Report on the correspondence and papers

of

JOHN FRANK ADAMS FRS

(1930 - 1989)

mathematician

in Trinity College Library,

Cambridge CB1 1TQ

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No 8/91 NRA 34000 Catalogue of the papers and correspondence of

JOHN FRANK ADAMS FRS

(1930-1989)

Compiled by Timothy E. Powell and Peter Harper

Deposited in the Library,

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GENERAL INTRODUCTION

PROVENANCE

The papers were received in March 1990 from the Department of Pure Mathematics and Mathematical Statistics, Cambridge University, through the good offices of Dr C B Thomas. Additional material assembled during the preparation of the Royal Society memoir of Adams was received from Professor I M James FRS in December 1990.

OUTLINE OF THE CAREER OF J F ADAMS

John Frank Adams was born in Woolwich on 5 November 1930. He was educated at Bedford School and won an Open Scholarship to Trinity College Cambridge in 1949 where he studied mathematics.

Following his graduation he began research at Cambridge, initially under A S Besicovitch then under S Wylie, and received his PhD in 1955. Adams was appointed to a Junior University Lecturership in 1955 and was a Research Fellow at Trinity College Cambridge 1955-58. He spent 1957-58 studying at the University of Chicago and at Princeton as a Commonwealth Fellow.

On his return to Cambridge Adams was appointed Fellow, College Lecturer and Director of Studies in Mathematics at Trinity Hall, posts held until 1962 when he took up a Readership at Manchester University.

In 1964 Adams succeeded M H A Newman as Fielden Professor of Pure Mathematics there.

In 1970 Adams returned to Trinity College Cambridge as a Fellow when he was appointed to the Lowndean Chair of Astronomy and Geometry in succession to Sir William Hodge, a position he held until his death in January 1989.

Adams's most important area of research was in homotopy theory. He developed the algebraic system known as the Adams Spectral Sequence and did pioneering work on cohomology operations in K-theory. In 1965 he introduced the Adams conjecture (now the Adams theorem) into the study of K-theory.

His outstanding achievements in mathematics were recognised by his election to the Fellowship of the Royal Society in 1964 (while still only 34) and the award of the Society's Sylvester Medal in 1982. Adams was also elected a Foreign Associate of the US National Academy of Sciences and an Honorary Member of the Royal Danish Academy; in 1986 he was awarded an honorary doctorate by the University of Heidelberg.

For a full account of the life and career of Adams see the memoir by I M James (<u>Biographical Memoirs of Fellows of the Royal Society</u>, 36, 1990).

DESCRIPTION OF THE COLLECTION

The material is presented in the order given in the List of Contents. The collection is particularly noteworthy for its coverage of Adams's lectures, research and incoming correspondence.

Section A, Biographical, is not substantial. It includes a little material of Adams's relating to his own career including three Bedford School notebooks and his PhD thesis, and material assembled by I M James during the preparation of his Royal Society memoir.

Section B, Research, provides extensive documentation of Adams's research from the 1950s until his death. It is presented in an alphabetical sequence arranged by subject title.

Section C, Lectures, is the largest in the collection. Two subsections comprise Adams's lecture notes and other teaching material for courses given at Manchester and Cambridge, and material from conferences and seminars attended by Adams throughout the world including drafts of Adams's contributions and notes of contributions by others. A third subsection consists of Adams's ms notes found in filing cabinet drawers labelled 'Other people's lectures'. It includes notes taken by Adams as an undergraduate at Cambridge in 1949.

Section D, Publications, is very slight. It includes drafts of a few of Adams's scientific papers.

Section E, Correspondence, contains virtually no extended exchanges of correspondence as very few copies of Adams's own letters survive. There is, however, significant correspondence from colleagues such as M F (later Sir Michael) Atiyah, M G Barratt, P J Hilton, I M James and S MacLane, sometimes extending over a period of twenty or thirty years.

There is also an index of correspondents.

ACKNOWLEDGEMENTS

We are very grateful to Dr C B Thomas and Professor I M James for making the material available, and to Professor J H Davenport, University of Bath, for comments on the draft catalogue.

Timothy E Powell
Peter Harper
1991

SECTION A BIOGRAPHICAL A.1 - A.19

- A.1 The Times obituary 30 January 1989.

 Independent obituary 14 January 1989.
- A.2 List of publications.
- A.3 List of Adams's Cambridge research students (includes only those working under Adams for more than one year).
- A.4 A.6 Three hardback notebooks used for Bedford School sixth-form mathematics notes, numbered '1', '2' and '3' on front covers.
- A.4 'l'. Inscribed inside front cover 'D. Adams I. VI Calculus' with list of contents given beneath. Paginated. Also used from the back for mathematics notes.
- A.5 '2'. Inscribed inside front cover 'D. Adams VI Mathematics'.
 Also used from the back.
- A.6 '3'. Inscribed inside front cover 'J.F. Adams VI '. Also used from the back.
- A.7 'On spectral sequence and self-obstruction invariants'.
 Adams's Cambridge Ph.D. thesis 1955. Bound copy.
- A.8 Correspondence from S Wylie, 1958, <u>re</u> appointment to University Assistant Lectureship, possible College Fellowship, etc.
- A.9 Offers of appointment at University of Chicago 1959 and 1960-61; offer of appointment at Rutgers University 1966; letter declining Adams's application for post at State University of New York, Stony Brook, 1970.

Correspondence <u>re</u> award of Honorary Doctorate of the University of Heidelberg, May 1986.

Biographical

- A.10 Notice of Adams's death; letters to family after Adams's death.
- A.11 A.19 Material assembled by I M James during the preparation of his Royal Society memoir of Adams. This principally consists of reminiscences of Adams and other material sent to James by friends and colleagues, arranged alphabetically by contributor.
- A.11 Bahn, T includes photograph of Adams.

Best, G

Bousfield, A K

Clegg, A B

A.12 Davis, D M

Greenlees, J P C

Gugenheim, V K A M

A.13 Johnstone, P

Kendall, D G

May, J P. Address at Memorial Service for Adams, 29 April 1989, 12pp typescript.

A.14 Moss, R M F

Polkinghorne, J C

Biographical

A.15 Ravenel, D C

Ray, N

Sjogren, J A

Snaith, V

A.16 Sutherland, W A

Tangora, M C

Thomas, C B

A.17 Walker, G

A.18, A.19 Other material.

A.18 'Report on Tenure of a Commonwealth Fund Fellowship', Adams's report on his research conducted in USA 1958. 7pp photocopied typescript.

'Conversation between a Topologist and Two Machines', 5pp photocopied ms, 10 January 1984.

'An Inquiry into some work of William M Singer'. llpp photocopied ms, nd.

A.19 Photocopied letter to research student, 11 November 1981.

SECTION B

RESEARCH

B.1 - B.173

The material is principally Adams's undated ms drafts, notes and calculations documenting his research from the 1950s until his death. It was found in Adams's own folders with titles inscribed thereon. These titles have been reproduced in the catalogue entries and form the basis for the arrangement of the material in an alphabetical sequence. At the end of this sequence is miscellaneous research material including 'work done' and 'work in progress'. The contents of bulky folders have been subdivided for ease of reference.

At B.173 is Adams's card-index of bibliographical references.

- B.1 'On Adem-Steenrod Operations'. Includes untitled 12pp ms draft beginning 'Let \(\) be a principal ideal domain of coefficients'.
- B.2 'Algebraic Geometry'. 22pp duplicated ms draft (not in Adams's hand).
- B.3 'Amusements'. Miscellaneous puzzles, calculations etc.
- B.4 'Anderson's work'. Notes on work of Anderson. Includes 9pp ms note 'Definition in terms of bdles ' on verso of 1963 example sheets.

- B. 8 'MGB [M G Barratt] stuff'.
- B. 9 B.11 'WORK WITH MGB'.
- B. 9 Letter to Michael [Barratt] re 'the argument you left on my blackboard', written 'Manchester 12th Feb'; ms calculations (some on verso of 1963 example sheets). See also B.113.
- B.10, B.11 Miscellaneous ms notes etc. 2 folders.
- B.12, B.13 'Bass. Alge. K-theory'. Notes on work of H Bass.
- B.12 Ms notes on 'Topics in Algebraic K-theory'.
- B.13 Ms notes on 'Higher K-theory'.
- B.14-B.18 'N Blackburn. Lie algebras'. Notes on work of N Blackburn. 5 folders.
- B.19-B.32 Work by D P Carlisle and P H Kropholler.
- B.19,B.20 'David Carlisle and Peter Kropholler's work'.
- B.19 'On the "magic formula" of Carlisle & Kropholler', 14pp ms; 'Statement of the work of Carlisle and Kropholler', 5pp ms.
- B.20 Correspondence with Kropholler, August, September 1987; ms notes.
- B.21 'Results, n=2'.
- B.22 'Results, n=3'.

- B.23 'Tabulated results'.
- B.24, B.25 'General theory'. 2 folders.
- B.26 B.28 'Proofs of results asserted'. 3 folders.
- B.29- B.32 'INVARIANTS'
- B.29 'Final steps in the symplectic case' by Kropholler and Carlisle, 5pp ms, with Adams's comments of 4 September 1987; 'Notes on Galois Theory', 3pp ms; ms notes on 'Bilinear Algebra' and 'Quadratic Algebra'.
- B.30 B.32 Miscellaneous ms notes and calculations. 3 folders.
- B.33 B.35 'Work on chain complexes with extra structure, iterated cobar etc.' 3 folders.
- B.36 B.38 'Ciphers etc.' Ms tables and notes. 3 folders.
- B.39 B.44 'Conway'. Notes on work of J H Conway.
- B.39 'A simple construction for the Fischer-Griess Monster Group' by Conway, dedicated 'To one who will understand.

 July 8, 1984'. 25pp typescript + appendix.
- B.40 'The Steiner triple system S(5,8,24)'. Ms notes.
- B.41 Ms notes on 'The Hexacode', 'Sylvester's combinatories' and 'The Golay code'.
- B.42 B.44 Miscellaneous ms notes on Conway's work. 3 folders.

- B.45, B.46 'CONWAY ON MONSTER'.
- B.45 Ms notes on 'J H Conway. Monster'.
- B.46 'The Golay code 6 and cocode 6*'. 19pp typescript draft + appendices.
- B.47 'Cubes'.
- B.48 B.50 'Fibre-Bundles and Characteristic Classes'. 3 folders.
- B.51 'Hirzebruch problem'.
- B.52 'Work with [PN] Hoffman'.
- B.53, B.54 'Hurwitz-Radon'.
- B.53 'Hurwitz-Radon Revisited', lOpp ms; ms note 'Hurwitz-Radon à la Wood'.
- B.54 Ms notes.
- B.55 B.58 'Drafts on J & Work'. 4 folders.
- B.59 B.66 'Work on K-theory spectral sequence'. Material <u>re</u> joint research with D W Anderson, <u>c</u> 1964.
- B.59 Correspondence, including Adams's 'attempt to explain my approach to our spectral sequence', 39pp ms.

в.60	Ms notes on 'Requisites for setting up a spec. seq.' etc.
в.61	Correspondence from Anderson. Includes 7pp ms and 12pp typescript drafts of 'Vector fields on Spheres' by Anderson.
B.62	Letter from M Boardman, 9 December 1964, <u>re</u> Adams's 'comments on the spectral sequences'; 'A generalization of the Adams spectral sequence' by Anderson 22pp ms; ms notes.
в.63	Correspondence from Anderson. Includes 'The Adams spectral sequence for generalized cohomology', lOpp ms, 'Cohomology operations in p-adic K-theory', 4pp typescript and ms, 'Convergence of the K-theoretic Adams spectral sequence', 9pp ms.
B.64	'A spectral sequence defined using K-theory' by Adams, 28pp photocopied ms.
в.65, в.66	Ms notes, some on verso of 1963 and 1964 University of Manchester circulars. 2 folders.
в.67	'K-theory spec. seq; Anderson & notes on him'.
в.68-в.70	'K p co'. Ms notes, calculations, tables etc., some on verso of 1965 circulars. 3 folders.
в.71-в.74	'Work on K(U)'.
B.71	'Two results on Chern characters', 9pp ms; 'Talk for Bonn', 4pp ms; 'Draft for Atiyah', 7pp ms.

- B.72-B.74 Miscellaneous ms notes, tables etc. 3 folders.
- B.75-B.78 'Ω (K)'.
- B.75 'On the cobar construction', 16pp ms; ms note on verso of 1955 letter.
- B.76-B.78 Miscellaneous ms notes etc. 3 folders.
- B.79 'Knopfmacher's problem'. Includes notes on verso of 1962-63 example sheet.
- B.80 'Lang'. Notes on work of S Lang.
- B.81 'Ledgard course on K1'. Notes on work of R Ledgard.
- B.82-B.84 'Lie Groups notes'.
- B.82 'Notes on maximal tori, etc.' by R G Swan, 29pp typescript; ms notes on it by Adams, 9pp.
- B.83 Ms notes on work of I M Singer and H Hopf.
- B.84 Miscellaneous notes, bibliographical references etc.
- B.85, B.86 'Landweber'. Notes on work of P Landweber and complex bordism. 2 folders.
- B.87 'MacLane Categories, Sheaves and Logic'. Notes on work of S MacLane.

