W.M. Schmidt, 1969 (Bibliog. 183).
6pp. ms. draft.
- D.199 'Simultaneous equations of additive type', with D.J. Lewis, 1969 (Bibliog. 184).
105pp. photocopy of ms. draft with corrections; 4pp. ms. summary.
- D.200 Biographical article on G.H. Hardy commissioned by 'The Encyclopedia Americana', 1969.
Correspondence, January, February 1969; 2pp. ms. draft.
See C.133, C.134 for Davenport's lecture material on Hardy.
- D.201-D.203 'On writing mathematical papers', 1969 (unpublished).
- D.201 Correspondence, 1966, 1969; 2pp. ms. notes.
- D.202 Background material (printed matter).
- D.203 23pp. typescript draft with covering letter to Mrs. Davenport from L. J. Mordell, June 1969.
- Letters to Mrs. Davenport re paper from J.W.S. Cassels, October 1969, and V. Armitage, February 1970.

Publications

- D.204 'Two additive equations', with D.J. Lewis, 1971 (Bibliog. 186).
32pp. photocopy of typescript draft with ms. corrections.
- D.205 'Homogeneous quadratic equations', 1971 (Bibliog. 194).
10pp. photocopy of typescript draft.
- D.206 'Gaps between values of positive definite quadratic forms', with D.J. Lewis,
1971 (Bibliog. 195).
27pp. photocopy of typescript draft; 1p. instructions to printer;
1p. corrections.
- D.207 'Trigonometrical polynomials', published as 'The zeros of trigonometrical
polynomials', Mathematika, 19, 1972, 88-90, with the footnote:
 'This note has been prepared for publication by Professor
 H. Halberstam from a draft manuscript sent to him in 1967
 by the late Professor Davenport in the course of a corres-
 pondence on the large sieve inequality; specifically,
 Halberstam had asked Davenport whether the inequality
 might not have some applications in the theory of trigonometrical
 polynomials and the note came in reply to this query.'

3pp. ms. note by Davenport; letter from Halberstam returning it to him,
March 1968.

Letter to Mrs. Davenport from C.A. Rogers, March 1972, enclosing
photocopies of her husband's original draft and the proposed paper
Halberstam had prepared from it.
- D.208 Reviews by Davenport, 1938-64.

Arranged in chronological sequence by date of the publication of the
work reviewed.

Material includes review of L.J. Mordell's inaugural lecture as Sadleirian
Professor at Cambridge, published 1947.
- D.209 3pp. incomplete typescript draft of letter concerning a book, not by
Davenport, n.d.

Publications

D.210-D.213 'The collected works of Harold Davenport', edited by B.J. Birch,
H. Halberstam and C.A. Rogers, 1977.

D.210-D.212 Correspondence between the editors and with other
colleagues 1969-75.

D.210 1969, 1970 D.211 1974 D.212 1975

D.213 B.J. Birch's ms. notes for and drafts of introductions to papers
by Davenport.

Photocopies of Davenport's typescript notes on his own work. Part only;
for full version see A.10.

4pp. typescript index, with ms. corrections by B.J. Birch.

SECTION E RESEARCH NOTES AND DRAFTS E.1 - E.135

- E.1 -E.15 COLLABORATION WITH HELMUT HASSE, 1933-36
- E.16 -E.83 TITLED AND UNTITLED DRAFTS
- E.84 -E.102 MISCELLANEOUS NOTES AND CALCULATIONS
- E.103-E.126 NOTES ON WORK BY OTHERS
- E.127-E.135 WORK BY OTHERS

E.1-E.15 COLLABORATION WITH HELMUT HASSE, 1933-36

Davenport visited Hasse in Marburg in the 1930s (Memoir, p.161) and they collaborated on a paper, published in 1934 (Bibliog. 8). Most of the material here is Hasse's work but there is some correspondence and a draft for a further collaborative paper.

Davenport's other collaborators are represented in Sections D and G.

For further correspondence with Hasse, see G.116-G.122.

- E.1, E.2 Letters from Hasse, May 1933-November 1935, chiefly concerning the joint paper, mostly in English.
 - E.1 1933, 1934
 - E.2 1935
- E.3 'Gaussian sums in finite fields', by H. Davenport and H. Hasse. 12pp. typescript and ms. draft with ms. corrections.
- E.4, E.5 Miscellaneous ms. notes and calculations by Hasse, in English and German. 2 folders.

E.4 includes sets of notes dated 28 September 1933 and 10 December 1935.
- E.6 7pp. ms. draft, in German, by Hasse.

Research notes and drafts

- E.7-E.15 Copies of typescript drafts of papers by Hasse, in German, presumably sent by him to Davenport. Some have ms. corrections and some are dated, 1933-36.
9 folders.

E.16-E.83 TITLED AND UNTITLED DRAFTS

Probably many of these drafts were intended to form lectures or papers for publication, while others may be no more than extensive notes. A number of these are untitled and very few are dated.

Dated titled drafts

- E.16 'For a single irreducible polynomial', 1934.
5pp. ms.
- E.17 'Tschebotareff's constant $(\sqrt{2})^n$ ', 1939.
2pp. ms. with covering note to L. J. Mordell.
Folder also includes 2 additional, untitled drafts, each 3pp.
- E.18 'Three fourth powers', 1943.
4pp. ms., and 8pp. ms. labelled 'Revised version 17.10.43'.
- E.19 'Four fourth powers' (continuation of E.18).
6pp. ms. with 1p. ms. calculations.
Folder also includes 3pp. ms. notes, found with above, entitled '5 4-th powers'.
- E.20 'On $X_1^2 + Y_2^2$ ', 1946.
7pp. ms.

Research notes and drafts

- E.21 'Direct proof of Marshall Hall's Theorem', 1956.
2pp. ms., with 2pp. ms. entitled 'M. Hall. Difference sets', dated
9 May 1956.

Undated titled drafts

- E.22 'Polynomials mod x^4 '
7pp. ms.
- E.23 'Polynomials (mod p)'.
4pp. ms.
- E.24 'Vinogradov's work on the addition of primes'.
16pp. ms.
- E.25 'Primes in arithmetic progression'.
3pp. ms. with 1p. ms. notes.
- E.26 'On reduced positive definite quadratic forms'.
9pp. typescript, with 1p. ms. notes.
- E.27 'Indefinite quadratic forms'.
18pp. ms., with 1p. ms. notes.
- E.28 'The quadratic character'.
2pp. ms. with 3pp. ms. notes and calculations.
- E.29 'Characters (mod M)'.
4pp. ms., with 10pp. untitled ms. draft and notes.

Research notes and drafts

- E.30 'The Weierstrassian equation $y^2 = 4x^3 - g_2x - g_3$ '.
6pp. ms.
- E.31 'On a problem of Fekete'.
3pp. ms.
- E.32 'An introd. to Turán's book'.
10pp. ms. with reprint of paper presented by P. Turán and 6pp. ms.
notes and calculations.
- E.33 'Turán-Halász'.
6pp. ms.
- E.34 'Units in algebraic number fields'.
10pp. ms., with bibliography.
- E.35 'Distribution of Farey fractions'.
13pp. ms.
- E.36 'Diophantine equations in many variables'.
9pp. ms.
- E.37 'Exponential sums'.
3pp. ms., found in an envelope labelled '185? Dirichlet Rome vol. to
appear', possibly an early draft for Bibliog. 185.
- E.38 'On the cubic exponential sum'.
7pp. ms.

Research notes and drafts

- E.39 1 'Notes on Littlewood's Problem'.
 2 3pp. ms. with 4pp. ms. calculations.
 2 'Littlewood's Problem'.
 1 2pp. ms.
 2 Included here is a further ms. draft, with notes, of the same title,
 and 3pp. draft on 'The distribution of certain fractional parts'.
 3
- E.40 1 'The critical lattices ...'.
 6pp. ms. with 1p. ms. notes.
 3
- E.41 1 'The field $k(\sqrt{5})$ '.
 5pp. ms.
 3
- E.42 1 'Units'.
 10pp. ms., with 6pp. notes.
 3
- E.43 1 'Analytic treatments of the Kloosterman sums'.
 3pp. ms.
 3
- E.44 1 'Binary cubic forms with $D < O$ '.
 6pp. ms.
- E.45 1 'The product of three complex linear forms'.
 2pp. ms.
- E.46 1 'Four linear forms. Type I'.
 21pp. ms., with 4pp. ms. notes.
 Folder also includes ' (α) of Type I', 13pp. ms. found with the
 above.

Research notes and drafts

- E.47 'The congruence ...'.
4pp. ms.
- E.48 'A modification of Cauchy's inequality'.
3pp. ms.
- E 49 'Successive minima for L_1, L_2, L_3 '.
2pp. ms.
- E.50 'Macbeath's proof of Chalk's theorem'.
1p. ms.
- E.51 'Simplest version of Rogers'.
4pp. ms.
- E.52 'Ingham'.
5pp. ms.
- E.53 'A lemma concerning pairs of integer points'.
3pp. ms.
- E.54 'Uniform distribution'.
11pp. ms., with 10pp. ms. notes.
- E.55 'On the values of zeta ($\frac{1}{2} + it$)'.
5pp. ms., with a ms. note 'Birch'.
- E.56 'Quartic'.
2pp. ms., with 5pp. ms. notes and calculations.

Research notes and drafts

- E.57 'Modified definition of V_n '.
4pp. ms.
- E.58 'Note on some conjectures of Ramanujan'.
1p. ms., paginated '102'.
- E.59 'Extension of Heilbronn's Theorem'.
13pp. ms., variously paginated, possibly connected with Bibliog. 176.
- E.60 'Charaktere der Restklassengruppe mod (x^k, p) '.
2pp. ms., in German.
- E.61 'Squares in A.P.'.
3pp. ms.
- E.62 Shorter ms. drafts (some photocopies), with a ms. note 'copies sent to Don' (D.J. Lewis), kept together. All bear titles and most are paginated.
- E.63-E.65 Contents of an unlabelled binder, consisting of a sequence of unpaginated ms. drafts, possibly for a course of lectures, with some ms. notes. These have been divided into separate folders for ease of reference, and kept in their original order.
- E.63 15pp. ms. 'Various expansions and summations'; 8pp. ms. 'Analytic continuation'.
- E.64 14pp. ms. 'The gamma function'; 22pp. ms. 'Elliptic functions'.
- E.65 11pp. ms. 'Modular functions'; miscellaneous ms. notes, some paginated.

Research notes and drafts

E.66-E.68 'Miscellaneous math. mss and notes'.

Contents of a binder so inscribed, consisting of miscellaneous ms. drafts, notes and calculations. Some with titles. These have been divided into folders for ease of reference, and kept in their original order.

E.66 2pp. untitled (in another hand); 6pp. 'Hermite's process of continued reduction'; 5pp. miscellaneous notes and calculations; 9pp. 'Cassels S.D.A.'.

E.67 3pp. untitled; 2pp. re '3 k -th powers', with covering note; 8pp. (in another hand) 'Markoff numbers'; 9pp. 'Quadratic and higher residues'; 6pp. tables.

E.68 4pp. on 'various problems', 13 October 1954; 4pp. with 2pp. notes, on 'Simultaneous Diophantine Approximation'; 4pp. on 'On lattice points in n -dimensional star bodies'; 3pp. and 5pp. untitled.

E.69 Miscellaneous bibliographies, including 2 with titles: 'Waring etc. in Math. Rev.' and 'Sieve methods'.

E.70 Miscellaneous ms. lists of 'problems', probably intended to accompany undergraduate lecture courses.

Untitled drafts

E.71-E.83 With the exception of E.71 and E.72, which contain typescripts, all the material here consists of ms. drafts without dates or titles. In view of the scantiness of the information available, no attempt has been made to describe these drafts in detail.

13 folders.

Research notes and drafts

E.84-E.102 MISCELLANEOUS NOTES AND CALCULATIONS

Notebooks

- E.84 Untitled notebook, with a few pages used at each end, containing miscellaneous ms. notes and calculations. 1p. headed 'Numeri Abundantes'.
- E.85-E.87 3 exercise books, labelled 'Cassels 1', 'Cassels 2' and 'Cassels 3', containing notes and calculations.
- E.88 Exercise book, labelled 'Math.', containing miscellaneous ms. calculations.

Titled notes and calculations

- E.89 'Dyson's method for seven cubes'.
4pp. ms., chiefly calculations, with 2pp. ms. calculations re article by Dickson.
- E.90 'Elaboration of previous argument'.
2pp. ms.
- E.91 'Ternary cubic'.
12pp. ms. notes and calculations; 2 ms. tables entitled 'Properly primitive ternary forms'.
- E.92 'Various equivalences between character-sums'.
2pp. ms. notes with 3pp. ms. calculations.
- E.93 'Zero of Emden Function'.
2pp. ms. notes.
- E.94 Miscellaneous shorter notes, all titled. Five items.

Research notes and drafts

Untitled notes and calculations

E.95-E.102 Due to the dearth of information on these notes and calculations, no attempt has been made to describe them in detail. Groups of notes have been kept together; E.102 contains miscellaneous single sheets.

E.98 contains material cleared from Davenport's office desk after his death (information from Professor B. J. Birch, February 1986).

8 folders.

E.103-E.126 NOTES ON WORK BY OTHERS

This material falls into two parts. Firstly, notes made by Davenport at lectures given by others (E.103-E.117) and secondly, notes made by him on a particular publication, or line of work, of another (E.118-E.126).

Notes at lectures

E.103 'Lecture attended in Brussels on Alternating Algebra, May 1946'.
1p. ms. notes.

E.104-E.117 'Lectures attended', 1951-63 and undated.
Contents of a folder so inscribed.

E.104 1951-52 Seminar talks and lectures by P. Erdős.

E.105 1952 Seminar talks and lectures by K. Mahler, P. Erdős,
C.A. Rogers, H.A. Heilbronn.

E.106 1953 Lectures by K.F. Roth, K. Mahler, J.H.H. Chalk,
C.A. Rogers.

E.107 1954 Seminar talks and lectures by K. Mahler, L. Few.

E.108 1955 Lectures by T. Estermann, A. Renyi.

E.109 1956 Lectures by W.B. Pennington, B.J. Birch,
A. Oppenheim.

Research notes and drafts

- E.110 1956-57 Lectures by W.B. Pennington, J.W.S. Cassels,
P. Erdős, G.L. Watson.
- E.111 1957 Lectures by G.C. Shepherd, Danicic, W.J. LeVeque.
- E.112 1958-59 Lectures by L.J. Mordell, P. Erdős, A.E. Ingham.
- E.113 1960-63 Lectures by B.J. Birch, K. Mahler, P. Erdős.
- E.114 n.d. Seminar talks and lectures by E.S. Barnes, P. Erdős,
L. Few, Gelfond.
- E.115 n.d. Lectures by H. Halberstam, K.A. Hirsch, K. Mahler.
- E.116 n.d. Lectures by C.A. Rogers, K.F. Roth, C.L. Siegel,
G.L. Watson.

E.117 Shorter unidentified notes.

Included here is Mrs. Davenport's list of contents of material now at
E.103-E.117.

Davenport's notes on work by others

Although in many cases Davenport gave the date of publication of the
work, few of these notes are themselves dated. Therefore they have
been arranged in alphabetical order, with the exception of E.125, E.126,
where the contents of one of Davenport's own folders have been kept
together.

E.118, E.119 Material relating to Blichfeldt, collected or made by Davenport.
See also C.27-C.29.

E.118 2 letters from A. Brauer, 1932, to Blichfeldt.

'Remarks on work of Blichfeldt', n.d. (c.1947-50).

2pp. ms. notes by Davenport.

4pp. miscellaneous ms. notes on Blichfeldt, made by Davenport, n.d.
(c.1947-50).

'Various topics in the theory of numbers', 1953-54.

6pp. typescript draft of a lecture by Davenport, containing material on
'Blichfeldt's Principle'.

E.119 Ms. notes, some dated 1920-22, not in Davenport's hand.

Research notes and drafts

- E.120 'Richard Brauer. A note on systems of homogeneous algebraic equations', n.d.
3pp. ms. on paper published by Brauer in 1945.
- E.121 'Jacobi', n.d.
8pp. ms. draft and 1p. ms. calculations.
- E.122 'Mordell's work', n.d.
4pp. ms.

'Pólya's Problem in Amer. Math Monthly', n.d.
3pp. ms. on paper by G. Pólya.
- E.123 'Rademacher. Riemann-von Mangoldt Theorem', 7 July 1959.
5pp. ms.

'R. Remak. Über die Minkowskische Reduktion der definiten quadratischen Formen'.
3pp. ms. on paper published by Remak in 1938.
- E.124 'J.M. Vinogradov. On a general theorem concerning the distribution of the residues and non-residues of powers', n.d.
6pp. ms. on paper published by Vinogradov in 1927.

'J.V. Whitworth', n.d.
1p. ms. notes re Whitworth's thesis, 1947, for MSc. at Manchester University.
- E.125, E.126 'Miscellaneous math mss'.
Contents of a folder so inscribed.

E.125 Ms. notes on various topics made from Hardy-Littlewood.

Ms. notes on work by Hecke, including 'Über analytische funktionen und Verteilung von Zahlen mod eins' (published 1921).
Ms. notes on Lerche's formula.

Research notes and drafts

E.126 'Landau. Bedeutung der Pfeifferschen Methode für die analytische Zahlentheorie'.

Ms. notes on paper published by E. Landau in 1912.

3pp. ms. notes, headed 'B.M. Wilson'.

7pp. ms. notes and calculations.

E.127-E.135 WORK BY OTHERS

In alphabetical order. Of special interest is E.131, a selection and discussion of research problems by J.E. Littlewood, and Davenport's comments on them.

E.127 'A valuation of some information concerning finite fields', by J.H. Conway, n.d.

14pp. typescript.

E.128 'Research Problems', by H.T. Croft, August 1967.

'This set of problems went through various editions, and was published (in collaboration with R.K. Guy) in c.1983, under the title "Unsolved Problems in Intuitive Mathematics"'. (Information from Professor B.J. Birch, February 1986.)

28pp. duplicated typescript.

'Problems (mostly geometrical)', by H.T. Croft, n.d.

7pp. duplicated typescript.

Research notes and drafts

- E.129, E.130 Duplicated copies of early ms. drafts by A.E. Ingham of his 'Cambridge Tract', published in 1932 as The distribution of prime numbers.
- E.129 'The Theory of the Distribution of Primes. Chapter I', n.d.
- E.130 'Chapter I', n.d.
-
- E.131 'Research Problems', by J.E. Littlewood, n.d.
- Duplicated manuscript; 4pp. introductory material beginning 'This is for "Family" reading, aimed at present and former pupils ...' explaining purpose and history of selection of problems; 26pp. list of problems.
- The document is accompanied by Davenport's 2pp. typescript, 'Comments', n.d.
-
- E.132 'Difference of two positive definite quadratic forms', by D. Ridout, n.d. (4pp. ms.).
-
- E.133 Miscellaneous ms. notes by C.A. Rogers, n.d.
-
- E.134 Photocopies of ms. drafts by H.P.F. Swinnerton-Dyer, n.d.
-
- E.135 Unidentified.

SECTION F FACULTY OF MATHEMATICS, CAMBRIDGE F.1 - F.17

| | |
|-----------|--------------------------------------|
| F.1 -F.6 | GENERAL COMMITTEES |
| F.7 -F.9 | NEEDS OF FACULTY AND SUB-DEPARTMENTS |
| F.10-F.12 | APPOINTMENTS, 1960-69 |
| F.13 | REQUESTS FOR POST-GRADUATE PLACES |
| F.14-F.16 | EXAMINATION PAPERS |
| F.17 | MISCELLANEOUS |

F.1-F.6 GENERAL COMMITTEES, 1959-65

F.1-F.3 Policy Committee of the Faculty of Mathematics, 1959-64.
Notices of meetings, agendas, minutes and reports, arranged in chronological order.

| | | | |
|-----|---------|-----|------------------|
| F.1 | 1959-60 | F.3 | 1964-65 and n.d. |
| F.2 | 1961-63 | | |

F.4 Pure Mathematics Lectures Committee, 1962
Notice of meeting and proposals for lecture list.

F.5, F.6 Faculty Board of Mathematics, 1964-65.

F.5 Correspondence and committee minutes, mainly re newly-created Department of Applied Mathematics and Theoretical Physics (D.A.M.T.P.).

F.6 Notes and correspondence re affairs of D.A.M.T.P., October 1964.

Faculty of Mathematics, Cambridge

F.7-F.9 NEEDS OF FACULTY AND SUB-DEPARTMENTS, 1959-65

These papers largely consist of Statements of Needs of various departments, in various areas, such as teaching staff, new equipment, etc.

F.7 1959-60 F.8 1961-64 F.9 1965 and n.d.

F.10-F.12 APPOINTMENTS, 1960-69

This material largely consists of papers of the Appointments Committee of the Faculty of Mathematics. There is also a little correspondence re vacant posts, applications, requests for curricula vitae, etc.

F.10 1960-61 F.11 1962 F.12 1963-69

F.13 REQUESTS FOR POST-GRADUATE PLACES

In alphabetical order, 1964, 1965 only.

F.14-F.16 EXAMINATION PAPERS

F.14 2pp. untitled ms. list of examination questions, n.d.

F.15 2pp. ms. list of examination questions, with covering letter from J.W.S. Cassels, 1961, re suitability of one question.

F.16 Copies of examination papers for Mathematical Tripos, Part III, 1964 and 1967.

1964 Papers I - VI

1967 Paper 13. Diophantine Approximation

Faculty of Mathematics, Cambridge

F.17

MISCELLANEOUS

Shorter items, 1964, 1966 and n.d.

Includes letter and 3pp. report re Science Research Council funded project on 'Equations in many variables', 1966.

SECTION G CORRESPONDENCE G.1 - G.373

Although there are several substantial exchanges, many of the letters are incoming only, sometimes with a brief ms. note by Davenport of his reply (presumably sent in long-hand) on which ensuing correspondence may be based.