B.108

Research

'Maps inducing non-zero homos of $\widetilde{K}p$.'. B.88-B.93 Ms note 'Alternative approach to the Essential Map'. B.88, B.89 2 folders. 'Calculations using method of "killing htpy groups"...'. B.90 'Killing htpy groups: unstable case'. B.91 'Killing htpy groups: stable case'. B.92 'Some applications of K-theory to homotopy theory', B.93 ms notes and tables. 'May: Geometry of Iterated Loop Spaces'. Notes on в. 94-в. 96 work of J P May. 3 folders. 'Notes on Peter May, etc.' 2 folders. B.97,B.98 'Obstr [uctio]ns: Homotopy Groups'. Some material on back в. 99-в. 102 of duplicated typescript sheets 1954. At B.100 is rough draft of letter to G W Whitehead. 4 folders. B.103-B.107 'Calculations about Operations of Higher Kinds in RP^{∞} , Includes note on back of 1960 Trinity Hall Some sets of calculations have register of addresses. later annotations by Adams. 5 folders.

'Oper [atio]ns on simp'l chains'.

- B.109-B.112 'Proj[ective] Class Groups'. Ms notes, tables, calculations etc.
- B.109 Includes letter from D Rees, nd, and C Hooley, 17 March 1966.
- B.110 Ms notes on 'o) Jordan-Holder Theorem'.
- B.111, B.112 Miscellaneous notes. 2 folders.
- B.113-B.118 'Quadratic Constr[uctio]n & MGB[arratt] on hh'.
- B.113 Duplicated ms notes on work of Barratt and M E Mahowald, 1968; 'MGB notes on my blackboard', 4pp ms (See also B.9); copy of letter from ?Mahowald to Barratt.
- B.114 'Princeton lecture' on recent work of Barratt and Mahowald, 13pp ms; ms notes.
- B.115 Ms notes on 'Quadratic Construction'.
- B.116-B.118 Ms notes 'On the quadratic construction', 'On the squaring approach', etc.
- B.119 'Ravenel'. Notes on work of D C Ravenel.
- B.120 'Reciprocity Laws'.
- B.121 'Samelson'. Includes notes on work of H Samelson.

B.122-B.129	'Work with Saunders [MacLane]' on PACTS. Chiefly correspondence 1963, 1966.
B.122	Correspondence with MacLane, May-June 1963.
в.123	Correspondence to MacLane, 21 and 25 April 1966, enclosing 'a draft on the "interpreted" PACT Ω ', paginated 1.1-8.2.
B.124	Correspondence April-May 1966. Includes Adams's 'Draft 1 on the Bar Construction', 8pp ms.
B.125	Correspondence June 1966. Includes MacLane's draft 'Comparison of Cobar and Loop Space Construction for the operations of a Steenrod PACT', 9pp ms.
в.126	Correspondence July 1966, re MacLane's draft.
в.127	Correspondence August 1966.
в.128	'Draft on the Acyclic-Models Argument', 10 September 1966; untitled 9pp ms note beginning 'My first objective is a fairly good PACT T(n)'.
B.129	Miscellaneous notes.
в.130-в.133	'Splitting Cohomol. Theories'.
в.130	'Splitting generalized cohomology theories with coefficients' 13pp duplicated ms; 'Seminar for B.M.C.' on splitting cohomology theories, 7pp ms.

- B.131 Untitled note beginning 'It seems to me that Proposition 1.15 could be proved more lucidly by using a certain amount of general theory', 17pp photocopied ms; ms notes.
- B.132,B.133 Lecture notes 'On splitting cohomology theories with coefficients'. 2 folders.
- B.134, B.135 'Notes on [R G] Swan'. 2 folders.
- B.136-B.139 'Swan course'. Photocopied ms notes on lectures given by Swan March-April 1973, with Adams's ms notes found therewith. 4 folders.
- B.140,B.141 'New work on Systematic htpy theory with[?] 2 coeffts'. 2 folders.
- B.142 'Zariski'. Notes on work of O Zariski.

Miscellaneous

- B.143-B.146 'Manuscript Notes of Papers'.
- B.143 Correspondence 1954-55 from J H C Whitehead, J-P Serre and J C Moore.
- B.144 Correspondence June, October 1955 from Moore.

- B.145,B.146 Ms notes on the literature etc., some in French. 2 folders.
- B.147-B.149 'Notes' on the work of others. 3 folders.
- B.150, B.151 'Work on Mark's problem'. 2 folders.
- B.152 'Problems etc.'
- B.153-B.156 'Work Done'. Ms notes and calculations, some with later annotations identifying the work.
- B.153 Includes 'On the topology of Cauchy's Theorem',
 'On Operations' (described as 'work done in Trin. Summer 57'.)
- B.154 Includes 'Relative spaces'.
- B.155 Includes 'Chain algebras'; 'Combinatorial work';
 'Cartan constructions'.
- B.156 Includes 'On isotropic Cartesian tensors', 3pp; 'On null sets'; 'Existence of a non-Abelian group complex'.
- B.157-B.159 'Various sorts of Work Done'. Ms drafts and notes, some with later annotations identifying the work.
- B.157 Ms drafts annotated 'This is a draft about the connections between Homological Algebra & Algebraic Topology which I started writing in connection with Saunders [MacLane]'s book', and 'This is a draft for Irvin on the index of a manifold'.

- B.158 'Contents. (1) Idea of Stallings for obtaining K^,L^ by subdividing a simplex. (2) Draft on A -spaces. (3) Some sheets with diagrams making things explicit'.
- B.159 Includes 'Annular neighbourhoods in manifolds', 3pp; 'Homological algebra', 3pp.
- B.160 'WORK DONE'. Ms notes and calculations.
- B.161-B.169 'Work in progress'
- B.161-B.163 Ms tables, notes, calculations. 3 folders.
- B.164 Ms tables annotated 'Final answer'.
- B.165 'Generalities on change of rings' annotated 'Good proof'.
- B.166 'Good proof'.
- B.167 'Direct definition of Pr'.
- B.168,B.169 Ms notes, etc. 2 folders.
- B.170, B.171 'Work in (?) progress'.
- B.170 'Stable Homotopy Theory', 7pp ms; 'Remarks on stable oper [atio]ns of the nth kind, for Richard'; ms notes.

- B.171 Index cards from Adams's 'Work-to-be-done file';
 'Research problems...'; etc.

 B.172 'Current Research'.
- B.173 Bibliographical references arranged alphabetically by author. In card index box.

SECTION C

LECTURES

C.1 - C.708

C. 1 - C.344 Teaching
C.345 - C.646 Conferences and Seminars
C.647 - C.708 'Other people's lectures'

TEACHING

Lecture notes and a little other teaching material from courses Adams gave at Manchester and Cambridge. The material was found in Adams's folders usually with the title of the course inscribed thereon. These titles are reproduced in the catalogue entries.

Contents of bulky folders have been subdivided for ease of reference.

The lecture notes are manuscript and often written on the verso of earlier lecture notes, students' examination scripts etc. They are sometimes paginated, either as a complete course or as a series of individual lectures. With these notes were found drafts of examination questions, lists of students, sheets of students' comments on Adams's lectures etc.

The material is arranged according to subject as follows:

c. 1 - c. 89	Algebra	C.231 - C.248	Lie Groups
c. 90 - C.129	Geometry	c.249 - c.263	Representation Theory
C.130 - C.143	Homology	c.264 - c.315	Topology
C.144 - C.218	Homotopy	c.316 - c.344	Miscellaneous
C.219 - C.230	K-theory		

Algebra	
C.1 - C.11	'Algebra Year 1. Term 1.'
C.1	'MT 111 Algebra, Michaelmas Term 1966' lecture notes.
c.2 - c.7	'Algebra Notes'. 6 folders.
C.8	'MT lll Mich.Term 66 Examples 6'; 'lll Algebra Examples 1'; ms draft 'Challenge Problem' and examination questions.
C.9	'MT 111 Revision Notes Autumn 67'.
C.10	'Course examinations January 1969 MT 111'; MT 111 vacation questions and model answers.
C.11	Miscellaneous notes.
C.12 - C.21	'ALGEBRA I'.
C.12	Course summary, compiled summer 1981; example sheets; examination questions.
C.13	Questionnaires on contents and style of Adams's algebra lectures completed by first year students 1980; requests from students for topics to be covered.
C.14 - C.17	'Algebra I' lecture notes. 4 folders.
C.18, C.19	Students' questions, requests for guidance etc. These are on slips of paper clipped to drafts of Adams's replies. 2 folders.

- C.20, C.21 Miscellaneous notes. 2 folders.
- C.22 C.29 'Algebra IA'.
- C.22 C.27 Lecture notes. 6 folders.
- C.28 Students' questions and requests for guidance on the course.
- C.29 Notes arising from '3 requests for work on duality'.
- C.30, C.31 'ALGEBRA IA'.

Students' questions and requests for guidance, with Adams's answers. 2 folders.

- C.32 '111 algebra: solutions to examples'.
- C.33, C.34 'ALGEBRA II'.

Lecture notes. 2 folders.

- C.35 C.38 'MT 200 Algebra Course'.
- C.35 C.37 Lecture notes. 3 folders.

- C.38 Algebra II question sheets.
- C.39 C.43 'Multilinear Algebra Prof Adams'.
- C.39 C.42 'Multilinear Algebra' lecture notes annotated '117 pages. Lecture at rate of 10 pages a lecture'. 4 folders.
- C.43 'Exterior Powers' lecture notes; 'MT 211 Examples Summer I'.
- C.44, C.45 '211 Algebra'.
- C.44 '2nd year [summer-term] algebra course'.
- C.45 Miscellaneous notes.
- C.46 C.53 'F[urther] II Algebra'.
- C.46 C.48 'F II algebra' lecture notes. 3 folders.
- C.49 C.51 'Chap.II Modules, Vector Spaces. Linear Algebra'.
 3 folders.
- C.52, C.53 Notes on 'worked examples'. 2 folders.
- C.54 C.59 'Third-year Normal Algebra Course'.
- C.54 'Proposed schedule for third-year normal algebra course'; list of students; note of questions on the course raised by students.

C.75 - C.80

C.81

6 folders.

ms notes.

Lectures

c.55 - c.58	'Algebra course' lecture notes. 4 folders.
C.59	'Chap.III. Fields' lecture notes.
c.60 - c.65	'Commutative Algebra'.
C.60	Examples, examination questions on commutative algebra for Part III of the Mathematical Tripos 1972.
c.61 - c.65	'Commutative Algebra' lecture notes. 5 folders.
C.66 - C.69	'Commutative Algebra (2)'.
C.66	Draft examination questions, examples etc.
c.67 - c.69	Lecture notes. 3 folders.
c.70 - c.74	'Commutative Algebra, Version 2'.
	Miscellaneous notes. 5 folders.
c.75 - c.81	'Algebra for Applied Algebraists'.

'Algebra for Applied Algebraists' lecture notes.

'Algebra for Applied Algebraists' lecture notes;

'Modules over a principal ideal domain', duplicated

c.82 - c.86	'Further topics in algebra'.
C.82	Exercises for Further Topics in Algebra course, 1987.
C.83	Students' questions and requests for guidance on the course.
C.84	Ms and typescript course notes.
C.85, C.86	Lecture notes. 2 folders.
C.87 - C.89	'Further Topics in Algebra'.
C.87	Booklists circulated 27 April 1987; exercises for Lent Term 1987.
C.88	Duplicated ms course notes.
C.89	'Further Topics in Algebra' lecture notes.

Geometry

C. JO C. JJ GCOMCCLY ID COULDE	C.90	_	C. 95	'Geometry	IB	course'	
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C.90 'IB Geometry' example sheets; correspondence from D W Babbage re geometry examination questions 1974-75.

C.107-C.112

Lectures

C.91 Questionnaires on content and style of Adams's IB geometry lectures completed by students 1974. C.92 - C.95 Lecture notes. 4 folders. C.96, C.97 'Geometry hand-outs'. 2 folders. 'Geometry'. C.98 - C.104 Questionnaires on Adams's geometry lectures completed by C.98 students 1982; letter from student requesting 'a lecture on lie groups' 25 April 1985, with ms notes on lie groups. C.99 - C.104 Lecture notes for course of eight summer-term lectures. Some sheets marked 'OLD'. 6 folders. C.105-C.112 'Geometry. 3rd Yr'. 'Draft 3rd-year Geometry course' by Adams and J Peters; C.105 'Draft Geometry Syllabus'. 'Examples - Pl Geometry', set of duplicated ms sheets C.106 for geometry classes 9 October - 11 December 1967. 'Geometry lecture notes'. 6 folders.

C.113-C.120	'Diff[erenti]al Analysis & Geometry'.
C.113	Questionnaires on Adams's differential analysis and geometry lectures completed by third-year students 1979; duplicated ms course notes compiled by C B Thomas for 1988-89.
C.114	Ms and duplicated typescript example sheets.
C.115-C.119	'Diff[erenti]al Analysis and Geometry' lecture notes. 5 folders.
C.120	Differential Analysis course notes.
C.121-C.129	'D.G'.
C.121	Two sets of completed questionnaires on Adams's differential analysis and geometry lectures. First set completed by third-year students 1985.
C.122	Example sheets; students questions, requests for guidance etc.
C.123-C.128	'Differential Analysis and Geometry' lecture notes. 6 folders.
C.129	Miscellaneous notes.