The content is essentially mathematical though some personal news from Davenport's long-term friends, colleagues and pupils may be included. Of special interest are the extensive exchanges with E. Bombieri, H.A. Heilbronn, K. Mahler and L.J. Mordell, while no correspondence with G.H. Hardy, however brief, lacks its characteristic quality. Davenport's long association with German mathematicians, many of whom became refugees in British universities including Cambridge, is well documented; several of the sequences are wholly or partly in German.

Mrs. Davenport's notes identifying correspondents and their connections with Davenport often accompany the letters and have been gratefully drawn upon in compiling the entries.

- | | | |
|-----|--|--------------------|
| G.1 | Adams, A. Mathematical puzzles on integers. | 1964 |
| G.2 | Aitken, A.C. Inequalities. | 1956, 1959-60 |
| G.3 | Ankeny, N.C. A research student of Davenport at Stanford 1947-48, later at Princeton and M.I.T. Mainly on number theory. | 1948-52, 1958 |
| G.4 | Ap Simon, H.G. 11pp. 'Notes on a Sunday Times brain teaser'. | n.d. probably 1957 |

Correspondence

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|---------------|--|--|
| G.5-G.7 | Armitage, J.V. | 1955-68 |
| | A research student of Davenport, later at King's College, London, and Durham. | |
| | General correspondence on research, appointments, publications. | |
| | G.5 | 1955-57 |
| | G.6 | 1958-61 |
| | G.7 | 1962-68 |
| G.8 | Atkin, A.O.L. | 1946, 1961, 1964 |
| G.9 | Austin, M.C | 1951 |
| G.10-G.12 | Bambah, R.P. | 1950-61 |
| | Bambah, an Indian mathematician, studied with Davenport in London and published a collaborative paper with him in 1952 (<u>Bibliog.</u> 97). | |
| | G.10 | 1950-53 |
| | G.11 | 1954 Arrangements for Bambah's Fellowship at St. John's College, Cambridge; includes list of publications and draft paper on 'Four Squares'. |
| | G.12 | 1961, 1965 (a letter from a pupil of Bambah on mathematical result). |
| G.13 | Barnes, E.S. | 1949, 1964 |
| G.14 | Basu, S.K. | 1947, 1966, 1968 |
| | A student of Davenport in London, 1945-47. | |
| G.15 | Bateman, P.T. | 1950, 1963-65 |
| | 1950 letter is <u>re</u> paper by R.P. Bambah (q.v.). Correspondence 1963-65 is on general research problems, appointments, publications, etc. | |
| G.16 | Behrend, F.A. | 1933-34, 1939 |
| | A German mathematician who was obliged to leave for Britain in 1939. Correspondence 1939 includes curriculum vitae, testimonials, list of publications, etc. | |

Correspondence

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|-----------|---|--|
| G.17 | Berlowitz, B. | 1967 |
| G.18 | Besicovitch, A.S. | 1943, 1947-48, 1950, 1955, 1959 |
| | Davenport had been a pupil of Besicovitch and succeeded him as Rouse Ball Professor at Cambridge. 1950 document is recommendation for the award of the de Morgan medal to Besicovitch (not signed). | |
| G.19 | Billing, G. | 1939, 1940, 1942, 1952 |
| | A Swedish mathematical and bridge-playing colleague at Manchester. | |
| G.20 | Birch, B.J. | 1959, 1966 |
| | Brief correspondence only. Birch was one of Davenport's most frequent collaborators; he contributed an account of his 'Work on the analytic theory of diophantine equations' to the <u>Memoir</u> (pp.171-176) and was an editor of the posthumous 'Collected Works'. | |
| G.21-G.23 | Blaney, H. | 1947-54 |
| | A research student of Davenport at London. | |
| | G.21 | 1947, November-December. Frequent letters on results and publication. |
| | G.22 | 1948, January-July. Similar correspondence, includes draft paper October-December. |
| | G.23 | 1949, 1953-54. |
| G.24 | Blundon, W.J. | 1956-57 |
| | Mainly publication of Blundon's papers on 'multiple covering', and 'packing'; includes figures. | |
| G.25 | Boas, R.P. Jnr. | 1948 |
| G.26 | Bohr, H. | 1947, 1949 |
| | Davenport's publications in <u>Acta Mathematica</u> . | |
| G.27 | Bollobás, B. | 1963-65, 1967 |
| | Mainly arrangements for Bollobás to come to Trinity College for academic year 1963-64 and including Davenport's recommendation and 'account of studies' during year at Cambridge. | |

Correspondence

- G.28-G.39 Bombieri, E. and others 1963-74
Bombieri, an Italian mathematician working at Milan, Pisa and Princeton, visited Davenport in 1963 and 1964 and published four collaborative papers with him (Bibliog. 150, 163, 172, 181. See Memoir, pp.164-165).
- G.28 1963-64 Includes Davenport's report on Bombieri's work in Cambridge 1963-64 and arrangements for Davenport to lecture in Milan.
- G.29 1965, January-July Correspondence, notes and calculations; includes draft paper by Bombieri on 'The Statistical theory of Dirichlet L-functions'.
- G.30 1965, August Correspondence and drafts on primes paper (published Proc.Roy.Soc. A, 1966).
- G.31 1965, August 'Small differences of primes', two ms. drafts, one each by Davenport and Bombieri, related to correspondence.
- G.32 1965, September-December Continuing correspondence and drafts, on 'prime numbers' paper and on 'large sieve' paper (published 1968, see G.38).
- G.33 1966, January-April
- G.34 1966, June-September Includes letter from H. Halberstam.
- G.35 1966, October-December Mainly on sieve paper.
- G.36 Extensive notes by Davenport kept with 1966 correspondence.
- G.37 1967 Includes revised version of 'large sieve method' July, and correspondence on polynomials (leading up to collaborative paper published in 1969).
- G.38 1968, January-July Includes arrangements re publication of 'large sieve' paper, and a 7pp. ms. by Davenport 'The case $N\delta$ small', and letters of comment.
- G.39 1969 Also includes press-cutting re award to Bombieri of the Fields medal at International Mathematical Congress, Vancouver, 1974.

Correspondence

| | | |
|-----------|---|------------------|
| G.40 | Bosanquet, L.S. | 1948, 1949 |
| G.41 | Brandon, R.W. | 1953 |
| G.42 | Brauer, A. 1931, and Brauer, R. 1953 Brothers, both German refugee mathematicians. | |
| G.43 | Brjuno, A.D. | 1966 |
| G.44 | Broadbent, A. | 1963 |
| G.45 | Brown, D.S. 4-colour problem. | 1965 |
| G.46 | Buckell, J.F. Four Square Representation. | 1965 |
| G.47 | Buhl, G. | 1954 |
| G.48 | Bullen, K.E. | 1934 |
| G.49 | Burgess, D.A. A former research student of Davenport at U.C.L. Correspondence on 'character sums'. | 1963, 1965, 1968 |
| G.50 | Burt, C. Printing of journals and especially <u>Mathematika</u> . | 1954 |
| G.51 | Capildeo, R. A former research student. One letter only. | 1961 |
| G.52-G.56 | Cassels, J.W.S. General correspondence on research and publications. | 1946-69 and n.d. |
| G.52 | November-December 1946, 1947 | |
| G.53 | 1948, 1949, 1951 | |
| G.54 | 1954, 1955, 1956 | |

Continued

Correspondence

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|------------|---|---|
| G.55 | 1963, 1969 | |
| G.56 | Undated; includes sequences of ms. notes by Cassels, perhaps 1950s, and contents list of proposed book by him titled 'An introduction to the geometry of numbers'. | |
| G.57 | Chalk, J.H.H. | 1947, 1950, 1969 |
| | A former research student of Davenport in London. Letter of 1947 is addressed to C.A. Rogers. | |
| G.58 | Champernowne, A. | n.d. |
| G.59, G.60 | Chandrasekhar, S. | 1946-48, 1964 |
| G.59 | 1946-48 | On functional equations; also includes some personal news. |
| G.60 | 1964 | |
| G.61 | Chase, R.E. | 1962 |
| | Proof of unique factorisation. | |
| G.62 | Châtelet, F. | 1946 |
| G.63 | Chatland, H. | 1948-49 |
| | Mainly on collaborative paper (<u>Bibliog.</u> 74). | |
| G.64-G.66 | Chowla, S. | 1933-63 |
| | Chowla, a distinguished Indian pure mathematician, studied at Cambridge, where his supervisor was J.E. Littlewood. He returned to academic posts in India, moving to USA in 1948. The surviving correspondence is sporadic and does not include any of Davenport's replies. | |
| G.64 | 1933-34 and n.d. | Includes testimonials for Chowla from J.E. Littlewood and G.H. Hardy. Letter of 16 February 1933 has a ms. note 'Chowla to Walfisz' (see G.335). Some of the undated material may be from Chowla's earlier period at Cambridge. |
| G.65 | 1947-49 | |
| G.66 | 1958-60 | Mainly <u>re</u> collaborative paper (<u>Bibliog.</u> 124), 1962, 1963. |

Correspondence

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|------------|---|------------------|
| G.67 | Cohen, P.J. Research and publications. | 1959, 1960, 1965 |
| G.68, G.69 | Cohn, H. | 1948-54, 1960-62 |
| | G.68 1948-54 Research and recommendations. | |
| | G.69 1960-62 Mainly <u>re</u> proposed 75th birthday symposium for L.J. Mordell. | |
| G.70 | Cole, A.J. A research student of Davenport in London; mainly <u>re</u> thesis. | 1952-53 |
| G.71 | Collingwood, E. Centenary of London Mathematical Society; includes reprint of article on subject by Collingwood. | 1965 |
| G.72 | Courant, R. Early correspondence is from Göttingen, with news of German mathe- maticians. Courant left for America in August 1934. Later correspondence is renewing contact after the war. | 1934, 1945, 1947 |
| G.73-G.76 | Coxeter, H.M.S. An undergraduate friend of Davenport at Cambridge, using his youthful nickname of 'Dave' in the letter of 1928 and signing his own letters 'Donald'. Includes some personal news as well as mathematical research. | 1928-59 |
| | G.73 1928, 1929, 1932 (from Coxeter's mother), 1935. Includes 3pp. 'Prop' by Coxeter. | |
| | G.74 1939 | |
| | G.75 1945-48 | |
| | G.76 1951-53, 1958-59 | |
| G.77 | Cridland, N. Packing of small circles. Enquiry originally addressed to S.T. Shovelton and passed on by him to Davenport. | 1954-56 |

Correspondence

| | | |
|------------|---|-----------------------|
| G.78 | Davies, M. | 1947 |
| | A research student of Davenport on his visit to Stanford. | |
| G.79 | Davis, C.S. | 1945, 1949, 1955 |
| G.80 | de Bruijn, N.G. | 1951-52, 1955 |
| | Correspondence 1951-52 is <u>re</u> suitable prize problem for Amsterdam Mathematical Society. | |
| G.81 | Delaunay, B. | 1963 |
| G.82 | Derry, D. | 1938 |
| | Minkowski's work. | |
| G.83 | Dirac, G.A. and others | 1964-65 |
| G.84, G.85 | Dolciani, M.P. | 1953-55 |
| | G.84 Arrangements to spend sabbatical leave working with Davenport on theory of numbers. | |
| | G.85 Miscellaneous ms. notes and drafts. | |
| G.86 | Drain, N.A. | various dates 1950-65 |
| G.87 | DuVal, P. | 1935 |
| | One letter only, from Princeton. Mainly mathematical but refers to J. von Neumann's proposed visit to Cambridge. | |
| G.88 | Dyson, F.J. | 1942, 1946 |
| | Includes laudatory report by Davenport on 'fellowship thesis by F.J. Dyson: "Two problems in the theory of numbers".' | |
| G.89 | Eichler, M. | 1962 |
| | One letter only. | |
| G.90 | Elliott, P.D.T.A. | 1966 |

Correspondence

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|-------|--|---------------------------|
| G.91 | Ennola, V. Research, draft paper on lattice constants. | 1957-59 |
| G.92 | Erdős, P. Although Erdős and Davenport collaborated on many publications 1936-63, the surviving correspondence is very meagre and is mainly from Erdős on various mathematical discoveries. Correspondence 1960 is enquiry <u>re</u> Erdős's problem on sets of congruences. | 1934, 1960, 1961-65, 1969 |
| G.93 | Errera, A. | 1953, 1955 |
| G.94 | Estermann, T. Davenport's ms. letter only. | 1949 |
| G.95 | Evelyn, J. | 1950, 1960 |
| G.96 | Fenna, D. Paper on 'Simultaneous diophantine approximation to series'. | 1958 |
| G.97 | Fjellstedt, L. Davenport's carbon only, on a paper by Fjellstedt. | 1956 |
| G.98 | Flanders, H. | 1969 |
| G.99 | Flett, T.M. | 1949-50 |
| G.100 | Godwin, H.J. Davenport's unpublished 1938 work on inhomogeneous linear forms. | 1955 |
| G.101 | Goodstein, R.L. Appreciation of Davenport's paper 'Study and research in mathematics' (<u>Bibliog.</u> 85). | 1950 |
| G.102 | Grünwald, G. | 1939 |
| G.103 | Guy, R.K. | 1958, 1964 |
| G.104 | Hadamard, J. Brief exchanges only. | 1947, 1952, n.d. |

Correspondence

- G.105 Halberstam, H. 1957, 1962-68
Research, publications, appointments.
- G.106 Haldane, J.B.S. 1952
One letter only, on an inequality, with 1p. attached calculations by Davenport headed 'Haldane'.
- G.107 Hall, M. 1947-48, 1958
General correspondence on research and publications, including collaborative paper (Bibliog. 72).
- G.108 Hall, P. 1965
One letter only.
- G.109-G.114 Hardy, G.H. 1938-47
Hardy, one of the most distinguished British mathematicians of his day, was Sadleirian Professor of pure mathematics at Cambridge 1931-42. Although this did not coincide with Davenport's undergraduate period, he and Hardy were colleagues at Trinity during the 1930s and they collaborated on a second edition of 'Hardy-Wright' (An Introduction to the Theory of Numbers, by G.H. Hardy and E.M. Wright, 1938), see G.112, G.113; see G.351 for brief correspondence re 3rd edition.
Hardy's communications are letters and cards in his distinctive spiky handwriting, often with parentheses and balloons of afterthoughts, some in pencil and few dated other than by postmark.
- G.109 1938, 1939
- G.110 1940 Appeal on behalf of H. Heilbronn.
- G.111 1941, n.d. Undated letter (perhaps 1942) refers to 'an undergraduate here called Dyson who is very promising' [F.J. Dyson].
- G.112 1944, May-December and undated. Mainly on revisions of 'Hardy-Wright' but including a little general mathematical information.
- G.113 1944 Davenport's letter and revision of Chapter 24, October, and miscellaneous comments on other parts of book.
- G.114 1945, 1946, 1947

G.115 Haselgrove, C.B. 1960
One letter only, on mathematical tables.

G.116-G.122 Hasse, H. 1932-52, 1963, 1967
Hasse was a distinguished German mathematician who invited Davenport to work with him in Marburg (see also G.209); Hasse was director of the Mathematical Institute in Göttingen 1934-45. Davenport admired his work greatly though they did not agree on political matters. Hasse's pre-war letters are all in very fluent English, with some personal and general as well as mathematical news. His letters in German use the 'du' form right to the end.

G.116 1932, November, December

G.117 1933, January-June. Letter of 20 January has a ms. note by G.H. Hardy.

G.118 1933, July-December. Hasse's letters of 20 and 24 October and 11 November include news of German mathematicians in Germany and abroad.

G.119 1934 Includes material re Hasse's and Davenport's joint paper (Bibliog. 8), and Hasse's appointment at Göttingen.

G.120 1935

G.121 1936, 1938, 1939

G.122 1946, 1947, 1949, 1952, 1963, 1967 (death of Hasse's wife).

G.123-G.142 Heilbronn, H.A. and others 1934-67
Heilbronn, a German-Jewish mathematician, was a life-long friend of Davenport, a colleague at Trinity College, Cambridge, and at University College, London, and a collaborator on many papers. When Heilbronn was forced to leave Göttingen in 1933, Davenport seems to have initiated the moves to help him find a post in Britain, and when he was temporarily interned as an 'enemy alien' in the Isle of Man in 1940, it was Davenport whom Gertrud Heilbronn (mother of Hans) appointed to be in charge of her affairs (G.125 and see also G.110 for an appeal by G.H. Hardy on behalf of Heilbronn). A fuller account of Heilbronn's career, including his friendship with Davenport, can be found in the Memoir by J.W.S. Cassels and A. Fröhlich (Biographical Memoirs of Fellows of the Royal Society, 22, 1976), an offprint of which is included at G.123.

Continued

Correspondence

G.123-G.142
(Cont'd.)

- G.123 1934 Includes a letter from L. J. Mordell; 1935 (card only, re Heilbronn's acceptance of Bevan Fellowship at Trinity).
- G.124 1939 Two letters only.
- G.125 1940 Includes correspondence re internment, Heilbronn's family affairs, release and service in army.
- G.126 1946 Includes undated letter from G.H. Hardy re help for Heilbronn's parents, tentatively dated 1943 by Mrs. Davenport.
- G.127 1947 Research, publications (Bibliog. 54).
- G.128 1948
- G.129 1949
- G.130 1950
- G.131 1951-54 Includes various notes and drafts and a 'Rough draft' for a paper 'On cubic fields' by Davenport.
- G.132 1955-58 Research, publications, appointments.

University expansion and shortage of mathematical teachers

Heilbronn disagreed with the proposed large increase in undergraduate numbers, feeling that standards of entry and of teaching would fall. Davenport shared this view and helped to organise questionnaires for information from university colleagues, formulate memoranda and make representations on the subject. In 1963 Heilbronn resigned from his Chair at Bristol and left Britain for USA and Canada (see Memoir, pp.122, 124-25). Almost all the documents in G.133-G.140 are concerned with the question of university expansion, but there are also a few references to the affairs of the London Mathematical Society and the Mathematical Tables Committee.

- G.133 1959 Heilbronn's letter to A.U.T., December 1959, headed 'University expansion. Quantity or quality'.
- G.134 1960, January-March. Includes draft letter and memorandum to Chairman, U.G.C. (Sir Keith, later Lord, Murray) and draft questionnaire.
- G.135 1960 Material re 'Questionnaire on recruitment of university teachers in mathematics' circulated April 1960 by Heilbronn and Davenport.

Correspondence

G.136 1960, May Replies and information from colleagues in Cambridge, sent to Davenport in answer to questionnaire.

G.137 1960, May Tables of results and information, and continuing correspondence, including a little on affairs of L.M.S.

G.138 1960, June-July Mainly re 'Second Memorandum' on university expansion, to be sent to U.G.C.

G.139 1960, June-July Correspondence re proposed conference on shortage of teachers of mathematics. Davenport was asked to chair the conference but declined because of his views on university expansion. (Correspondence kept with the Heilbronn material.)

G.140 1960 Miscellaneous notes and drafts for 'Second Memorandum', 'Notes on the questionnaire', etc.

G.141 1962-63

G.142 1964, 1965, 1967 Brief correspondence only.

| | | |
|-------|---------------|---|
| G.143 | Heinhold, J. | 1948 |
| G.144 | Henstock, R. | 1963 |
| G.145 | Hirsch, K.A. | 1952 |
| G.146 | Hlawka, E. | 1948, 1952-56, 1962, 1963 General correspondence on research and publications, and some personal. Includes (1963) humorous poem 'To Professor Mordell on arrival to the city of Vienna'. |
| G.147 | Hodge, W.D.V. | 1954, 1965 Correspondence 1954 is re P. Erdős. |
| G.148 | Hofreiter, N. | 1951 |
| G.149 | Hooley, C. | 1963, 1965 |
| G.150 | Hopf, H. | 1955, 1958 |

Correspondence

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|--------------|--|------------------------|
| G.151 | Hua, L-K Later President of Academia Sinica. | 1939, 1940, 1949, 1964 |
| G.152, G.153 | Ingham, A.E. and others | 1950 |
| G.152 | 1950 Correspondence with Ingham and others <u>re</u> volume of essays on G.H. Hardy. | |
| G.153 | 1950, 1954, 1956, 1960, 1963 | |
| G.154 | Inkeri, K. Quadratic forms. | 1948-49 |
| G.155-G.157 | Jaeger, J.C. A friend of Davenport at Cambridge in 1930s before returning to Tasmania and (from 1951) Canberra. Early letters are addressed to 'Dave'. | 1936-57 |
| G.155 | 1936-44 | |
| G.156 | 1945-48 | |
| G.157 | 1950, 1957 | |
| G.158 | Jarnik, V. A Czech mathematician, renewing contact with UK colleagues. | 1946 |
| G.159 | Jenkins, G.M. | 1961 |
| G.160 | Kanagasabapathy, P. Research and publications. | 1951-52, 1962-63, 1968 |
| G.161 | Kemmer, N. On 'Physics teaching in Britain'. | 1956 |
| G.162 | Kestelman, H. Letters to Davenport in California, with news of UCL and Britain. | 1947, 1948 |
| G.163 | Khan, N.A. | 1954 |
| G.164 | Knapowski, S. Polish research student at Cambridge. | 1959, 1963, 1966 |

Correspondence

- | | | |
|--------------|--|---------------------------|
| G.165 | Kober, H. | 1934-35 and undated, 1942 |
| | A German refugee mathematician. Correspondence 1930s is from Breslau, correspondence 1942 from Birmingham. | |
| G.166 | Kosambi, D.D. | 1961 |
| G.167 | Kreisel, G. | 1958 |
| G.168 | Lang, S. | 1963-64 |
| | Comments on Davenport's research notes and publications. | |
| G.169 | Ledermann, W. | 1958 |
| | Includes 6pp. ms. note by Davenport 'A question concerning quadratic forms'. | |
| G.170 | Leech, J. | 1958 |
| G.171 | Lehmer, D.H. | 1948 |
| G.172, G.173 | LeVeque, W.J. | 1961, 1963 |
| | G.172 1961 Correspondence on proposed 'Compilation of a Topical History of the Theory of Numbers'. Includes draft proposal, report (not favourable) of American Mathematical Society Committee, Davenport's draft comments, etc. | |
| | G.173 1963 Includes 6pp. ms. note by Davenport, 'On Weyl's criterion for uniform distribution' later published jointly with LeVeque and Erdős (<u>Bibliog.</u> 142) and a related note by LeVeque on Weyl's criterion. | |
| G.174 | Levy, M. | 1950 |
| | Delay lines. | |

Correspondence

G.175-G.184 Lewis, D.J.