Homology

C.130-C.133	'Homology Theory III'.
c.130	Attendance list for Adams's third-year homology course, summer term 1963; 4pp ms draft 'What is homology theory good for?'; miscellaneous notes.
C.131-C.133	'Homology theory' lecture notes. 3 folders.
C.134-C.143	'Diploma course on generalised homology'.
C.134-C.138	'Extraordinary Cohomology Theories' lecture notes. 5 folders.
C.139,C.140	Lectures on K*(X)'
C.139	Typescript notes for lectures 1-4.
C.140	Typescript notes for lectures 5,6; ms lecture notes on $K^*(X)$.

Homotopy

C.144-C.151 'Homotopy Theory'.

Lecture notes, latest reference 1961. 8 folders.

C.141-C.143 Miscellaneous lecture notes. 3 folders.

C.152 'III Homotopy Theory'.

Ms note of basic definitions etc., attendance sheet, Adams's note $\underline{\text{re}}$ supervision of homotopy theory course 4 May 1977, etc.

- C.153-C.159 'Homotopy-theory'.
- C.153 Course outline; lists of students for 1980 and 1981; correspondence from R Luckwith re draft examination questions 1976 and 1981; etc.
- C.154-C.159 'Homotopy Theory' lecture notes. 6 folders.
- C.160-C.163 'HOMOTOPY'.
- C.160 Homotopy theory exercises and examination questions 1982 and 1983; lists of students 1982; etc.
- C.161-C.163 Lecture notes. 3 folders.
- C.164-C.167 'HOMOTOPY THEORY. ('83 version)'.
- C.164 'Homotopy-Theory Exercises'; lists of students.
- C.165-C.167 Lecture notes. 3 folders.
- C.168-C.171 'Homotopy'.
- C.168 List of students 1985; examples sheets; draft examination questions, etc.

- C.169-C.171 'Notes on Homotopy'. 3 folders.
- C.172 'Homotopy theory'.

 Lecture notes on 'Toda brackets'.
- C.173-C.176 'Advanced Homotopy Prof. J F Adams'.

 Lecture notes. 4 folders.
- C.177-C.183 'Advanced Homotopy Theory'.

 Lecture notes. 7 folders.
- C.184-C.189 'Adv. Htpy'.

 Lecture notes on 'Obstruction theory', 'Postnikov systems' etc. 6 folders.
- C.190 Lecture notes, annotated 'Add to other file of notes on Advanced htpy theory'.
- C.191-C.195 'Further homotopy'.

C.209-C.215

7 folders.

Lectures

C.191 Ms draft and typescript Part III examination paper on further homotopy theory 1976; questionnaire on Adams's further homotopy theory course completed by third-year students 1976. 'Further homotopy' lecture notes. 4 folders. C.192-C.195 C.196-C.199 'Calculating Homotopy Groups'. 'Lecture notes on calculating homotopy groups'; miscellaneous notes. 4 folders. C.200-C.207 'Stable Homotopy and Generalised Cohomology'. 'Topology Diploma Courses Michaelmas Term 1970'; draft C.200 examination paper for Stable Homotopy Theory and Generalised Cohomology Theories, 1971; ms calculation (not in Adams's hand). C.201 Ms ?course outline. 'Stable Homotopy and Generalised Cohomology' lecture notes. C.202-C.207 6 folders. 'Systematic Phenomena in p-primary Homotopy Theory'. C.208-C.215 Draft letter to Arunas, 25 February 1986, re 'Young idempotents'. C.208

'Systematic phenomena in Mod p Homotopy Theory' lecture notes.

C.216-C.218 Untitled lecture notes beginning 'Introduction to localisation.

In homotopy theory, we have known for a long time that it is sufficient to attack our problems one prime at a time'.

3 folders.

K-theory

C.219, C.220 'K-theory'.

Lecture notes. 2 folders.

C.221-C.223 'K-theory'.

Lecture notes. 3 folders.

C.224-C.230 'Algebraic K-theory'.

C.224 Example sheets; algebraic K-theory examination paper 1974.

C.225-C.230 'Algebraic K-theory' lecture notes. 6 folders.

Lie Groups

C.231-C.241 'Lie Groups'.

C.231 ?Introductory lecture notes.

C.232-C.241 'Lie Groups' lecture notes. 10 folders.

C.242-C.248 'Lie Groups II'.

C.242 Ms example sheets; lie groups examination paper 28 May 1974; bibliography.

C.243 List of students for Pt III class; etc.

C.244-C.246 Lecture notes. 3 folders.

C.247,C.248 'LIE GROUPS Lectures given in the University of Manchester, 1965, by J.F.Adams Notes by M.B.Mather'. 2 folders.

Representation Theory

- C.249-C.255 'Reptn Theory'.

 C.249 Questionnaires on Adams's representation theory lectures completed by third-year students 1976, with Adams's 'Analysis of Replies...'; typescript 'Questions on representation theory'.

 C.250-C.252 'Representation Theory' lecture notes. 3 folders.

 C.253 'Worked Examples...'; ms notes beginning 'Dirac group of 32 matrices'; ms notes on 'The theory of group representation'.
- C.254, C.255 Miscellaneous notes. 2 folders.

C.256-C.261 'R [epresentation] Theory'.

C.256 Students questions and requests for guidance; example sheets, dated 'Mich[aelmas] 77'.

C.257-C.259 'Lecture notes on Representation Theory'. 3 folders.

C.260 Ms notes on Representation Theory'; ms notes 'For appendix'.

C.261 Miscellaneous notes.

C.262,C.263 'Rep Theory Examples, Hand-outs'.

Ms and duplicated ms example sheets and hand-outs. 2 folders.

Topology

- C.264-C.270 'Topology II & III'.
- C.264-C.269 'Topology II' lecture notes, some on verso of 1963 Royal Society accounts. 6 folders.
- C.270 Continuation of the preceding on 'The Husenicz Isomorphism Theorem'.
- C.271, C.272 'Diploma Course on Alge[braic]. Topol'.

 Lecture notes. 2 folders.

C.273	'Reading List'.
	'Reading list for algebraic topology' October 1958; 'Syllabus (for Research Students) of Algebraic Topology'; bibliography.
C.274-C.283	'Algebraic Topology'.
C.274	Algebraic topology examination paper 1979; letter from C R F Maunder 3 March 1980 re draft algebraic topology examination paper; course outline; etc.
C.275	Example sheets.
C.276	Lists of students etc.
C.277-C.282	Lecture notes. 6 folders.
C.283	Miscellaneous notes.
202	

C.288-C.295 'Topics in Algebraic Topology'.

'Diploma Course'.

C.284-C.287

C.288 Correspondence with D S Kahn <u>re</u> the Kahn-Priddy Theorem,
January-March 1972. Includes 'Applications of the transfer
to stable homotopy theory' by Kahn and S B Priddy, 8pp
typescript, and Adams's ms note 'Peter May on KAHN-PRIDDY THM'

Lecture notes on algebraic topology. 4 folders.

C.289 Two duplicated ms calculations by Adams; ms note beginning 'Frank: Here is a complete calculation of $H_*(C \infty S^{\circ})$ '.

- C.290-C.295 Lecture notes. 6 folders.
- C.296-C.301 'Part III Further Topics in Alge. Topol'.
- C.296 Circular letter re 'Part III Mathematical Tripos 1988'; course outlines for 'Algebraic Topology' and 'Further Topics in Algebraic Topology'; example sheet; draft examination questions; etc.
- C.297-C.301 Lecture notes. 5 folders.
- C.302 'TOPOL'.

List of students for Advanced Algebraic Topology 1985; example sheet; 4pp ms draft 'Eilenberg-Maclane spaces and "killing homotopy groups"; 7pp ms draft 'Classes of abelian groups and localisation'.

- C.303-C.306 'Analytic Topology'.
- C.303 'Analytic Topology Problems' May 1957; 8pp ms draft 'Connection in the Plane and Sphere'; ms list of 'Requests' ?from students.
- C.304-C.306 'Analytic Topology' lecture notes. 3 folders.
- C.307-C.311 'Bundles'.

- C.307 Topology of Bundles and Classifying Spaces course outline 1974-75; examination paper 1975; 'Examples on Characteristic Classes'; questionnaires on Adams's topology of bundles course completed by students 1974.
- C.308-C.311 'Topology of Bundles & Classifying Spaces' lecture notes. 4 folders.
- C.312-C.315 'Topology of Manifolds'.
- C.312, C.313 'Manifolds' lecture notes. 2 folders.
- C.314, C.315 Miscellaneous lecture notes. 2 folders.

Miscellaneous

- C.316-C.319 'Cartan Theory'.
 - Lecture notes. 4 folders.
- C.320-C.324 Lecture notes on CW-complexes. 5 folders.
- C.325-C.327 'The Projective Class Group: Lecture Notes'.

 Lecture notes. 3 folders.

C.328-C.337 'Representations of the Classical Groups'.

Lecture notes (some on verso of 1962 example sheets). 10 folders.

- C.338-C.344 'Riemann Surfaces and Algebraic Curves'.
- C.338 Notes on times of tutorials and syllabus, ms note on 'Algebra needed for Atiyah stuff', etc. Some on verso of 1962 example sheets.
- C.339-C.344 'Riemann surfaces and algebraic curves' lecture notes. 6 folders.

CONFERENCES AND SEMINARS

Material <u>re</u> conferences and seminars attended by Adams in Britain and overseas: principally ms notes etc., on contributions by others and notes and drafts of his own contributions. With the exception of notebooks at C.345 and C.346 the material was found in Adams's folders with titles inscribed thereon. These titles are reproduced in the catalogue entries. Contents of bulky folders have been subdivided for ease of reference.

The material is presented in a chronological sequence with a little undated material at the end.

Where applicable reference has been made to Adams's List of Publications (A.2) in the form <u>Bibliog</u>. no. ...

- C.345 Hardback notebook inscribed inside front cover 'Seminar notes 1954/55, including Young Topologists' Conference at Oxford'. Used from both ends for notes and calculations. At back are loose notes.
- C.346 Hardback notebook inscribed inside front cover 'Seminar Notes 1955/56, including British Mathematical Colloquium.' Used from the front for notes and calculations. At the back are loose notes.
- 'B M C[British Mathematical Colloquium] lecture'.

 'The existence of division algebras, and related topological questions', 13pp ms, latest bibliographical reference 1955.
- C.348,C.349 'Seminar Notes etc'.

 2 folders. A little correspondence at front is dated
 1955 and 1956.
- C.350-C.353 'Bristol notes'.
- C.350 Untitled draft beginning 'I want to talk about the homology and cohomology theories for certain algebraic structures', 19pp ms.

- C.351-C.353 Ms notes and calculations, some on verso of 1956 Cambridge college minutes. 3 folders.
- C.354 'Bundles'.
 - 'Lecture on fibre-spaces for the Quintics', 7pp ms; 'Classification theorem', 9pp ms; ms notes, some on verso of information sheet for colloquium to be held in June 1956.
- C.355,C.356 'Seminar Notes America'.
 2 folders. Latest bibliographical reference 1957.
- C.357,C.358 Seminars Given At Columbia. 1957/58'.

 Ms notes. 2 folders.
- C.359-C.361 'Seminar Notes (1958/59/60)'.

 3 folders. Includes notes on verso of programme for Mathematische Arbeitstagung, Bonn, July 1959.
- C.362-C.367 'Seminar Notes 1959/60'.

 6 folders. Includes 'Theory of representation and characters' by Adams, lOpp ms.

C.368-C.370 'Seminar Notes 1960/61'.

C.368

'Untitled draft beginning 'In this seminar I would like to give an account of some work which is to appear in the Proc. Camb. Phil. Soc. under the title "On Chern characters and the structure of the unitary group" '(Bibliog. no.18)

8pp ms; 'S.P.Novikov on the cohomologies of the Steenrod algebra', 6pp typescript; typescript note on work of Sho-Kwan Chow.

C.369, C.370 Ms notes. 2 folders.

C.371-C.375 'Seminar notes (2nd trip to America, 1961)'.

5 folders.

C.376,C.377 'Seminars on K(x)'.

Rough ms drafts. 2 folders.

C.378-C.384 'Seminar Notes M'[anches]ter '62'.

Ms notes and calculations, some on verso of duplicated typescript example sheets etc. 7 folders.

C.385-C.390 'Aarhus & Stockholm'.

Material from Colloquium on Algebraic Topology, Aarhus, 1-10 August 1962. Adams spoke on 'Applications of the Grothendieck-Atiyah-Hirzebruch functor K(x)' (Bibliog. no.24).

C.398-C.404 'Seattle'.

Ms notes. 7 folders.

c.385-c.388	Duplicated typescript texts of lectures. 4 folders.
C.389	Ms notes on lectures.
C.390	Miscellaneous duplicated typescript and ms material.
C.391-C.393	'Seminar notes, Morse symposium & M [anchester]'63'.
C.391	Abstracts of lectures, including Adams's 'On the groups $J\left(X\right)$ ', with ms notes on them.
c.392,c.393	Ms notes. 2 folders.
C.394-C.396	'Ideas for Seattle talks'.
C.394	Invitation from N E Steenrod to deliver 'two expository lectures to the [Seattle Summer] Institute on the subject of cohomology operations', 6 May 1963.
c.395,c.396	Ms notes and calculations. 2 folders.
C.397	'Lecture Notes (Seattle)'.
	Rough ms drafts of first, fourth and fifth lectures.