1957-68

Lewis, a professor of mathematics at Ann Arbor, Michigan, was a close friend and frequent collaborator on papers, some published after Davenport's death. Much of the correspondence reflects their friendly and hospitable relationship as well as research, visits and publications, and general news of the mathematical scene. A little correspondence from Carolyn Lewis is included.

See also C.115-C.129.

G.175 1957-58 (Bibliog. 116).

G.176 1959-60

G.177 1961

G.178 1962 (Bibliog. 136, 137, 139), visits, lectures

G.179 1963 (Bibliog. 137, 138, 139, 141, 145)

G.180 1964 (Bibliog. 145, 148)

G.181 1965

G.182 1966 (Bibliog. 167, 169)

G.183 1967

G.184 1968

G.185 Linnik, Yu. V.

1950-69 (not all dated)

General correspondence, including Russian translation of Davenport's
Multiplicative number theory.

G.186 Littlewood, D.E.

1952-53, 1955

G.187 Littlewood, J.E.

1931

Card only.

Correspondence

- | | | |
|--------------|--|--------------------|
| G.188, G.189 | London Mathematical Society | 1952-53 |
| | Correspondence and papers November 1952-January 1953 <u>re</u> finances, publishing policy, etc., with Treasurer of the Society, Royal Society, colleagues, etc. | |
| G.188 | Correspondence, notes for meetings. | |
| G.189 | Minutes, accounts, background information. | |
| G.190 | McAndrew, H. | 1959 |
| G.191 | Macbeath, A.M. | n.d. |
| G.192 | Mack, J. | 1963 |
| G.193 | McLeod, J.B. | 1963 |
| G.194-G.201 | Mahler, K. | 1933-67 |
| | Mahler, a refugee German mathematician, was a colleague of Davenport at Manchester (where L.J. Mordell had obtained support for him) and a long-term friend. | |
| G.194 | 1933-34, 1940 (one letter only, from Isle of Man where Mahler was interned). | |
| G.195 | 1945 (<u>Bibliog.</u> 47), 1946 | |
| G.196 | 1947-49 | |
| G.197 | 1950-51, 1953 | |
| G.198 | 1954-55 Includes some reference to the founding of, and papers for, <u>Mathematika</u> . | |
| G.199 | 1956-57 | |
| G.200 | 1958-59, 1961 | |
| G.201 | 1962-63. Letter of 4 March 1963 announces Mahler's decision to accept research chair at Australian National University, Canberra. | |
| | 1967 | (one letter only). |

Correspondence

- | | | |
|-------------|--|---------------|
| G.202 | Mann, H.B. | n.d. |
| G.203 | Matthews, K.R. | 1963-66 |
| G.204 | Mayer, A. | 1950 |
| | A German refugee, thanking Davenport for help with publication. | |
| G.205 | Mendelsohn, N.S. | 1949 |
| G.206 | Milne, E.A. | 1926-27, 1945 |
| | Milne was Davenport's tutor in applied mathematics at Manchester, 1924-27. Letters of 1926-27 are re Davenport's Scholarship at Trinity (Milne's own college, to which he was devoted), with advice on directions of study. Letter of 1945 is on current leaders in mathematics. | |
| G.207 | Montgomery, H.L. | 1969 |
| G.208-G.232 | Mordell, L.J. | 1927-68 |
| | <p>Mordell, a distinguished mathematician of American origin, with a special interest in number theory, was Fielden Professor of Mathematics at Manchester when Davenport took his first degree there. The Manchester school of mathematics was particularly strong in the 1930s, and included several refugee mathematicians; Davenport also joined it as Assistant Lecturer in 1937. Mordell succeeded Hardy in the Sadleirian Chair at Cambridge 1945-53 and remained in contact with Cambridge mathematics until his death in 1972. Davenport was among his closest friends. Mordell recognised his quality from a very early stage (see G.208), helped him to share his own special interest in the geometry of numbers, and, according to J.W.S. Cassels, looked on Davenport as 'his spiritual heir' (<u>Biographical Memoirs of Fellows of the Royal Society</u>, 19, 1973, pp.493-520).</p> <p>The later correspondence (from about 1944, when Christian names began to be used) provides interesting general information on the mathematical scene as well as continuing exchanges on research problems and papers. There are also occasional contributions from Mabel Mordell.</p> <p>G.208 1927 (re award of Derby Scholarship to assist Davenport at Trinity), 1929 (suggestions for reading and research; Mordell sent his draft papers to the young Davenport for comment).</p> <p>G.209 1930 Letter of 27 November suggests Davenport should take up the 'splendid opportunity' to go to Marburg to work with and teach English to Hasse.</p> | |

Correspondence

| | | |
|-------|---|---|
| G.210 | 1931 | Research and publications, mainly on congruences. |
| G.211 | 1932-33 | |
| G.212 | 1934, 1935 | |
| G.213 | 1936 (one letter only), 1938, 1939 (one letter only). | |
| G.214 | 1942, 1943, 1944 | |
| G.215 | 1945, 1946 | |
| G.216 | 1947 (includes comments on <u>Bibliog.</u> 56), 1948 | |
| G.217 | 1949 (not all dated). Some refer to death and obituaries of G.H. Hardy. | |
| G.218 | 1950 | |
| G.219 | 1951 | |
| G.220 | 1952 | |
| G.221 | 1953 | |
| G.222 | 1954 | |
| G.223 | 1955 | |
| G.224 | 1956 | |
| G.225 | 1957 | |
| G.226 | 1958 | |
| G.227 | 1959 | |
| G.228 | 1960 (one letter only), 1961 (includes draft paper by Mordell 'On a Pellian Equation Conjecture', and a 2pp. untitled ms. note by Davenport). | |
| G.229 | 1962 | |
| G.230 | 1963, 1964 (includes draft paper by Mordell) | |
| G.231 | 1965 | |
| G.232 | 1967 (one letter only), 1968 (one letter only) | |

Correspondence

| | | |
|-------|---|---------|
| G.233 | Muses, C.A. | 1959 |
| G.234 | Neugebauer, O. | 1938 |
| G.235 | Niven, I. | 1956 |
| G.236 | O'Baoghail, M. Triangle of minimum area. | 1954 |
| G.237 | Olds, D. | 1958 |
| G.238 | Oppenheim, A. Correspondence and research notes, mainly on quadratic forms, also on new University of Malaya, Singapore. | 1946-52 |
| G.239 | Orde, H.L.S. Prime factors of a large number. | 1958 |
| G.240 | Ormonde, Marquess of Equations in high numbers, with 2pp. draft reply. | 1959 |
| G.241 | Ostrowski, A. 'Schubfachprinzip'. | 1958 |
| G.242 | Pedoe, D. | 1954-56 |
| G.243 | Pennington, W.B. Includes 11pp. draft paper by Pennington 'On Widder's inversion formula'. | 1960 |
| G.244 | Perron, O. | 1946 |
| G.245 | Philipp, W. Littlewood's problem. | 1964 |
| G.246 | Phillips, E. G. | 1951 |

Correspondence

- G.247 Pitman, J. 1962, 1965 and n.d.
Research, appointments. Includes material made available by B. J. Birch: research notes on 'Cubic Problem', 4pp. note by Davenport on 'A Theorem of Rado' and 7pp. ms. draft by Davenport on 'Miss Pitman's simplification' of Bibliog. 119.
- G.248-G.251 Pólya, G. and Pólya, S. 1947-64
Davenport and his wife made the acquaintance of George and Stella Pólya on their Stanford visit 1947-48, and remained lifelong friends.
- G.248 1947-48
- G.249 1949 Includes letter (7 May) from A.E. Ingham re G.H. Hardy.
- G.250 1950-51 Includes (November 1950) reference to Davenport's decision not to accept permanent post at Stanford.
- G.251 1956-64 Various dates, shorter exchanges.
- G.252 Popova, H. 1952
Includes draft research papers by Popova and correspondence from A.S. Besicovitch.
- G.253-G.255 Prasad, A.V. 1946-68
Prasad was a research student of Davenport in London, working on theory of numbers, before returning to India.
- G.253 1946-50
- G.254 1952, 1954
- G.255 1955, 1968 (re thesis)
- G.256 Pye, D.R. 1947
- G.257 Rado, R. various dates 1934-68
Rado was a refugee mathematician in Cambridge in 1933. His letter to Davenport on his appointment to the Chair of Pure Mathematics at Reading in 1954 expresses his gratitude for Davenport's consistent support.

Correspondence

| | | |
|-------------|--|-----------------------|
| G.258 | Ramanujam, C.P. | 1962, 1965 |
| G.259 | Rankin, R. | various dates 1950-63 |
| G.260 | Redei, L. Hungarian mathematician. | 1949, 1953, 1959 |
| G.261 | Remak, R. | 1938 |
| G.262 | Rendle, A.B. Comments on paper. | 1954 |
| G.263 | Reuter, G.E.H. | n.d. |
| G.264 | Richert, H-E. | 1954 |
| G.265 | Ridout, D. | 1958, 1959 |
| G.266 | Robinson, G. de B. Invitation to contribute a book on number theory to new series 'Mathematical Expositions'. | 1941 |
| G.267 | Robinson, R.M. Minkowski's results on packing of tetrahedra. Includes comments by J.W.S. Cassels. | 1959-60 |
| G.268-G.278 | Rogers, C.A. and others Rogers was one of Davenport's most distinguished research students at University College, London, where he had been an undergraduate before war service at the Ministry of Supply and where he later held the Astor Chair. He collaborated with Davenport on several papers 1947-50 on the geometry of numbers, and was first author of the Royal Society <u>Memoir</u> of Davenport. | 1945-69 |
| G.268 | 1945, appointment as Demonstrator at UCL, 1946 (one letter only). | |
| G.269 | 1947 Frequent reports on research and departmental news, sent to Davenport in USA. | |
| G.270 | 1948 Departmental news, research, publications (<u>Bibliog.</u> 70, 71, 73, 79). | |

Correspondence

- G.271 1949 Includes research notes by Rogers 'On theorems of Markoff, Hurwitz and Segre' and 'Non-homogeneous quadratic forms'.
- G.272 1950 (Bibliog. 81).
- G.273 1952, 1953 (Davenport's carbon only), 1954 (research, appointments, includes note by Davenport for Nature on Rogers's appointment to Chair at Birmingham).
- G.274 1955
- G.275 1956, 1957
- G.276 1958 Appointment at UCL.
- G.277 1964 Includes correspondence with R.F. Wrighton on packing of spheres, 6pp. note by Davenport on the problem and comments by Rogers.
- G.278 1965, 1969
-
- G.279, G.280 Rogers, K. 1951-55, 1963, 1964
A research student of Mordell, and later of Davenport, who later worked in USA.
- G.279 1951, 1953 Includes research note by Rogers 'The inhomogeneous minima of indefinite Hermitian forms'.
- G.280 1954-55, 1963, 1964
-
- G.281 Romanoff, N. 1935, 1937
-
- G.282, G.283 Roth, K.F. various dates 1951-57, 1964-65
Roth was a research student and later a colleague of Davenport at UCL and wrote collaborative papers with him (see Memoir, p.163).
- G.282 1951 Includes 4pp. ms. note 'On certain sets of integers' (shortened version prepared by Davenport of a paper by Roth) and French translation by Davenport.
- G.283 1954, 1956-57, 1964, 1965