C.405-C.411 'Lecture Notes BMC [British Mathematical Colloquium]'63 & '63 - '64'.

7 folders.

C.412 'Wood Seminar on Atiyah-Singer'.

Ms notes on 'Wood seminar' and 'Wood II'; miscellaneous ms notes. Latest reference 1963/64.

- C.413-C.419 'Summer 64- '.
- C.413 'An exercise in Obstruction Theory November 1964'.

 llpp duplicated typescript annotated 'JFA'.
- C.414-C.419 Ms notes. 6 folders.
- C.420, C.421 'Kuiper Seminar'.
- C.420 'The general linear group of Hilbert space is k connected' by N H Kuiper, June 1964.
- C.421 Rough draft of 'Seminar on Kuiper's work', etc.
- C.422-C.432 'Seminars'.
- C.422 Programme of Topology Conference, Oberwolfach, W Germany, 20-30 September 1965. Adams is not listed as a speaker.

- C.423-C.432 Ms notes etc. The first page of notes is annotated 'Arbeitstagung '67'. 10 folders.
- C.433-C.439 'Seminar'.

 Ms notes etc, latest bibliographical reference 1965.
 7 folders.
- C.440, C.441 'Arbeitstagung '66'.
- C.440 'Arbeitstagung lectures of M. Atiyah June 1965. The Euler Characteristic Theorem I', 4pp duplicated typescript; ms notes on Atiyah's lectures.
- C.441 Ms notes on other lectures.
- C.442, C.443 'Hattori-Stong Talk'.
- C.442 'The work of Stong and Hattori on Complex Cobordism', 20pp ms. Latest bibliographical reference 1966.
- C.443 'Talk for Bonn', 3pp ms; ms notes.
- C.444-C.446 'International Geometry Symposium'.

 Ms notes, latest reference 1966. 3 folders.

- C.447 'Seminar on Quillen on Adams's Conjecture'.
 - 'Quillen's work on approximating BU by BG', 5pp ms; 'Talk on Quillen', 20pp ms, latest bibliographical reference 1967; 'Talk on Quillen III', 10pp ms.
- C.448 'Lectures given at Waterloo & Chicago. Easter 69'.

 'Lecture for Waterloo', 14pp ms; 'Expository lect. on Geom. & Homol', 11pp ms; 'General Notes'.
- C.449-C.452 'Notes, Chicago, Easter 69'.

 Ms notes. 4 folders.
- C.453, C.454 'Bonn 1969'.

Ms notes. 2 folders.

C.455-C.457 'AMS lecture Swinnerton-Dyer'.

Duplicated ms draft of 'Algebraic number theory by H P F Swinnerton-Dyer', June 1969.

- C.455 Introduction; 'Part I The Classical Theory'.
- C.456 'Part II Valuations and their consequences'; 'Part III Abelian extensions of the rationals'.

- C.457 'Part IV Zeta functions and L-series'; 'Examples Sheet I'.
- C.458-C.466 'Seminars'.
- C.458 Pan American airline menus used on verso for Adams's ms calculations.
- C.459-C.464 Ms notes etc, latest reference March 1969. 6 folders.
- C.465, C.466 Ms notes on lectures by others 1968-69, not in Adams's hand. 2 folders.
- C.467,C.468 'Notes of lectures'.
 2 folders. Latest reference 1969.
- C.469-C.473 'Seminars 1969/70'.
- C.469 'The j-homomorphism in bordism theory', 12pp duplicated ms not in Adams's hand.
- C.470-C.473 Ms notes. 4 folders.
- C.474,C.475 'Chicago, summer 1970'.

 Ms notes. 2 folders.

C.476-C.479 'Seminars - Int'l Congress 1970'.

The material is $\underline{\text{re}}$ the Congres International des Mathematiciens, Nice, September $\overline{1970}$. Adams chaired a section on 'Topologie des varietes' and a seminar on algebraic topology.

- C.476 Correspondence <u>re</u> arrangements from E Michael and R H Bing 1968-69.
- C.477-C.479 Ms notes, some on verso of pages of Congress programme. 3 folders.
- C.480-C.486 'Seminars 1970/1971'.
- C.480 'Some comultiplications' by M G Barratt 1970, 2pp duplicated ms; 'On \(\Gamma\)-structures' by Barratt, 5pp typscript; 'On a theorem of D.S.Kahn's' by Barratt and P J Eccles, 5pp typescript; untitled lOpp typescript (paginated 2-11, title page missing).
- C.481 'Chapter I The Magic Exact Sequence' and 'Chapter II The functors Γ^+ , Γ ' by Barratt, 8pp duplicated ms.
- C.482 Three sets of Adams's ms notes annotated 'From: Seminars '71'.
- C.483-C.486 Ms notes etc. 4 folders.

C.487-C.498	'Chicago Course Summer '71.'
	This course of lectures by Adams on 'Stable Homotopy and Generalised Homology' was published by Chicago University Press in 1974 (Bibliog. no.49). Adams's notes are divided into seventeen chapters. The last three chapters have addenda.
C.487	Chapters 1, 2
C.488	Chapter 3
C.489	Chapter 4
C.490	Chapters 5, 6
C.491	Chapters 7, 8
C.492	Chapter 9
C.493	Chapter 10
C.494	Chapters 11-13
C.495	Chapter 14
C.496	Chapter 15 + Addendum
C.497	Chapter 16 + Addendum
C.498	Chapter 17 + Addendum

C.499-C.501 'Atiyah-Singer seminar'.

Ms draft and notes etc., latest bibliographical reference 1971. 3 folders.

C.502-C.510 'Seminars '71-'74'.

Ms notes etc. 9 folders.

C.511 'Talks at Oxford, June '72'.

'Programme for the Topology Symposium' (Adams is listed as a speaker); ms notes annotated 'Out of Talks at Oxford, June '62'.

C.512-C.516 'ICM 1974'.

Ms notes; photocopied ms notes (not in Adams's hand), some dated July and August 1974. 5 folders.

C.517 'JHCW lecture'.

Adams was invited to give the London Mathematical Society's first J H C Whitehead Lecture.

14pp ms draft of Whitehead Lecture with incomplete rough ms draft of ?later lecture to the London Mathematical Society, on verso of 1974 questionnaires.

- C.518-C.529 'Seminars'.
- C.518-C.526 Ms notes, including those taken at 'Oxford Conference 1975' (C.521), and at London Mathematical Society (C.524).
 9 folders.
- C.527,C.528 Programme of and ms notes on 'Mathematische Arbeitstagung', Bonn, June 1978. Adams spoke on 'Finite H-spaces and algebras over the Steenrod Algebra' (Bibliog. no.63).
- C.529 Ms notes, the first page annotated 'Cartan Do Starts Here', final page annotated 'Cartan Do Ends Here'.
- C.530, C.531 'Zurich Notes'.

Programme of and ms notes on International Colloquium on Topology and Algebra, Zürich, 12-16 April 1977. Adams spoke on 'Maps between classifying spaces' or'Finite H-spaces'. 2 folders.

- C.532-C.534 'Aarhus file'.
- C.532,C.533 Ms and duplicated ms notes on Algebraic Topology symposium, Aarhus, 7-12 August 1978. 2 folders.
- C.534 Ms poem in Adams's hand beginning 'My tale of Chicago begins with MacLane. His papers with Sammy showed a vigorous brain'. Written on verso of pages of Aarhus programme.
- C.535,C.536 'Helsinki file 1978'.

Ms notes. 2 folders.

- C.537-C.539 'Seminars '78-'.
 - Ms and duplicated ms notes. 3 folders.
- C.540, C.541 'Arcata talks'.

Ms notes, latest bibliographical reference 1978. 2 folders.

- C.542-C.545 'Talks'.
- C.542,C.543 Programme of and ms notes on 'Mathematische Arbeitstagung', Bonn, 6-12 June 1979. Adams spoke on 'G. Segal's Burnside ring conjecture' (Bibliog. no. 65). 2 folders.
- C.544, C.545 Ms notes. 2 folders.
- C.546-C.565 'Seminars 1979 '
- C.546-C.551 Ms notes, latest bibliographical reference 1980. 6 folders.
- C.552 Conference handbook for 'Mathematische Arbeitstagung',
 Bonn, 12 18 June 1981. Adams did not deliver a lecture.
- C.553 Programme for 4th Topology Symposium, Edinburgh, 30 June 2 July 1981.
- C.554 Ms notes on 4th Topology Symposium.

- C.555 List of student participants at 'Topology Gathering [Cambridge] 1981'; 'genealogia topologica' (a 'family tree' of eminent topologists).
- C.556-C.560 Ms notes, latest bibliographical reference 1981. 5 folders.
- C.561 Programme for Northwestern [University] Conference on Homotopy Theory, 22-26 March 1982; duplicated ms notes on lectures (not in Adams's hand).
- C.562-C.565 Ms notes, some (not in Adams's hand) dated 16 March 1982. 4 folders.
- C.566-C.569 'Notes from Durham'.

 Ms notes, latest reference 1982. 4 folders.
- C.570-C.573 'Seminar Notes'.

 Ms notes, latest bibliographical reference 1982. 4 folders.
- C.574-C.576 'Moore'.

 Programme of and ms notes on Algebraic Topology and K-theory Conference in honour of John Moore's 60th birthday c 1983. 3 folders.

C.577-C.579 'Bonn, NOTES'.

Programme of and ms notes on 'Mathematische Arbeitstagung', Bonn, 15-22 June 1984. 3 folders.

C.580, C.581 'SEMINARS MINNEAPOLIS'

Programme of and ms notes on conference, Institute for Mathematics and its Applications, University of Minnesota, 23-27 July 1984. Adams spoke on 'G-homology theories'. 2 folders.

C.582 'Oxford Talk'.

Rough ms draft of Adams's lecture on the recent work of M J Hopkins and colleagues, latest bibliographical reference 1984.

C.583-C.601 'Seminars 1985'.

C.583,C.584 Programme of and ms notes on Northwestern University Conference on Group Cohomology and its Applications, 18-22 March 1985. Adams spoke on 'Maybe elementary abelian p-groups are just as good as tori?'. 2 folders.

C.585 Programme of and ms notes on West Coast Topology
Symposium Stanford University, 25-26 March 1985.
Adams spoke on 'The Adams spectral sequence in equivariant groups'.

- C.586 Programme of and ms notes on conference on algebraic topology, Palaiseau, France, 13 15 June 1985.
- C.587,C.588 Ms notes annotated on first page 'Start Newfoundland' and on last page 'End Newfoundland'. 2 folders.
- C.589 Adams's ms notes for 'My Newfoundland talk'. The notes are on a sheet of cardboard from the back of a notepad.
- C.590,C.591 Ms notes annotated on first page 'Start Warsaw' and on last page 'End of Warsaw'. 2 folders.
- C.592-C.601 Ms and duplicated ms notes. 10 folders.
- C.602 'April 1st Seminar'.

Ms draft of ?spoof press release 'New N.S.F. grants', dated 1 April 1985; untitled draft of Adams's lecture.

C.603-C.605 'Notes of Barcelona 1986'.

Programme of and ms notes on '1986 BCAT', Institut d'Estudis Catalans, Barcelona, 2 - 8 April. Adams spoke on 'New proofs of two theorems of Jean Lannes'. 3 folders.

- C.606, C.607 'Bonn 1986'.
- C.606 Conference handbook of 26th Mathematische Arbeitstagung, Bonn, 13 - 20 June.

C.607 Ms and duplicated ms notes.

C.608, C.609 'New Seminars'.

Ms notes, including notes on 'Simon Donaldson at LMS, 21 Feb '86,17.00-18.00 Homology and Moduli Spaces'. 2 folders.

C.610-C.612 'Congress Talks'.

Ms notes, latest bibliographical reference 1986. 3 folders.

- C.613-C.621 'Seminars 1986 -'.
- Photocopied ms notes, not in Adams's hand, October and November 1986; photocopied ms notes of Talks on 'Group characters and complex-oriented theories' by Nick K[?] delivered at Warwick 17 January 1987; and on 'Brownian motion and the Riemann function' by D.Williams delivered at Number Theory Seminar, Cambridge, 10 May 1988; etc.
- C.614-C.616 Programme of and ms notes on International Conference on Homotopy Theory and Related Topics, Kinosaki, Japan, 19 24 August ?1988. Adams gave a 'Survey on homotopy theory and Toda's works'. 3 folders.
- C.617-C.621 Ms notes. 5 folders.

C.622-C.625 'D Williams Seminar'.

Ms, photocopied ms and typescript material \underline{re} Williams's proposed 'seminar/workshop called <u>Connections</u> on differential geometry and its relation to probability and other subjects', 1988. 4 folders.

- C.626-C.633 'Seminars Given'.
 - Miscellaneous ms drafts of lectures found in Adams's folder so inscribed. Mostly undated, retained in original order.
- C.626 'Topology of H-spaces', Cambridge 1959, 7pp; 'Talk on Fibre-Bundles for the Quintics', 7pp; 'On Loop Spaces', llpp; 'Seminar for Manchester' on the analogy between topological spaces and chain complexes, 8pp.
- 'Oxford Seminar' on cohomology operations of higher kinds, 6pp; 'Report on C.T.C.Wall's work on the Cobordism Algebra Ω', 6pp (see <u>Bibliog</u>. no.13; 'No more division algebras?', lOpp; plan of 'Seminar for Bonn. Heidelberg. Strasbourg', lp.
- C.628 'Hatfield Seminar' on applying topological methods to analysis, llpp; 'Cohomology operations', llpp; 'Fundamental notions of manifolds', 9pp.
- C.629 Comments on lectures at 'Bonn' [?Mathematische Arbeitstagung],
 9pp; 'Mahowald's Result on the J-homomorphism', 7pp;
 'E.H.Brown's work on Cohomology Theories', 14pp.
- C.630 'Talk for Warwick', lOpp; 'Atiyah's work on the Künreth theorem for K , 6pp; 'Talk to student teachers' on pure mathematics, 14pp.

- 'Seminar: K-theory of infinite complexes', 16pp; 'Seminar on Atiyah-Singer', 8pp; 'More about the e-invariant', 13pp.
- C.632 'Cobordism', 14pp; 'Paris Talk (Draft 1)' on the
 K-theory of Grothendieck-Atiyah-Hirzebruch (in French),
 15pp; 'A new method in Algebraic Topology', 10pp.
- C.633 'Work of Bronder Peterson & Liulevicius, 21pp;
 'Seminar' on some of the lectures at the Morse symposium
 (1963, see C.391-C.393), 9pp; 'Kerraire on higherdimensional knots', 4pp.
- C.634 'Ideas for Seminars'.

Miscellaneous sets of ms notes on possible subjects and speakers for symposia, various dates.

Undated.

- C.635-C.637 'Clifford Modules Ms'.
- C.635 Rough ms draft 'Clifford Modules, Part II'.
- C.636,C.637 Ms drafts of seminars on A.B.S. (Atiyah-Bott-Shapiro), continuing the preceding. 2 folders.
- C.638 'Coates-type lecture'.

Rough ms draft.

C.639 'Course on Mike Hopkins'.

Two rough ms drafts on work of M ${\tt G}$ Hopkins (the second

is in French).

C.640 'Lectures to Swedish course'.

Rough ms drafts of lectures on 'Lie groups' and 'A-S

[Atiyah-Singer] index theorem'.

C.641, C.642 'Lectures to Training College lecturers'.

Rough ms drafts of three lectures. 2 folders.

C.643 'Vector fields on spheres'.

Rough ms draft.

C.644-C.646 'Weil Seminar'.

C.644 Rough ms draft of 'Seminar' on perverted naturality.

C.645 Rough ms drafts of Atiyah-Hirzebruch's Philosophy of

Riemann-Roch-Type Theorems.

C.646 Miscellaneous drafts and notes.

'OTHER PEOPLE'S LECTURES'

Material found in two filing cabinet drawers so labelled. The material is chiefly ms notes on lectures found in Adams's folders with the name of the lecturer and usually the subject of the lecture/s inscribed thereon. These inscriptions are reproduced in the catalogue entries and form the basis for the arrangement of the material in an alphabetical sequence by lecturer. Contents of bulky folders have been subdivided for ease of reference. A little miscellaneous material is presented at the end of the sequence.

The bulk of the material is undated but a few of the sets of notes were taken by Adams as an undergraduate in 1949. It is probable much of the rest dates from the early 1950s.

- C.647,C.648 'Atiyah. Algebraic F [unctio]ns & Riemann Surfaces'.

 2 folders.
- C.649 'Atiyah-Zeeman Seminar on stacks'.

 Duplicated typescript text with Adams's ms annotation.
- C.650 'Prof. Besicovitch. Non-Absolute Integration.'

C.651	'Besicovitch Point Sets'.
C.652	'Besicovitch Research Problems'.
c.653	'Bryan Birch Zeta f[unctio]ns'.
	Photocopied ms notes (not in Adams's hand).
C.654	'Burkill Real-Variable'.
C.655	'Series & Complex V[aria]ble. Burkill'.
c.656,c.657	'Burkill - Transfinite Nos.'
	2 folders.
C.658	'Miss Cartwright. Complex V [aria] ble'.
c.659,c.660	'Cassels & Smithies Linear Spaces'.
C.659	Notes on Cassels.

- C.660 Notes on Smithies.
- C.661,C.662 'Miss Edmonds Fourier Series'.
 2 folders.
- C.663,C.664 'Miss Grimshaw. Absolute Integration'.
 2 folders.
- C.665-C.667 'P.Hall Abelian Groups'.

 3 folders.
- C.668 'Mr Hall Groups'.
- C.669 'P. Hall Topics In Group Theory'.
- C.670 'Hall Universal Algebra'.
- C.671 'Hilton Homotopy Theory'.

C.672	'Haselgrove Analytic Theory of Nos.'
c.673	'Mr Ingham - Complex Variable'.
C.674	'Ingham Divergent Series'.
C.675	'Mr Ingham - Lebesgue Integration'.
c.676,c.677	'Ingham Theory of Numbers'.
	2 folders.
C.678	'Little Seminar'.
c.679	'Littlewood Theory of Functions'.
c.680	'Littlewood's Research Problems'.
	Duplicated ms problem sheets.
C.681	'Mahowald Seminar'.

C.682,C.683 'Analysis I Dr Rankine'.

Notes taken from 10 October 1949. 2 folders.

C.684 'Mr Rees Abstract Algebra'.

C.685, C.686 'Smithies. Integral equations'

2 folders. Some notes are on verso of 'University of Natal Maths IV, Astronomy Tutorial' papers dated 11 April 1949.

C.687, C.688 'Linear algebra Dr Smithies'.

Notes taken from October 1949. 2 folders.

C.689, C.690 'Steen Differential equations'.

2 folders.

C.691 'Steen Distributions

C.692-C.694 'Stein F[unctio]ns of Several Complex V[aria]bles'.

3 folders.

C.695 'Swinnerton-Dyer: The Riemann Hypothesis in Function Fields'.

Duplicated typescript text.

C.696 'Taunt - Groups'.

C.697-C.699 'Mr Ward Topology'.

3 folders.

C.700 'Mr White. Diff[erentia]l Geom[etry]'.

C.701 'JCHW [Whitehead] S-theory'.

C.702 'Wylie Alge.Top. II'.

C.703 'Wylie Combinatorial Topology'.

C.704 'Geometry I Mr Wylie (& Todd)'.

Notes taken from 11 October 1949.

Miscellaneous

- C.705 'Supervision, etc'.
 - Notes taken ?at tutorials from 12 October 1949.
- C.706 'Edsac'.

Notes on operation and programming of Edsac computer, \underline{c} . 1951.

- C.707 'Several complex variables Seminar'.
- C.708 Miscellaneous ms notes.

SECTION D

PUBLICATIONS

D.1 - D.15

Where applicable reference has been made to Adams's List of Publications (A.2) in the form <u>Bibliog</u>. no. ...

D.1 'On the chain algebra of a loop space', with P J Hilton. Bibliog. no.5 (1956).

44pp typescript.

D.2,D.3 'The cobar construction'. Essay submitted for the Adams Prize 31 December 1956.

53pp ms. 2 folders.

- D.4,D.5 'On the non-existence of elements of Hopf invariant one mod p'. Bibliog. no.10 (1958).
- D.4 21pp ms + references.
- D.5 13pp typescript.
- D.6 'On the anticommutative law and and the Jacobi identity for stable Toda Brackets', with R M F Moss. Not published but written c.1958-61.

8pp ms.

D.7 'On the non-existence of elements of Hopf invariant one'.
Bibliog.no.14 (1960).

Letter from N E Steenrod, Editor of Annals of Mathematics with suggestions for expanding Adams's draft.

Publications

D.8-D.10 'Algebraic Topology, Homotopy Theory'.

In January 1967 Adams was invited to edit a reprint collection in a series for graduate students to be published by Worth Publishers, Inc. Adams accepted but the project was later abandoned.

Editorial correspondence 1967-68. 3 folders.

D.11 'Lectures on Lie Groups'. Bibliog. no.38 (1969).

Letter from publishers, 22 November 1968.

'Algebraic Topology: a student's guide'. Bibliog. no.44 (1972).

Correspondence with publishers, July 1970.

D.12 ' λ -rings and Ψ -operations'. Nd.

4pp typescript.

- D.13 'Book'. Contents of Adams's folder so inscribed: ms notes outlining topics to be covered by projected book. Nd.
- D.14, D.15 'Offprints Dist. List'. Contents of Adams's folder so inscribed divided into two for ease of reference: lists of those receiving off-prints of Adams's publications.
- D.14 Index cards.
- D.15 Miscellaneous typescript and ms lists.

SECTION E

CORRESPONDENCE

E.1 - E.299

There are virtually no extended exchanges of correspondence, the great majority of the letters are incoming, with very few carbons of Adams's replies. The content is essentially mathematical; chiefly requests for Adams's advice or comments on specific problems, reflecting Adams's high standing in his field. Of special interest is the extensive correspondence from M F (later Sir Michael) Atiyah, M G Barratt, P J Hilton, I M James, A Liulevicius, S MacLane and C W Wilkerson.

Where applicable reference has been made to Adams's List of Publications (A.2) in the form Bibliog. no. ...

The material is arranged as follows:

E. 1 - E.272 GENERAL SCIENTIFIC CORRESPONDENCE.
In alphabetical order.

E.273- E.299 SHORTER SCIENTIFIC CORRESPONDENCE. In chronological order.

GENERAL SCIENTIFIC CORRESPONDENCE

E.1	Adem, J	1960
	Papers on secondary operations.	
E.2,E.3	Anderson, D W	1963-71, nd
E.2	1963-65.	
E.3	1968-71, nd. Letter of 1 April 1971 is re '"H type of spectral sequence', 7pp.	urewicz
E.4-E.12	Atiyah, M F	1961-88, nd
	Atiyah and Adams were contemporaries as undergrand postgraduate students at Cambridge.	raduate
E.4	1961. Comments on draft of Adams's paper 'Approf the Grothendieck-Atiyah-Hirzebruch functor K (Bibliog.no.24).	plications ((X)'
E.5	1962.	
E.6	1963. Includes comments on draft of Adams's properties of the groups $J(X)-I'$ (Bibliog.no.25).	paper
E.7	1964-66. Includes correspondence <u>re</u> joint pagatiyah 'K-theory and the Hopf invariant' (Bibli	per with log.no.34).
E.8	1966-71.	
E.9	1969-73.	
E.10	1976-80. Arrangements for Atiyah's seminars i	in Cambridge.
E.11	1978-88.	
E.12	Nd.	
E.13	Aubry, M	1977-80
E.14	Baas, N A	1968-74,1982-83
	1968-69 correspondence chiefly re the Adams spe	ctral sequence.

E.15-E.20	Barratt, M G		1960-76, nd
E.15	1960.		
E.16	1961-62. Chiefly <u>re</u> periodicity	tables.	
E.17	1961, 1964.		
E.18	1963-64.		
E.19	1967-76, nd.		
E.20	1967,1970.		
E.21	Bass, H		1972,1983
	Visit to Cambridge 1972; invitat Columbia University 1983.	ion to visit	
E.22	Berrick, A J		1980-87
	Chiefly <u>re</u> appointments.		
E.23	Boardman, J M	various dates	1964-76
	Includes 3pp ms notes on spectral	sequence, 196	4.
E.24	Bott, R		1959-62,1968,1969
E.25	Browder, W	various dates	1967-79, nd
	Includes correspondence <u>re</u> refere <u>Mathematics</u> .	eing for <u>Annal</u>	s of
E.26,E.27	Brown, E H	various dates	1965-83
E.26	1965-76. Includes 5pp photocopi 'Properties of B(K)', 1976.	ed ms note on	
E.27	1980-83.		

E.28-E.32	Brown, R	1966,1971-87
E.28	1966,1971-75.	
E.29	1976-81. Includes 1976-77 correspondence <u>re</u> p on the work of Brown and Higgins.	aper
E.30	1982-83. Includes correspondence <u>re</u> refereein	g.
E.31	1984-85. Includes 'Revised abstract April 198 of book on 'lie groupoids and the algebroids in differential geometry' by R Brown.	5'
E.32	1986-87.	
E.33	Bundgaard, S	1963,1969-70
E.34	Burghelea, D	1966,1979,1987
E.35-E.38	Carlsson, G	1981-84
	The correspondence is chiefly \underline{re} Carlsson's wor Segal's Burnside Ring Conjecture.	rk on
E.35	1981,1982.	
E.36	1982.	
E.37	1983.	
E.38	1984. Includes draft of 'Equivariant stable I Sullivan's Conjecture' by Carlsson, with Adams thereon.	nomotopy and 's comments
E.39	Cartan, H P various date:	s 1957 - 80
E.40	Caruso, J L	1979-81
E.41	Cathcart, A G	1984-87
	Cathcart was a PhD student of Adams, working between spectra and the Steinberg Idempotent'.	on 'Maps
E.42	Chern, S S	1978,1983-85
	Chiefly re visits.	