Correspondence

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|--------------|---|---------------|
| G.284 | Rumney, M. | 1947, 1964 |
| G.285 | Sadler, D.H. | 1928, 1940-46 |
| | Sadler was a contemporary of Davenport at Cambridge. Card of 1928 congratulates 'Dave' on Yeats prize; correspondence 1940-46 describes wartime work for Admiralty, raids on Bath, visit to Germany and meeting with Hasse 1945, etc. | |
| G.286 | Saelman, B. | 1952 |
| | Problem in elliptic integrals. | |
| G.287 | Salié, H. | 1931, 1933 |
| G.288 | Sawyer, D.B. | 1957, 1961 |
| G.289 | Scherk, P. | 1951 |
| | Theorem on addition of residue classes. | |
| G.290 | Schinzel, A. | 1962, 1966-69 |
| | A Polish mathematician and graduate student of Davenport at Cambridge, who collaborated with him on several papers. | |
| G.291 | Schmid, H.L. | 1937 |
| G.292 | Schmidt, F.K. | 1960 |
| G.293, G.294 | Schmidt, W.M. | 1965-69 |
| | Schmidt spent part of the academic year 1966-67 in Cambridge and wrote several collaborative papers with Davenport. | |
| G.293 | Correspondence, mainly on publications (<u>Bibliog.</u> 173, 183, 185, 188). | |
| G.294 | Ms. drafts by Davenport for work with Schmidt, 4pp. and 20pp. | |
| G.295 | Schnitzer, F. | 1952-57 |
| | Various research problems. | |

Correspondence

- | | | |
|-------------|---|------------------|
| G.296 | Schoenfeld, L. | 1967 |
| | Large sieve problem. | |
| G.297 | Schwarz, S. | 1947 |
| G.298 | Shovelton, S.T. | 1956 |
| G.299-G.303 | Siegel, C.L. | 1938-68 |
| | <p>Siegel, a distinguished German mathematician, was born in Berlin. Much of his pre-war academic life was spent in Göttingen, to which he returned in 1951 after residence in USA. Of special interest is G.303, Siegel's account of events in his life and recollections of many leading figures in German mathematics. This appears to have been related to Davenport, and written up by him, in 1966 during his stay in Göttingen as Gauss Professor (see G.301).</p> <p>G.299 1938, 1939 (letter of 16 July includes suggestion that Siegel and Davenport should meet in Denmark in March 1940, referred to in the recollections).</p> <p>G.300 1941, 1942 (from Princeton), 1954-57, 1964.</p> <p>G.301 1965-66 Correspondence and arrangements re Gauss Professorship for Davenport at Göttingen, May-July 1966. Includes notices of lectures and draft in German of <u>Bibliog.</u> 171. See also C.108-C.114.</p> <p>G.302 1966-68</p> <p>G.303 Siegel's recollections. These are ms. accounts in Davenport's hand: 'Siegel', 5pp. dated 20 and 22 July 1966; 'Siegel', 5pp. dated 26 July 1966; 'Siegel At Kneser's', 5pp. dated 27 July 1966.</p> | |
| G.304 | Sierpinski, W. | 1959, 1963, 1964 |
| | Mainly re publications in <u>Acta Arithmetica</u> , including <u>Bibliog.</u> 149. | |
| G.305 | Smith, C.A.B. | 1951 |
| G.306 | Smith, G.S. | 1953, 1955 |
| | Research problems and notes, mainly fractions for irrational numbers. | |
| G.307 | Spencer, D.C. | 1959 |
| | Includes comment by J.W.S. Cassels. | |

Correspondence

| | | |
|-------|---|---------------|
| G.308 | Sprenger, E. Paper on 'Odd numbers', redrafted by Davenport. | 1953 |
| G.309 | Sprindžuk, V.G. | 1967, 1969 |
| G.310 | Srinivasan, B.R. | 1962 |
| G.311 | Stark, H. | 1966-67 |
| G.312 | Steen, S.W.P. Research note. | n.d. |
| G.313 | Steward, G.C. Translation of a Russian paper by Kotelnikoff. | 1952 |
| G.314 | Stoller, G. Waring's problem. | 1960 |
| G.315 | Swinerton-Dyer, H.P.F. Correspondence, research notes and problems (not all dated) including collaborative paper (<u>Bibliog.</u> 107). | 1953-57 |
| G.316 | Szegő, G. Correspondence 1956 includes letters <u>re</u> symposia at 1958 Congress and a memorandum by S. Bergman on complex variables. | 1948-49, 1956 |
| G.317 | Szekeres, G. | 1958 |
| G.318 | Szele, T. Includes research note on 'Davenport's theorem'. | 1951 |
| G.319 | Taussky-Todd, O. | 1950, 1957 |
| G.320 | Titchmarsh, E.C. One letter only. | 1957 |
| G.321 | Todd, J.A. | 1945 |

Correspondence

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|-------------|---|---|
| G.322 | Tschebotareff, G.N. | 1955 |
| | <u>Re</u> recent death of his father. | |
| G.323 | Turán, P. and Turán, V. | 1934, 1947, 1964-67 |
| | Research and publications, including contributions to memorial volume for E. Landau (<u>Bibliog.</u> 172). | |
| G.324 | Ursell, H.D. | 1969 |
| G.325 | Uspensky, J.V. | 1947 |
| G.326 | Vallance, L.S. | 1955-57 |
| G.327 | van der Corput, J.G. and van der Corput, J. | 1946-48, 1952-53, 1961 |
| | Visits, publications, research. Includes a little personal correspondence. | |
| G.328 | van der Pol, B. | 1953 |
| G.328A | van der Waerden, B.L. | 1932-33 |
| | Comments on draft papers by Davenport. | |
| G.329 | Vandiver, H.S. | 1949 |
| G.330-G.334 | Varnavides, P.L. | 1947-60 |
| | Varnavides was a research student of Davenport at London and subsequently worked abroad. The correspondence is mainly on research and publications and includes drafts of papers submitted by Varnavides. | |
| G.330 | 1947-48 | |
| G.331 | 1950-51 | |
| G.332 | 1952-54 | |
| G.333 | 1955-56 | Includes various drafts of papers on quadratic forms. |
| G.334 | 1957, 1959-60 | |

Correspondence

G.335, G.336 Walfisz, A. 1930-33, 1936, 1949-57

Pre-war correspondence is from Radošć; post-war correspondence is from Tiflis.

G.335 1930, 1931

1932-33 On research and publications by Walfisz and S. Chowla, and including two drafts of paper by Chowla 'On the class-numbers of binary quadratic forms' (in Walfisz's hand) and copy of letter by Walfisz to Chowla. See G.64.

1936

G.336 1949, 1954, 1956-57 Brief correspondence, mainly on exchange of reprints.

G.337 Ward, G.W. 1964

Contemporary of Davenport at Trinity.

G.338-G.344 Watson, G.L. 1950-60

After taking a mathematics degree at Trinity, Cambridge, in 1930, Watson entered the Indian Civil Service. On returning to Britain, he became a mature research student (part-time) of Davenport in London and wrote a collaborative paper with him. Despite the paucity of letters from Davenport, the correspondence gives a full account of research, publications and career and includes several draft papers.

G.338 1950

G.339 1951

G.340 1952 Includes research note.

G.341 1953 Includes drafts, etc. for collaborative paper (Bibliog. 103), and other research notes.

G.342 1954 (one letter only), 1955 (includes drafts for papers and research notes).

G.343 1956 (one letter only), 1957 (includes research note), 1958 (includes research note).

G.344 1959 Includes draft papers, and 5pp. ms. draft for part of Bibliog. 119.

1960

Correspondence

- G.345 Watson, G.N. 1933, 1945
Correspondence 1933, on a problem of Davenport, includes ms. notes for a solution by Watson.
Correspondence 1945 is re Davenport's draft obituary of W.E.H. Berwick (Bibliog. 65) and includes ms. suggestions and additions by Watson.
- G.346 Whitehart, F.E. 1950
Elementary proof of the prime number theorem.
- G.347 Whiteley, J.N. c.1959-60
Research and publications, including draft papers. Few letters dated.
- G.348 Whyte, L.L. 1949, 1952
Correspondence and notes re points on a sphere.
- G.349 Williams, W.L.G. 1948
Invitation to Davenport to a Chair at McGill.
- G.350 Wonham, W.M. 1959
Random noise.
- G.351 Wright, E.M. 1952, 1957
Correspondence 1952 is re 3rd edition of 'Hardy and Wright' Introduction to the theory of numbers (published 1954).
- G.352 Youngs, J.W.T. 1958
- G.353 Zeeman, E.C. 1965
Proposal for National Mathematics Research Centre.
- G.354 Zervos, S.P. 1952
Mathematical papers of P. Zervos (father of S.P.).
- G.355 Zulauf, A. 1954-56
Research and publications on prime numbers.
- G.356 Zygmund, A. 1954
Includes note by Davenport in reply to problem.
- G.357 Shorter scientific correspondence (not indexed). In alphabetical order.

Correspondence

G.358-G.372 References, appointments, theses, requests for advice

15 folders, in alphabetical order.

| | | | |
|-------|-------|-------|-------|
| G.358 | A | G.366 | N |
| G.359 | B (1) | G.367 | P |
| G.360 | B (2) | G.368 | T |
| G.361 | C | G.369 | U |
| G.362 | E | G.370 | W (1) |
| G.363 | F | G.371 | W (2) |
| G.364 | H | G.372 | Y |
| G.365 | J | | |

G.373 'Cranks' (Davenport's description).

Some with replies by Davenport, or notes for a reply by colleagues.

1 box.

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17, 1971, 187-192.