E.43	Clarke, F W		1974-77
	Includes correspondence <u>re</u> joint 'Stable operations on complex K-t no.59).	paper with Clar heory' (<u>Biblio</u> g	rke I•
E.44	Cockcroft, W H	various dates	1962-70
E.45	Cohen, F R	various dates	1975-87
E.46	Cohen, J M		1968,1972,1983
E.47	Cohen, R L		1979-88
	1981-82 correspondence re 'the Im	mmersion conjec	ture'.
E.48	Cohn, P M		1966,1976,1979-82
E.49	Davis, D M		1972-82
E.50	Deleanu, A		1971-74,1980,1983
	1973 correspondence chiefly $\underline{\text{re}}$ 't the Adams completion'.	the existence o	f
E.51	Delzell, C N		1981-82
	Drafts sent to Adams for comment	•	
E.52-E.58	Dibag, I		1974-87
E.52	1974.		
E.53	1975 Feb, May.		
E.54	1975 Nov, Dec.		

E.55	1976 Feb. 33pp letter on 'the number-theoretical problem'.
E.56	1976-79.
E.57	1980.
E.58	1981-87.
E.59,E.60	Dold, A 1959-85
E.59	1959-65. Chiefly <u>re</u> visits.
E.60	1968-85.
E.61	Dyer, E 1958-68,1975
	Later correspondence chiefly <u>re</u> visits.
E.62	Eckmann, B various dates 1956-78
E.63-E.65	Epstein, D B A 1960-81,1984
E.63	1960-66.
E.64	1968-81, 1984.
E.65	1980.
	Feshbach, M 1980-87
E.66	Feshbach, M 1980-87
	Chiefly <u>re</u> papers sent to Adams for comment, visits.

E.67-E.70	Friedlander, E M	1974-85
E.67	1974.	
E.68	1975.	
E.69	1976-78. Chiefly <u>re</u> Friedlander's work on the 'stable Adams's conjecture', visits.	
E.70	1980-86.	
E.71	Fröhlich, A	1969,1980,1984
E.72	Gandy, R O	1976,1978
E.73	Gray, B	1966-83, nd
E.74,E.75	Greenlees, J P C	1986-88
E.74	1986. Includes 8pp ms draft on 'a fully equivariant version of Lin's theorem' by Greenlees sto Adams for comment.	
E.75	1987,1988. Correspondence 1987 chiefly re b*(ICTs.
E.76	Gugenheim, V K A M various dates	s 1960-76, nd
E.77	Hazewinkel, M	1974-75
E.78	Heller, A	1969-74
E.79	Henn, H-W	1980-83,1986

E.80-E.85	Hilton, P J	1955-84, nd
E.80	1955-63. Includes 'Proposal for collaboration between members of the Department of Mathematic of Cornell University and European Mathematicia 1963.	S
E.81	1964,1967-71.	
E.82	1970.	
E.83	1972-76.	
E.84	1977-84. Includes correspondence <u>re</u> participa at International Congress of Mathematics, Warsa	
E.85	1984. Includes 15pp typescript draft obituary M H A Newman, Adams's predecessor as Fielden Pr of Mathematics at Manchester University.	
E.86	Hirsch, G C	1958,1964
	Includes llpp ms draft beginning 'Consider a fi space E, base B, the fibre F being a K(M,n)' by Hirsch sent to Adams for comment, 1958.	
E.87,E.88	Hirzebruch, F	1959-75,1984
E.87	1959-69. Chiefly <u>re</u> conferences.	
E.88	1971-75, 1984.	
E.89,E.90	Hoffman, P N	1966-77,1982
E.89	1966-73. Correspondence 1966-67 chiefly re Hoffman's PhD thesis.	
E.90	1974-77,1982. Chiefly <u>re</u> sabbatical year in U 1975-76.	к,

E.91-E.93	Hubbuck, J R	1966-78,1982-88,nd.
E.91	1966-70. Includes lOpp typescript draft 'The type of an associative H-space' by Hubbuck sent to Adams for comment.	
E.92	1972-78.	
E.93	1982-88, nd.	
E.94	Hunton, J R	1986-88
	Hunton was a PhD student of Adams.	
E.95,E.96	Husemoller, D	1964-71,1979
E.95	1964-68. Chiefly <u>re</u> visits.	
E.96	1969-71, 1979. Chiefly <u>re</u> visits.	
E.97,E.98	Jackowski, S	1983-87
	The correspondence chiefly relates to work toward two 1988 joint publications by Adams, Jackowski J-P Haeberly and J P May 'A generalisation of the Segal conjecture' (Bibliog.no.78) and 'A generalisation of the Atiyah-Segal completion theorem' (Bibliog.no.79).	, he
E.97	1983-84.	
E.98	1984-87.	
E.99-E.104	James, I M	1956-86
E.99	1956-60.	

E.100	1961-66. Visits, papers for <u>Topology</u> , examining etc.
E.101	1967,1968. Correspondence chiefly <u>re</u> tape-recorded lectures by Adams. Also includes 7pp typescript draft 'On sphere-bundles' by James sent to Adams for comment.
E.102	1969-75. Chiefly \underline{re} visits, participation at conferences.
E.103	1976-79.
E.104	1980-86.
E.105	Kaplansky, I 1973-75,1979
	Correspondence 1973-74 <u>re</u> publication of <u>Stable</u> homotopy and generalised homology by Chicago University Press (<u>Bibliog.no.49</u>); 1975 Newsletters on GLA's (graded Lie algebras) by Kaplansky; 1979 poem in honour of S MacLane.
E.106	Karoubi, M various dates 1966-75
	Correspondence 1974-75 \underline{re} Karoubi's draft book on K-theory.
E.107	Kassar, R G 1976-79
E.108,E.109	Kelly, G M various dates 1962-88
E.108	1962-64. Includes correspondence \underline{re} homology of function spaces.
E.109	1971-88.

1982,1984,1988

Correspondence

Chiefly correspondence and notes \underline{re} Kendall's work on 'the homology etc of shape-spaces for use in statistics and probability'.

E.110 1982.

E.111 1984,1988

E.110, E.111 Kendall, D G

E.112 Kervaire, M A various dates 1958-67

E.113, E.114 Kochman, S O 1975-81

E.113 1975-77.

E.114 1979-81.

E.115-E.117 Kono, A 1985-86

Kono worked on exceptional Lie groups in Cambridge April-June 1986.

E.115 Correspondence <u>re</u> arrangements to work in Cambridge, etc 1985-86.

E.116,E.117 Miscellaneous notes and calculations by Kono and Adams. 2 folders.

E.118, E.119 Kreisel, G various dates 1976-85

E.118 1976-78.

E.119 1981, 1982, 1985.

E.120-E.122	Kuhn, N J	1981,1985-88
E.120	1981. Correspondence <u>re</u> Kuhn's work on 'a conjecture of G W Whitehead' and visit to Camb	ridge.
E.121	1985. Includes 10pp photocopied ms draft on 'Morava K-theories of some classifying spaces' Kuhn.	by
E.122	1986-88. Includes correspondence <u>re</u> joint wo (published as 'Atomic spaces and spectra', <u>Bibliog</u> . no.80).	rk
E.123	Lam, K Y various date	s 1970 - 84
E.124-E.126	Landweber, P various date	s 1967 - 86
E.124	1967,1970-73. Includes Landweber's May 1973 comments on Adams's 1971 Chicago Lecture Notes and correspondence <u>re</u> visit to Cambridge.	
E.125	1974. Re visit to Cambridge	
E.126	1984,1986. Includes 19pp photocopied ms semi talk 'Dickson Invariants and Prime Ideas Invarunder Steenrod Operations' by Landweber, March	iant
E.127	Lang, S	1969-74
E.128	Lannes, J	1984-86
	Includes 8pp photocopied ms draft 'Cohomology groups and functions spaces' by Lannes, 1986.	of

E.129	Lax, P D 19	64-65
	Re joint paper 'On matrices whose real linear combinations are non-singular' by Adams, Lax and R S Phillips (Bibliog.no.32) Includes 9pp typescript draft.	
E.130	Leslie, J A	64-65
	Includes 5pp typescript draft 'Une description axiomatique des operations cohomologiques stables d'Adams-Peterson'.	
E.131	Lewis, L G	82-83
E.132,E.133	Leytem, C	84-86
E.132	1984. Includes 9pp typescript draft 'Spectra of Brown-Gitler type' sent to Adams for comment.	
E.133	1985, 1986.	
E.134-E.137	Lin, W H 19	75-82
E.134	1975. Re Lin's paper 'Unstable modules over the Steenrod algebra'.	
E.135	1976. Re Lin's papers on 'Cohomology of Sub-Hopf Algebras of the Steenrod algebra'.	
E.136	1977-79. Chiefly <u>re</u> papers by Lin.	
E.137	1980,1982. Chiefly <u>re</u> Lin's papers 'Algebraic Kahn-Priddy Theorem' and 'Cohomology of the Steenrod algebra'.	Ē

E.138-E.147	Liulevicius, A 1960-88
E.138	1960-65. Correspondence 1960 re work on Browder's Theorem.
E.139	1966-67. Correspondence 9-30 November 1967 covered Liulevicius's 'daily instalments of the translation of Novikov' sent to Adams.
E.140	1968-69. Letter of 25 May 1969 encloses llpp typescript 'write-up on the Novikov algebra' by Liulevicius sent to Adams for comment.
E.141	1970-71. Correspondence 1970 re visit to Chicago and subsequent preparation of texts of Adams's lectures for circulation.
E.142	1972-73.
E.143	1974-75.
E.144	1976. Includes llpp photocopied ms notes on a conjecture on G-homotopy types of linear actions on CP ⁿ sent to Adams for comment ll February, and 7pp photocopied ms 'UC University of Chicago Topology Seminar. Representation rings of S _n - a Hopf algebra approach'. 20 October.
E.145	1977-79.
E.146	1980-83.
E.147	1986, 1988.

E.148	McCleary, J	1978,1980,1983
E.149-E.153	MacLane, S	1956-85
E.149	1956-60. Correspondence 1960 <u>re</u> MacLane's dra of book on homological algebra.	afts
E.150	1961-65.	
E.151	1966-69. Correspondence 1966 re PACTs.	
E.152	1971-77.	
E.153	1979-85.	
E.154	Madsen, I	1975-83,1988
	Correspondence 1975 <u>re</u> Commuting maps.	
E.155-E.157	Mahmud, Z	1973-83,1988
E.155	1973-75. Chiefly <u>re</u> Mahmud's thesis and work joint paper 'Maps between classifying spaces' (<u>Bibliog</u> . no.55).	on
E.156	1976-79. Includes correspondence \underline{re} visit to Kuwait 1979.	
E.157	1980-83, 1988.	
E.158,E.159	Mahowald, M E	1974,1976,1979,nd
E.158	1974, 1976, 1979.	
E.159	Nd.	

E.160	Margolis, H R	1968-73
	Chiefly <u>re</u> joint paper 'Modules over the Steenralgebra' (Bibliog. no.42).	rod
E.161	Mather, M	1968,1972,1975
E.162	Mathias, A	1979,1988
E.163	Maunder, C R F	1962-67,1981
E.164,E.165	May, J P	1984-86
	Material <u>re</u> joint papers with Adams, J-P Haeber and S Jackowski (<u>Bibliog</u> . nos 78 and 79). 2 fo	
E.166-E.172	Miller, H R	1980-86
	Chiefly re work on the Segal conjecture etc.	
E.166	1980, 1981 Jan-Apr.	
E.167	1981 Aug, Oct. Includes 19pp photocopied ms draft beginning 'Our object in this section is the construction of another Tor-equivalence', sent to Adams for comment.	
E.168	1982 Jan-June. Includes ms 'memoranda' and 'e sent to Adams for comment.	essays'
E.169	1982 July.	
E.170	1982 Sept, Dec. Includes llpp photocopied ms beginning 'The first of my assignments is to pr a description of the "Singer Construction" T(M)	oduce

1983. E.171 E.172 1984-86. various dates 1957-77 E.173 Milnor, J W 1966,1973-76 E.174 Mimura, M 1973-74 E.175 Mislin, G Visit; construction of 'exotic maps BG+BG''. E.176, E.177 Morava, J J 1979,1986-87,nd. 1979, 1986-87. E.176 E.177 Nd. Moss, R M F various dates 1964-75, nd. E.178 Correspondence 1964-66 $\underline{\text{re}}$ Moss's PhD thesis. 1979-80,1986, nd E.179-E.181 Neisendorfer, J A E.179 1979-80, 1986.

E.182 Novikov, S P 1968-69

E.180, E.181 Nd. 2 folders.

Correspondence in Russian (three letters have ms translations into English).

E.183	Oguchi, K		1985-86
	Chiefly <u>re</u> visit to Cambridge.		
E.184	Pengelley, D J		1979-85
	Includes 9pp letter <u>re</u> 'a curious a ll March 1985.	lgebraic pher	nomenon',
E.185	Peterson, F P	arious dates	1959-88
E.186,E.187	Petrie, T		1980-82, nd
E.186	1980.		
E.187	1981-82, nd.		
E.188-E.190	Priddy, S B		1974-84
E.188	1974-76. Includes correspondence 'Uniqueness of BSO' (Bibliog.no.58)		r
E.189	1977-82.		
E.190	1983, 1984.		
E.191	Puppe, D	arious dates	1960-88
E.192	Quinn, F S		1982,1985-86
E.193	Ranicki, A A		1971,1979-83,1987

Ranicki was a PhD student of Adams, and a Research Fellow at Trinity College Cambridge 1972-77.

E.194-E.196	Ravenel, D C		1973-83
E.194	1973-77.		
E.195	1979. Re visit to Cambridge.		
E.196	1980-83.		
		_	
E.197	Ray, N v	arious dates	1972-88, nd
	Ray was a PhD student of Adams at University.	Manchester	
E.198	Rector, D		1976,1981-82
	Chiefly correspondence 1981 $\underline{\text{re}}$ abel and tori.	ian subgroup	s
E.199	Rees, E		1974,1980-83
E.200	Rose, W		1985-88
E.201	Rourke, C P		1971-72,1977
	Chiefly correspondence 1977 <u>re</u> Adam of 'Lecture Notes' by Rourke and B See also E.203.		ms
E.202	Samelson, H		1961,1966,1978
	Correspondence 1961 chiefly $\underline{\text{re}}$ visi University.	t to Stanfor.	đ
E.203	Sanderson, B J	arious dates	1972-77, nd

E.204-E.206	Segal, G	1969-84, nd
E.204	1969-73.	
E.205	1975-78.	
E.206	1980-84, nd. Includes exchange November 1981 reconjectures in stable homotopy theory.	r <u>e</u>
E.207	Serre, J various dates	1958-87
E.208	Shaw, R	1986-88
E.209	Shih, W	1964-67,1981
E.210	Siebenmann, L various dates	1971-85
E.211,E.212	Singer, W M	1980-86
E.211	1980. Includes correspondence <u>re</u> possible joir paper.	nt
E.212	1981-86.	
E.213-E.216	Smith, L	1968-85
E.213	1968.	
E.214	1969.	
E.215	1970-71.	
E.216	1973-85.	

E.217-E.221	Snaith, V P	1970-88
E.217	1970-75.	
E.218	1976. Includes correspondence <u>re</u> idempotents.	
E.219	1977-79. Includes correspondence <u>re</u> visit to	Cambridge.
E.220	1980-82. Includes correspondence 1982 <u>re</u> Lichtenbaum-Quillen conjecture.	
E.221	1984-88. Chiefly correspondence 1986-87 re Explicit Brauer Induction.	
E.222	Spanier, E H	1960-63,1981
	Chiefly $\underline{\text{re}}$ 1961 visit to University of Californ Berkeley.	ia,
E.223-E.225	Stasheff, J various dates	: 1958-87, nd
E.223	1958-59. Includes Stasheff's comments 'on the	1
	first draft of the Hopf Invariant One paper' (Bibliog. no.11), 1958.	
E.224		
	(<u>Bibliog</u> . no.11), 1958.	vs -
E.224	(<u>Bibliog</u> . no.11), 1958. 1960-63. 1966-87, nd. Includes Stasheff's 'H-space new	vs -
E.224	(<u>Bibliog</u> . no.11), 1958. 1960-63. 1966-87, nd. Includes Stasheff's 'H-space new	vs -
E.224 E.225	(Bibliog. no.11), 1958. 1960-63. 1966-87, nd. Includes Stasheff's 'H-space new January 21, 1974', and correspondence re visits	vs - 6.

E.228	Stong, R E various dates	1967-88
E.229	Sutherland, W A various dates	1962-80, nd
E.230	Tangora, M C	1969,1974,1976
	Chiefly <u>re</u> visit to Manchester 1969-70.	
E.231-E.234	Thomas, C B	1969-71,1974-85
E.231	1969-71.	
E.232	1974-76.	
E.233	1977-79.	
E.234	1980-85.	
E.235	Thomas, P E	1962,1967,1975
E.236	Tits, J	1973,1985
1	Correspondence 1973 <u>re</u> lie groups	
E.237	Toda, H	1961,1968-70, nd
E.238,E.239	tom Dieck, T various dates	1967-86
E.238	1967-86. Includes 9pp ms 'results on power operations in cobordism theories' sent to Adams May 1967.	
E.239	1981.	

E.240	Wall, C T C	1961-70,1985, nd
	Chiefly <u>re</u> examining and visits.	
E.241	Whitehead, G W various dates	1957-79
E.242	Whitehead, J H C	1956-59
	Chiefly correspondence 1956 $\underline{\text{re}}$ homotopy types.	
E.243-E.251	Wilkerson, C W	1974-88, nd
E.243	1974-76.	
E.244	1977. Re joint paper 'Finite H-spaces and algorer the Steenrod algebra' (Bibliog. no.63)	ebras
E.245	1978 Feb-Aug. Re joint paper.	
E.246	1978 Sept-Dec. Re joint paper.	
E.247	1979 Jan-Mar. Re joint paper.	
E.248	1979 May-Nov. Re joint paper.	
E.249	1980. Re correction to joint paper.	
E.250	1981-84.	
E.251	1986-88, nd.	
E.252	Wilson, W S	1975-79
E.253-E.261	Wojtkowiak, Z	1979-88
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E.254	1982-85. Includes report on work since visit to Cambridge 1982.
E.255	1986 May, Sept. Includes 14pp photocopied ms draft 'On the mapping space map (BG,BH)' sent to Adams for comment.
E.256	1986 Dec. 28pp photocopied ms draft 'A remark on maps between classifying spaces of compact Lie groups' sent to Adams for comment.
E.257	1987, 1988 Jan-Apr.
E.258	1988 May, June. Re work towards joint paper 'Maps between p-completed classifying spaces' (Bibliog. no.81).
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Report on the further correspondence and papers

of

JOHN FRANK ADAMS

(1930 - 1989)

mathematician

in Trinity College Library,
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JOHN FRANK ADAMS FRS

(1930 - 1989)

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NCUACS 34/2/92

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INTRODUCTION

PROVENANCE

The supplementary material presented here and the original collection of papers (NCUACS 26/2/91) were made available for cataloguing and deposit by the family of Professor Adams.

PRESENTATION

The material has been arranged into sections and numbered to follow the sequence of the catalogue compiled in 1991 (NCUACS 26/2/91), which should be consulted in conjunction with this Supplementary Catalogue.

DESCRIPTION

The collection is presented in the order given in the List of Contents. Material supplementary to the 1991 catalogue has been found for all sections.

Section A, Biographical, consists of one new item; an intellectual 'family tree' compiled by Adams tracing pupils of J H C Whitehead.

Section B, Research, provides significant further documentation of Adams's research. It is presented in an alphabetical sequence arranged by subject title.

Section C, Lectures, comprises two subsections presenting further teaching material for courses at Cambridge and notes from conferences and seminars attended by Adams.

Section D, Publications, presents much new material relating to Adams's publications over the period 1971-89. Of particular note is the extensive documentation of two important joint papers 'The Segal conjecture for elementary abelian p-groups', with J H Gunwardena and H Miller, Topology 24 (1985) and 'A generalisation of the Segal conjecture', with J-P Haeberly, S Jackowski and J P May, Topology 27 (1988).

Section E, Correspondence, is a slight addition to the extensive correspondence in the catalogue compiled in 1991.

T E Powell
P Harper
Bath 1992

SECTION A

BIOGRAPHICAL

A.20

A.20

'Family tree'. Contents of Adams's folder so inscribed: correspondence and papers \underline{re} 'J H C Whitehead supervision tree'.

On the occasion of the inaugural J H C Whitehead Lecture, 28 June 1974, Adams prepared 'a wall-chart showing the pupils of J.H.C.W., and his pupils' pupils, and so on'. Folder includes the wall-chart.

SECTION B

RESEARCH

В.174-В.394

The research material in this section complements that in the previous catalogue, which it exceeds in quantity. It was found in Adams's own folders with titles inscribed thereon. These titles have been reproduced in the catalogue entries and form the basis for the arrangement of the material in an alphabetical sequence. At the end of this sequence are the contents of Adams's folders containing mathematical problems for research students and colleagues, and miscellaneous research material.

The contents of bulky folders have been subdivided for ease of reference.

Many of Adams's notes are written on the back of earlier notes, pages of drafts (generally undated), reports and correspondence. Some of the reports and correspondence are concerned with Trinity College Cambridge or Royal Society business and are subject to restricted access.

B.174 'Ideas on Adams Resolutions for Leytem'.

B.175-B.177 'Current work on ASS [Adams Spectral Sequence]'. 3 folders.

B.178-B.180 'Work on Adams Spectral Sequence'. 3 folders.

B.181 'Work on ASS'. Includes 'BMC [British Mathematical Colloquium]talk', 5pp ms and 'Paris talk', 17pp ms (in French).

B.182 'Convergence of ASS'.

B.183 'Generalised ASS'.

B.184 'Amusements'. Miscellaneous puzzles and problems.

Research

в.185	'Baird work'. Includes 'The structure of $A=K_0\left(k\right)\otimes \mathrm{Zp}'$, 7pp ms.
в.186,в.187	'Notes on talks on BP* by Morava et al. 2 folders.
в.188	'bu*(bu) for[D W]Anderson'.
в.189	'Archives of [G] Carlsson work'.
B.190,B.191	'G-spectra work on Carlsson'.
в.190	Letter from Maurice [?] re equivariant stable homotopy theory, 9 August 1982; 'Aarhus lecture' on Carlsson's
4	proof of G Segal's Burnside Ring Conjecture; 'Carlsson's Convergence Theorem', 4pp ms.
в.191	Ms notes.
в.192-в.196	'New work on Carlsson'.
в.192	'Conversation between a Topologist and Two Machines', 5pp ms, 10 January 1984.
в.193-в.196	Ms notes. 4 folders.
в.197	'Cohen - Moore - Neisendorfer'.
в.198	'Cohomol[ogy] of Groups'.

'Archives: Duflot - Landweber - Stong → work on cohomol. B.200-B.203 lie groups (May Cohen sources)'. Includes letter from Correspondence with R E Stong 1985. B.200 Stong, 18 January, enclosing 'A problem of Adams on H* (BG; Zp)' by J Duflot, P S Landweber and Stong, and Adams's reply of 22 February commenting on the paper. B.201-B.203 Ms notes. 'Work on E for Kleidman'. B. 204 'Eg'. 2 folders. Some notes on verso of abstracts B.205, B.206 submitted for Trinity College Fellowship competition 1982. 'E₈ at the prime 2'. 3 folders. B.207-B.209 $^{\prime}E_{Q}$ at prime 5'. B.210 'EASS [Equivariant Analogues of the Adams Spectral Sequence] B.211 file'. (1). 'Exceptional Lie Groups'. B.212-B.214 Index cards of bibliographical references. B.212 'Roots of E₆ for Weyl formula'; 'Roots of E₇ for Weyl B.213 formula'. Ms notes 'From Cornwall file'. Some notes on verso of B.214 1982 Trinity College Fellowship reports. 'Exceptional Lie Groups'. (2). 3 folders. B.215-B.217

B.218-B.222 'Exceptional Lie Groups'. (3).

Five folders of Adams's so labelled as a group.

- B.218 'E₆'.
- B.219-B.221 'E₈ at prime 5'. 3 folders. Some notes on verso of 1976-77 correspondence re Royal Society elections.
- B.222 'Collection of verifications on E₇, E₆'.
- B.223 'Spare material on exceptional lie groups'.
- B.224 'Ext K* (K)'. Includes 'Basic definitions', 27 May 1972, and 'case of p odd', 28 May.
- B.225 'Work on Ext'. Some notes on verso of ?Royal Society papers.
- B.226-B.232 'F₄'.
- B.226 Ms drafts on F₄, December 1978, January 1979.
- B.227 Letter from Adams, 26 June 1979; 'A bit about the exceptional lie group F_A ', 16pp ms.
- B.228-B.232 Ms notes. 5 folders.
- B.233 'Small subgroups of G_2 (and F_4)'.

B.234 'Note on G-cohomology'.

Includes note from N Kuhn, April 1987.

- B.235, B.236 'New drafts via Gen Homol'. 2 folders.
- B.237, B.238 'Products in Generalised Cohomology Theories'. 2 folders.
- B.239, B.240 'Geometry'. 2 folders.
- B.241, B.242 'Yosé in Go'.

Ms notes and calculations re the game of Go. 2 folders.

- B.243 'Work for Goto'.
- B.244 'Thoughts on Greenlees problem'.

Includes 'summary of progress' from J P C Greenlees, January 1983; and photocopies of work on 'False ${\tt HP}^{\infty}$'s' February 1977.

- B.245 'Greenlees work'.
- B.246 'H spaces & [?]lie groups'.
- B.247 'New Hattori-Stong'.
- B.248 'Scraps of work with Haynes, on Burnside Ring Conj, June-July '82'.
- B.249-B.251 'Homol. Alge.'. 3 folders.