- (1) 1931. On the distribution of quadratic residues (mod p). *J. Lond. Math. Soc.* **6**, 49-54.
- (2) 1931. On Dirichlet's L-functions. *J. Lond. Math. Soc.* **6**, 198-202.
- (3) 1932. On the distribution of the l th power residues (mod p). *J. Lond. Math. Soc.* **7**, 117-121.
- (4) 1932. On a generalization of Euler's function $\phi(n)$. *J. Lond. Math. Soc.* **7**, 290-296.
- (5) 1933. On certain exponential sums. *J. für Math.* **169**, 158-176.
- (6) 1933. On the distribution of quadratic residues (mod p) (second paper). *J. Lond. Math. Soc.* **8**, 46-52.
- (7) 1933. Über numeri abundantes. *Sitzungsber. Preuss. Akad. Wiss. Berlin*, pp. 830-837.
- (8) 1934. (With H. HASSE.) Die Nullstellen der Kongruenzetafunktionen in gewissen zyklischen Fällen. *J. für Math.* **172**, 151-182.
- (9) 1935. On the addition of residue classes. *J. Lond. Math. Soc.* **10**, 30-32.
- (10) 1935. Note on mean value theorems for the Reimann Zeta-function. *J. Lond. Math. Soc.* **10**, 136-138.
- (11) 1936. (With H. HEILBRONN.) On Waring's problem for fourth powers. *Proc. Lond. Math. Soc.* (2), **41**, 143-150.
- (12) 1936. (With H. HEILBRONN.) On the zeros of certain Dirichlet series. *J. Lond. Math. Soc.* **11**, 181-185.
- (13) 1936. The meromorphisms of an elliptic function-field. *Proc. Camb. Phil. Soc.* **32**, 212-215.
- (14) 1936. (With H. HEILBRONN.) On an exponential sum. *Proc. Lond. Math. Soc.* (2), **41**, 449-453.
- (15) 1936. (With H. HEILBRONN.) On the zeros of certain Dirichlet series (second paper). *J. Lond. Math. Soc.* **11**, 307-312.
- (16) 1936. (With P. ERDŐS.) On sequences of positive integers. *Acta Arithmetica*, **2**, 147-151.
- (17) 1937. On some infinite series involving arithmetical functions. *Quart. J. Math.* **8**, 8-13.
- (18) 1937. (With H. HEILBRONN.) On Waring's problem: Two cubes and one square. *Proc. Lond. Math. Soc.* (2), **43**, 73-104.
- (19) 1937. (With H. HEILBRONN.) Note on a result in the additive theory of numbers. *Proc. Lond. Math. Soc.* (2), **43**, 142-151.
- (20) 1937. On primitive roots in finite fields. *Quart. J. Math.* **8**, 308-312.
- (21) 1937. On some infinite series involving arithmetical functions (II). *Quart. J. Math.* **8**, 313-320.
- (22) 1937. Note on a result of Siegel. *Acta Arithmetica*, **2**, 262-265.
- (23) 1938. Note on an identity connected with Diophantine approximation. *Proc. Camb. Phil. Soc.* **34**, 27.
- (24) 1938. On the product of three homogeneous linear forms. *J. Lond. Math. Soc.* **13**, 139-145.
- (25) 1938. On the product of three homogeneous linear forms (II). *Proc. Lond. Math. Soc.* (2), **44**, 412-431.
- (26) 1939. On the product of three homogeneous linear forms (III). *Proc. Lond. Math. Soc.* (2), **45**, 98-125.
- (27) 1939. Character sums in finite fields. *Acta Mathematica*, **71**, 91-121.
- (28) 1939. Minkowski's inequality for the minima associated with a convex body. *Quart. J. Math.* **10**, 119-121.
- (29) 1939. A simple proof of Remak's theorem on the product of three linear forms. *J. Lond. Math. Soc.* **14**, 47-51.
- (30) 1938. Sur les sommes de puissances entières. *C.R. hebdom. Acad. Sci. Paris*, **207**, 1366-1368.
- (31) 1939. On sums of positive integral k th powers. *Proc. Royal. Soc. Lond. A*, **170**, 293-299.

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- (33) 1939. On Waring's problem for cubes. *Acta Math.* **71**, 123-143.
- (34) 1942. On sums of positive integral k th powers. *Amer. J. Math.* **64**, 189-198.
- (35) 1939. On Waring's problem for fourth powers. *Annals of Math.* **40**, 731-747.
- (36) 1939. (With P. ERDŐS.) On sums of positive integral k th powers. *Annals of Math.* **40**, 533-536.
- (37) 1942. On Waring's problem for fifth and sixth powers. *Amer. J. Math.* **64**, 199-207.
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Bibliography

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INDEX OF CORRESPONDENTS

| | |
|---------------------------------|--|
| ADAMS, A. | G.1 |
| ADAMS, J. F. | G.136 |
| ADRIAN, Edgar Douglas, Baron | A.61, A.76 |
| AITKEN, Alexander Craig | G.2 |
| AITKEN, Sir Robert | G.139 |
| ANKENY, Nesmith C. | G.3 |
| ANNAN, Noël Gilroy, Baron | A.70 |
| AP SIMON, H. G. | G.4 |
| ARCHBOLD, J. W. | A.47 |
| ARMITAGE, J. Vernon | A.76, D.203, G.5-G.7 |
| ASHBY, Eric, Baron | A.76 |
| ATKIN, A. O. L. | G.8 |
| AUSTIN, M. C. | G.9 |
| | |
| BAILEY, W. N. | A.57, A.62 |
| BAKER, Alan | A.77, D.196 |
| BAMBAH, R. P. | G.10-G.12 |
| BARNES, Eric S. | G.13 |
| BASU, S. K. | G.14 |
| BATEMAN, Paul T. | D.90, G.15 |
| BEHREND, Felix A. | G.16 |
| BERLOWITZ, Bernard | G.17 |
| BERNDT, Bruce | G.37 |
| BESICOVITCH, Abram Samoilovitch | A.42, A.62, A.77, G.18, G.252 See also B.57 |
| BILLING, Gunnar | G.19 |
| BIRCH, Bryan John | A.77, D.112-D.116, D.143, D.155, D.210-D.212, G.20, G.92 |
| BLANEY, Hugh | G.21-G.23 |
| BLUNDON, W. J. | G.24 |

Index of correspondents

| | |
|-------------------------------|---|
| BOAS, R. P. Jr. | G.25 |
| BOHR, Harald | G.26 |
| BOLLOBÁS, Béla | A.77, G.27 |
| BOMBIERI, Enrico | G.28-G.39 |
| BOSANQUET, L. Stephen | A.57, A.62, G.40, G.152 |
| BOWMAN, Frank | A.62 |
| BOYS, Samuel Francis (Frank) | G.136 |
| BRAGG, Sir (William) Lawrence | A.70 |
| BRANDON, R. W. | G.41 |
| BRAUER, Alfred | E.118, G.42 |
| BRAUER, Richard | G.42 |
| BRJUNO, A. D. | G.43 |
| BROADBENT, J. Alun A. | A.62, G.44 |
| BROUGHTON, Arthur | A.77 |
| BROWN, David Spencer | G.45 |
| BUCKELL, J. F. | G.46 |
| BUHL, G. | G.47 |
| BULLEN, Keith Edward | G.48 |
| BURGESS, David Albert | A.77, G.49 |
| BURKILL, John Charles | A.62, A.77 |
| BURNABY, John | A.39 |
| BURT, Sir Cyril | G.50 |
| BUTLER, Richard Austen, Baron | A.77 |
| | |
| CAPILDEO, R. | G.51, G.242 |
| CASSELS, John William Scott | A.62, D.203, F.15, G.52-G.56, G.267, G.307 |
| CHALK, John H. H. | G.57 |
| CHAMPERNOWNE, Arthur | G.58 |
| CHANDRASEKHAR, Lalitha | G.60 |
| CHANDRASEKHAR, Subrahmanyam | A.47, A.62, A.70, A.78, G.59, G.60 |
| CHASE, R. E. | G.61 |

Index of correspondents

| | |
|--|-----------------------------|
| CHATELET, François | G.62 |
| CHATLAND, Harold | D.60, G.63 |
| CHAUNDY, Theodore William | D.66 |
| CHOWLA, S. | G.64-G.66 |
| CLEMMOW, P. C. | G.136 |
| COHEN, Paul Joseph | G.67 |
| COHN, Harvey | A.78, G.68, G.69 |
| COLE, A. J. | G.70 |
| COLLINGWOOD, Sir Edward | A.78, G.71 |
| CONWAY, John H. | D.91, E.127 |
| COOPER, Sir William Mansfield | A.57, A.78 |
| CORCORAN, John P. | D.91 |
| COULSON, Charles Alfred | A.47, A.70 |
| COURANT, Richard | G.72 |
| COXETER, Harold Scott MacDonald (Donald) | A.62, A.70, A.78, G.73-G.76 |
| COXETER, Lucy | A.47, G.73 |
| CRIDLAND, Nigel | G.77 |
| | |
| DAINTON, Frederick Sydney, Baron | A.74 |
| DAVIES, Merton | G.78 |
| DAVIS, Clive S. | G.79 |
| de BRUIJN, N. G. | G.80 |
| DELAUNAY, B. | G.81 |
| DERRY, Douglas | A.63, A.79, G.82 |
| DE WITTE, Paul | A.79 |
| DIENES, Paul | G.268 |
| DIRAC, Gabriel A. | G.83 |
| DOLCIANI, Mary Patricia | G.84, G.85 |
| DRAIM, Nick A. | A.79, D.91, G.86 |
| DRAZIN, Michael | A.63 |
| DUBREIL, Paul | C.145 |
| DUFF, Patrick William | A.79 |
| DUMIR, Vishwa Chander | G.12 |

Index of correspondents

| | |
|-------------------------------|------------------------------------|
| DuVAL, Patrick | A.79, G.87 See also A.53 |
| DYSON, Freeman John | G.88 |
| EDDINGTON, Sir Arthur Stanley | See B.58 |
| EDKINS, C. W. | A.24, A.39, A.47 |
| EGGLESTON, H. G. | A.63 |
| EICHLER, M. | G.89 |
| ELLIOTT, Peter D. T. A. | A.80, G.90 |
| ENNOLA, Veikko | G.91 |
| ERDÖS, Paul | A.80, D.91, G.92 See also D.210 |
| ERRERA, Alfred | G.93 |
| ESTERMANN, T. | A.80 See also G.94 |
| EVANS, Benjamin Ifor, Baron | G.276 |
| EVELYN, Sir John (Jack) | G.95 |
| FENNA, Donald | G.96 |
| FEW, L. | G.254 |
| FJELLSTEDT, L. | G.97 |
| FLANDERS, Harley | G.98 |
| FLETT, T. M. | G.99 |
| FRIEDLANDER, F. G. | G.136 |
| FRÖHLICH, Albrecht | A.63 |
| GILLIS, J. | A.47 |
| GODWIN, H. J. | G.100 |
| GOODSTEIN, R. L. | G.101 |
| GRÜNWARD, G. | G.102 |
| GUY, Richard K. | G.103 |

Index of correspondents

| | |
|---------------------------------------|--|
| HADAMARD, Jacques | G.104 |
| HALBERSTAM, Heini | A.63, A.70, A.81, D.207, G.34, G.83, G.105 See also A.5 |
| HALDANE, John Burdon Sanderson | G.106 |
| HALL, Marshall | G.107 |
| HALL, Philip | A.60, A.70, A.81, G.108, G.136 See also B.71, B.72 |
| HARDY, Godfrey Harold | A.39, A.42, A.52, G.109- G.114, G.126 See also B.92, C.133, C.134, D.200, G.117, G.217, G.249 |
| HASELGROVE, C. B. | G.115 |
| HASSE, Helmut | A.81, E.1, E.2, G.116-G.122 See also G.114, G.285, G.303 |
| HAYMAN, Walter Kurt | A.63, A.81 |
| HEAP, A. | A.38 |
| HEILBRONN, Hans Arnold | A.57, A.63, A.81, G.68, G.123-G.142 See also D.39, G.110 |
| HEINHOLD, J. | G.143 |
| HENSTOCK, Ralph | G.144 |
| HIRSCH, Kurt A. | A.63, A.81, G.145 |
| HLAWKA, Edmund | A.81, G.146 |
| HODGE, Sir William (Vallance Douglas) | G.136, G.147, G.316 |
| HODGKIN, Sir Alan (Lloyd) | A.70 |
| HOFREITER, N. | G.148 |
| HOLLOND, H. A. | A.81 |
| HOOLEY, Colin | G.149 |
| HOPF, Heinz | G.150 |
| HOWARTH, Leslie | A.48, A.63 |
| HUA, Loo-Keng | G.151 |

Index of correspondents

| | |
|-------------------------------------|--------------------------------------|
| INGHAM, Albert Edward | E.129, E.130, G.152, G.153, G.249 |
| INKERI, K. | G.154 |
| ISRAEL, Neil | G.92 |
| JAEGER, John | A.82 |
| JARNIK, V. | G.158 |
| JEFFERY, G. B. | A.48, A.56 |
| JEFFREYS, Bertha, Lady | A.82 |
| JENKINS, G. M. | G.159 |
| JONES, W. Burton | G.84 |
| KANAGASABAPATHY, P. | G.160 |
| KEMMER, Nicholas | G.161 |
| KESTELMAN, Hyman | A.82, G.162 |
| KHAN, Nisar Ahmed | G.163 |
| KITSON CLARK, George Sidney Roberts | A.82 |
| KNAPOWSKI, S. | G.164 |
| KOBER, Hermann | G.165 |
| KOSAMBI, D. D. | G.166 |
| KREISEL, G. | G.167 |
| LANDAU, Edmund | See D.184, D.185 |
| LANDAU, Marianne | D.185 |
| LANG, Serge | G.168 |
| LEDERMANN, Walter | G.169 |
| LEECH, John | G.170 |
| LEHMER, Dick H. | G.171 |
| LEHMER, Emma | A.82 |
| LEVEQUE, William J. (Bill) | G.172, G.173 |
| LEVY, M. | G.174 |

Index of correspondents

| | |
|--------------------------------|---|
| LEWIS, Donald J. | G.175-G.184 |
| LIGHTHILL, Sir (Michael) James | A.82 |
| LINFOOT, Edward Hubert | A.48, A.57 |
| LINNIK, Yu.V. | A.82, G.185 |
| LITTLEWOOD, D. E. | G.186 |
| LITTLEWOOD, John Edensor | A.41, A.82, E.131, G.187 |
| LOGAN, M. | A.64 |
| LONDON MATHEMATICAL SOCIETY | A.60, A.90, G.188, G.189 |
| | |
| McANDREW, H. | G.190 |
| MACBEATH, Alexander Murray | A.64, G.191 |
| McCREA, Sir William Hunter | A.64 |
| MACK, John | G.192 |
| MCLEOD, J. B. | G.193 |
| MAHLER, Kurt | A.57, A.64, A.83, G.194-G.201 |
| | |
| MANN, Heinrich B. | G.202 |
| MARTIN, Sir David Christie | A.71 |
| MATTHEWS, K. R. | G.203 |
| MAYER, Alfred | G.204 |
| MENDELSON, Nathan S. | G.205 |
| MILLER, J. C. P. | A.83 |
| MILNE, Edward Arthur | A.48, D.37, G.206 |
| MONTGOMERY, Hugh Lowell | G.38, G.207 |
| MORDELL, Louis Joel | A.30, A.50, A.52, A.64, A.83, D.203, E.17, G.123, G.203-G.232 See also A.3, G.69 |
| | |
| MORRELL, A. J. H. | A.64 |
| MOTT, Sir Nevill Francis | A.64 |
| MURDOCH, B. H. | G.83 |
| MUSES, C. A. | G.233 |

Index of correspondents

| | |
|---|------------------------------------|
| NEUGEBAUER, O. | G.234 |
| NEUMANN, Bernhard | A.64 |
| NIVEN, Ivan | G.235 |
| NYHOLM, Sir Ronald (Sydney) | A.71 |
| O'BAOGHAILL, Mary | G.236 |
| OFFORD, A. Cyril | A.49, A.64, A.83 |
| OLDS, Douglas | G.237 |
| OPPENHEIM, Tan Sri Sir Alexander | G.238 |
| ORDE, H. L. S. | G.239 |
| ORMONDE, James Arthur Norman Butler, 6th Marquess of | G.240 |
| OSTROWSKI, A. | G.241 |
| PAGE, Arthur | A.57 |
| PARS, Leonard Alan | A.39, A.84 |
| PEARSON, Egon | A.71 |
| PEDOE, D. | G.242 |
| PENNINGTON, W. B. | A.65, A.71, G.243 |
| PERRON, Oskar | G.244 |
| PHILIPP, Walter | G.245 |
| PHILLIPS, Edgar G. | A.65, G.246 |
| PITMAN, Jane | A.84, G.247 |
| POLKINGHORNE, John Charlton | A.84 |
| PÓLYA, George | D.92, G.248-G.251 See also D.55 |
| PÓLYA, Stella | D.92, G.248-G.251 |
| POPOVA, Helen | G.252 |
| PRASAD, A. Vindhyachal | G.253-G.255 |
| PYE, Sir David (Randall) | A.54, A.56, G.256 |

Index of correspondents

| | |
|--------------------------------|---|
| RADO, Peter | A.74 |
| RADO, Richard | A.49, A.65, A.71, A.85, G.257 |
| RAMANUJAM, C. P. | G.258 |
| RANKIN, Robert A. | A.65, G.259 |
| REDEI, L. | G.260 |
| REMAK, Robert | G.261 |
| RENDLE, A. B | G.262 |
| RÉNYI, Alfred | A.80 |
| REUTER, G. E. H. | G.263 |
| RICCI, Giovanni | G.28 |
| RICHERT, Hans-Egon | G.264 |
| RIDOUT, D. | E.132, G.265 |
| ROBERTS, Donald | A.65 |
| ROBINSON, G. de B. | G.266 |
| ROBINSON, Raphael M. | D.164, G.267 |
| ROBSON, R. | A.85 |
| ROGERS, Claude Ambrose | A.85, D.41, D.207, D.210- D.212, E.133, G.268-G.278 See also A.3, A.4, C.167, D.81, G.57 |
| ROGERS, Kenneth | G.279, G.280 |
| ROMANOFF, N. | G.281 |
| ROSEN, David | A.85 |
| ROTH, Klaus Friedrich | G.282, G.283 |
| ROUGHTON, Francis John Worsley | A.49 |
| ROYAL SOCIETY | A.68, D.201 |
| RUMNEY, Max | G.284 |
| RUSHTON, William Albert Hugh | A.71 |
| SADLER, Cyril | A.49 |
| SADLER, Donald H. | A.86, G.285 |
| SAELMAN, B. | G.286 |
| SALIÉ, Hans | G.287 |

Index of correspondents

| | |
|--|---|
| SAMET, Paul | A.66 |
| SAWYER, Desmond B. | G.288 |
| SCHERK, Peter | G.289 |
| SCHINZEL, Andrzej | A.86, D.164, G.290 |
| SCHMID, H. L. | G.291 |
| SCHMIDT, F. K. | G.292 |
| SCHMIDT, Wolfgang M. | A.85 |
| SCHNEIDER, Theodor | A.86 |
| SCHNITZER, Franz J. | A.86, G.295 |
| SCHOENFELD, Lowell | G.296 See also D.90 |
| SCHWARZ, Stefan | G.297 |
| SEMPLE, J. G. | A.57, A.66 |
| SHAW, Frank | A.66 |
| SHOVELTON, Sydney Taverner | A.60, A.66, G.188, G.189, G.254, G.298 |
| SIEGEL, Carl Ludwig | A.86, C.108, G.276, G.299- G.303 |
| SIERPINSKI, Wacław | A.86, G.304 |
| SMITH, Cedric A. B. | A.66, G.305 |
| SMITHIES, Frank | A.66 |
| SPENCER, D. C. | G.307 |
| SPRENGER, E. | G.308 |
| SPRINDŽUK, V. G. | G.309 |
| SRINIVASAN, B. R. | G.310 |
| STARK, Harold | G.311 |
| STEEN, S. W. P. | A.66, G.136, G.312 |
| STEWART, G. C. | A.66, G.313 |
| STOLLER, Gerald | G.314 |
| STOPFORD, John Sebastian Bach, Baron | A.49, A.53, A.55 |
| SWINNERTON-DYER, Sir (Henry) Peter (Francis) | A.66, A.86, D.99, E.134, G.315 |
| SZEGÖ, Gabor | A.60, D.92, G.316 |
| SZEKERES, G. | G.317 |
| SZELE, Tibor | G.318 |

Index of correspondents

| | |
|----------------------------|-------------------------------|
| TATCHELL, J. B. | A.66 |
| TAUNT, Derek | C.52, G.136 |
| TAUSSKY-TODD, Olga | A.49, A.66, G.319 |
| TEMPLE, George | A.66, A.87, G.188 |
| THOMSON, Sir Joseph John | A.41 |
| TITCHMARSH, Edward Charles | G.152, G.320 |
| TITCHMARSH, Kathleen | A.71 |
| TODD, John Arthur | A.66, A.87, G.136, G.321 |
| TSCHEBOTAREFF, G. N. | G.322 |
| TURÁN, Paul | G.323 |
| TURÁN, Vera | G.323 |
| | |
| URSELL, Harold D. | G.324 |
| USPENSKY, J. V. | G.325 |
| | |
| VALLANCE, L. S. | G.326 |
| VAN DER CORPUT, Jan G. | D.92, G.327 |
| VAN DER CORPUT, Jeannet | G.327 |
| VAN DER POL, Balthazar | G.328 |
| VAN DER WAERDEN, B. L. | G.328A |
| VANDIVER, H. S. | G.329 |
| VARNAVIDES, P. L. | A.87, D.60, G.330-G.334 |
| | |
| WALD, A. | D.55 |
| WALFISZ, Arnold | G.335, G.336 See also G.64 |
| WALMSLEY, Charles | D.92 |
| WARD, G. W. | G.337 |
| WARD, J. | A.53 |
| WATSON, George L. | A.88, G.338-G.344 |

Index of correspondents

| | |
|--------------------------|-------------------|
| WATSON, George Neville | G.345 |
| WHITEHART, F. E. | G.346 |
| WHITELEY, J. N. | G.347 |
| WHYTE, L. L. | G.348 |
| WIGGLESWORTH, Laurence | A.88 |
| WILCOCK, Bruce | A.88 |
| WILLIAMS, W. Lloyd G. | G.349 |
| WINSTANLEY, Denys A. | A.33 |
| WONHAM, W. M. | G.350 |
| WREN, J. L. | A.88 |
| WRIGHT, Edward Maitland | A.66, A.88, G.351 |
| WRIGHTON, R. F. | G.277 |
| | |
| YOUNGS, J. W. T. | G.352 |
| | |
| ZEEMAN, Erik Christopher | G.353 |
| ZERVOS, Spiros P. | G.354 |
| ZULAUF, Achim | G.355 |
| ZYGMUND, Antoni | G.356 |