в. 252-в. 254	'Work on using homology in Novikov Spectral Sequence'.
в. 252	'Care and Feeding of Comodules', 14pp ms; 'Data: R ring: C comodule over R, flat over R.' 5pp ms.
B.253,B.254	Ms notes. 2 folders.
в.255	'Homotopy'. Some notes on back of draft letter to T M Sugden, Physical Secretary of the Royal Society, October 1978.
в.256	'Homotopy Theory'. Some notes on back of copies of letters to C W Wilkerson, 1977-78.
в.257-в.261	'Jackowski'.
в.257	Adams's 'Remarks on the draft "Families and completions in equivariant cohomology" by S Jackowski'; letter from Jackowski enclosing revised draft, ?January 1984.
в.258-в.261	Ms notes. 4 folders.
в. 262	'Jackowski - McClure on BG'. Comments on ms draft by S Jackowski and J E McClure 'An approximation theorem for classifying spaces of compact lie groups'.
в.263	'Johnstone problem'. Work re P T Johnstone.
в.264-в.267	'Kahn thing'.
в. 264	Correspondence with D S Kahn re 'line of attack on the conjecture of Mahowald and Whitehead'.
в.265-в.267	Ms notes. 3 folders.

B.268-B.270 'Work for [A] Kono'. 3 folders.

B.271 'LIE'.

B.272-B.274 'New Lie Groups'. 3 folders.

B.275-B.278 'LIN'.

Four folders of Adams's so labelled as a group.

B.275 Ms notes for 'Chicago seminar'.

B.276 'New work on Lin'.

B. 277, B. 278 Ms notes. 2 folders.

B. 279 'Bits about localisation & completion'.

B. 280 'Work for Miss [C] Luz'.

B.281 'Work for Chuck McGibbon'.

B.282 'Mislin localisation thing'.

B.283-B.286 'Mahowald'. (1)

B.283 Correspondence with M E Mahowald, March-April 1972.

B.284-B.286 Ms notes. 3 folders.

B.287,B.288	'Mahowald'. (2)
в.287	Drafts by Mahowald: 'The order of the image of J', 'The order of the image of the J-homomorphism', 'Periodicity in the Adams Spectral Sequence'.
B.288	Ms notes.
в. 289-в. 292	'Mahowald'. (3)
в.289	Ms draft 'On a result of Anderson' by Adams.
в.290-в.292	Ms notes. 3 folders.
в.293	'Exposé on Mark [Mahowald] on hhh'.
B.294,B.295	'Vanishing theorems: notes on Mark [Mahowald], letters'. 2 folders.
в.296	'Modules'.
	llpp ms draft.
в.297	'File On MSp'. Some notes on back of corrected proof of 'On the groups J(X)-lV' by Adams (Bibliog.no.35, 1966).
в.298	'MSp (new)'.
B.299-B.301	'Work on Non-abelian Homol. Algebra'.
в.299	Seminar notes.

- B.300,B.301 Ms notes. 2 folders. Some on back of incomplete ms draft by Adams on wartime work of M H A Newman, probably for his Royal Society Memoir of Newman (<u>Bibliog.no.75</u>, 1985).
- B.302-B.304 Novikov: Liulevicius translation & work on him'.

 See also E.139, E.140 of the previous catalogue (NCUACS 26/2/91).
- B.302 Letters to A Liulevicius, January 1968.
- B.303, B.304 Ms notes. 2 folders.
- B.305-B.308 'Novikov seminar: [?], calculations'. 4 folders.
- B.309-B.313 'Periodicity'. 5 folders.
- B.314 'PSU (3) etc'.
- B.315 'Quillen thing'. Notes on work of D G Quillen.
- B.316-B.321 '[D C] Ravenel, BP, p-homotopy'.

Six folders of Adams's so labelled as a group.

- B.316 'Notes on Ravenel & BP applied to p-homotopy'. Includes notes for 'Seminar talk on BP-theory'.
- B.317-B.319 'HTPY, CALCNS'. 3 folders.
- B.320 'Ravenel'.

в.321	'Ravenel's notes, <u>re</u> Shen thing'.
в.322-в.326	'RECTOR-LAM'.
	Five folders of Adams's so labelled as a group.
B.322,B.323	'Work on Rector'.
B.322	Correspondence with D Rector, October-November 1981.
B.323	Ms notes.
в.324-в.326	'LAM'.
	S P Lam was a Research Student of Adams's.
в. 324	Letter to Lam, 31 December 1981; 'Algebras over the Steenrod Algebra', 19pp ms.
B.325	'Work of Lam and Adams', 9pp ms by C Wilkerson, 11 April 1982; 'Work of Wilkerson on "Work of Lam and Adams" ' 3pp photocopied ms by Adams, 19 April .
в.326	Ms notes.
в.327	'Segal-Jackowski Conj.'
в.328	'Sources on Serre Conj.'
	Photocopied papers and correspondence.
в. 329-в. 332	'SHEN'.
в.329	Correspondence with Shen and S Oka, 1981-82, recalculating Ext groups.

в.330-в.332	Ms notes. 3 folders.
B.333,B.334	'Larry Smith work'. 2 folders.
в. 335	'A child's guide to Larry Smith's construction'.
в.336	'Thoughts on Steinberg [?symmetry]'.
в.337	'Steinberg'.
B.338-B.341	'Sullivan (Work on Sullivan's cals)'.
в.338	Correspondence with D Sullivan and Brian [?].
B.339-B.341	Ms notes. 3 folders. Some on back of Manchester University Department of Mathematics minutes, November 1970.
в.342-в.344	'Symmetry thing'. 3 folders. Some notes on back of Royal Society papers, 1976-78.
в. 345	'C B T [homas] problem'.
в.346	'TRANSFER'. 'Transfer and Dyer-Lashof structure'. 9pp ms.
в.347	'Triality'. 'Some precise details on the group $\mathbf{\Sigma}_3$ of outer automorphisms', lOpp ms.
в. 348	'Work on Unstable Algebra'.
в.349,в.350	'G Walker'. 2 folders.

- B.351,B.352 'Study on Weyl groups'. 2 folders.
- B.353-B.355 'Work on $(\mathbb{Z}_2)^n$ '. 3 folders.
- B.356, B.357 'Work on [R S]Zahler'. 2 folders.

'Problems'

Contents of Adams's folders so inscribed containing mathematical problems for research students and colleagues.

- B.358 1965, 1968.
- B.359, B.360 1974, 1976. 2 folders.
- B.361 1977. 'Problems from Chicago Easter 77'.
- B.362,B.363 1978-79. 2 folders.
- B.364 1982. 'Current problems in homotopy theory'.
- в. 365 '1983'.
- B.366-B.368 1985. 3 folders.
- B.369,B.370 1986. Problems from participants at International Conference on Algebraic Topology, Arcata, California, 1986. 2 folders.

- в. 371 1986.
- B.372 Nd. 'Problems proposed at the Chicago Circle Algebraic Topology Conference'; 'Problems for problem session'; etc.

Miscellaneous

- B.373 'Work done in Chicago'. Chiefly re work of J P May.
- B.374 'Draft for Jeremy[?Gunwardena]'. 15pp research problem, September 1979.
- B.375,B.376 'Work for Nigel'. 2 folders.
- B.377 'Thoughts for Princeton'.
- B. 378 'Notes on papers'.
- B. 379 'Suggs. for Further Work etc'.
- B.380 'My own....'
- B.381 'Work in progress'. Includes 'False HP 'c', 9pp ms, 20 February 1977.
- B.382,B.383 'Work'. 2 folders.

B.384, B.385 'Scraps'.

Includes 'A problem in homological algebra' 9pp ms; notes for P T Johnstone. B.384

Ms notes. B.385

B.386-B.394 Untitled. 9 folders.

SECTION C

LECTURES

C.709-C.742

C.709 - C.717

Teaching

C.718 - C.742

Conferences and seminars

TEACHING

C.709-C.714 'Equivariant topology'.

Lecture notes; examination questions. 6 folders.

C.715-C.717 'Course on Exceptional Groups (Materials, preliminary sessions etc)'. Contents of Adams's folder so inscribed divided into three for ease of reference.

Ms notes, examination questions.

Lectures

CONFERENCES AND SEMINARS

C.718	'Algebraic Topology Seminar'.
	Programmes of speakers and subjects for Departmental seminars, 1985-86.
C.719-C.721	'Proceedings of Monday seminar'. Contents of Adams's folder so inscribed divided into three for ease of reference.
C.719	Programme for Departmental seminars on 'Algebra over the Steenrod algebra', Lent Term 1986; Adams's notes on Seminar by J H Gunwardena; ms note by Gunwardena 'T commutes with suspension' arising from the seminar.
C.720	Adams's notes on seminars by K Schuch, A Cathcart, J Greenlees, D Carlisle.
C.721	Adams's notes on seminars by D Carlisle, D Barden; typescript note by Barden 'The geometric parts of Haynes Miller's proof of the Sullivan conjecture' arising from the seminar.
C.722	'Bonn, Dynamics'. Contents of Adams's folder so inscribed.
	Lecture notes.
C.723,C.724	Namboodiri Lectures, University of Chicago, latest reference 1985.
C.723	First lecture.
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of

Lectures

C.724	Second and third lectures.
C.725	'Talk for Chicago'.
	Lecture notes.
c.726	'Generalisation of the Adams spectral sequence, I: The category of fractions associated with a homology theory'.
	Lecture notes.
C.727	'Talk for Hull', latest reference 1966.
	Lecture notes.
c.728,c.729	'Seminar on Lannes'. Contents of Adams's folder so inscribed divided into two for ease of reference.
	Notes for two lectures.
C.730	'Lannes (Notes from Paris Meeting)'. Contents of Adams's folder so inscribed.
	Ms notes.
C.731	'Talk for Notre Dame (Midwest Topology Seminar)'.
	Lecture notes.
c.732-c.734	Contents of Adams's folder divided into three for ease of reference.
	Lecture notes, beginning 'I have been instructed to present proofs of what I said in the Midwest Topology Seminar'.

Seminar'.

Lectures

C.735,C.736 'Talk for Oxford'. Contents of Adams's folder so inscribed divided into two for ease of reference.

Lecture notes on 'The theorem of Madsen, Snaith & Tornehave'.

C.737 'Oxford Talk'.

Lecture notes.

C.738 'Peaks, passes & pits Talk to Archimedeans'. Contents of Adams's folder so inscribed.

Lecture notes.

C.739-C.741 'Talk on theorems of R M W Wood, H R Margolis, D W Anderson and M E Mahowald'. Contents of Adams's folder so inscribed divided into three for ease of reference.

Lecture notes.

C.742 Contents of Adams's folder.

Lecture notes.

SECTION D

D.23-D.26

4 folders.

PUBLICATIONS

D.16 - D.108

Where applicable reference has been made to Adams's List of Publications (A.2) in the form Bibliog. no....

'Modules over the Steenrod algebra', with H R Margolis. D.16, D.17 Bibliog. no. 41 (1971). 28pp typescript by Margolis; letter from Adams commenting D.16 on the draft. D.17 15pp typescript by Adams. D.18-D.20 'Sub-Hopf-Algebras of the Steenrod algebra', with H R Margolis. Bibliog.no.50 (1974). D.18 Correspondence from Margolis, 1972-73; ms and typescript drafts of 'Subalgebras of the mod 2 Steenrod algebra', probably earlier version of the paper. D.19 10pp photocopied ms by Margolis; 22pp ms by Adams. D.20 15pp typescript; 14pp ms 'Notes for the Author' by Adams. D.21-D.26 'Geometric dimension of bundles over RP"'. Bibliog. no.51 (1974). D.21 23pp ms. D.22 17pp typescript.

Material found with the preceding: correspondence, 1973-74, with C Luz, research student; ms notes.

D.27-D.32	'Idempotent functors in homotopy theory'. Bibliog. no.52 (1975).
D.27	12pp 'OLD' ms; 18pp ms.
D.28	llpp typescript.
D.29-D.32	Material found with the preceding: ms notes. 4 folders.
D.33-D.35	'Calculation of Lin's Ext groups', with W H Lin, D M Davis and M E Mahowald. Bibliog. no. 64 (1980).
D.33	Correspondence with co-authors and Editor, 1979.
D.34	34pp ms 'Draft for Lin-Davis-Mahowald'.
D.35	22pp ms; proof with ms corrections.
D.36,D.37	'Graeme Segal's Burnside Ring Conjecture'. <u>Bibliog</u> . no.65 (1980). See also <u>Bibliog</u> . nos. 68 and 69 (1982).
D.36	18pp typescript.
D.37	Ms notes for talks on Segal's Burnside Ring Conjecture found with preceding.
D.38	Book review of 'The classifying spaces for surgery and cobordism of manifolds' by I Madsen and R J Milgram for Bulletin of the London Mathematical Society c.1980.

D.39-D.44	'Spin (8), triality, F ₄ and all that'. <u>Bibliog</u> . no.67 (1981).
D.39	21pp photocopied ms.
D.40-D.44	Material found with preceding: ms notes. 5 folders.
D.45	'The case of an odd prime', July 1982. Not listed in <u>Bibliog</u> .
	40pp ms.
D.46-D.48	'Maps between classifying spaces. III', with Z Mahmud. Bibliog. no.71 (1983)
D.46	Correspondence with Mahmud, 1980-81.
D.47	6pp ms; 6pp ms 'Amendments'.
D.48	Material found with preceding: ms notes.
D.49	'An exposition of Carlsson's proof'. Not listed in Bibliog., latest bibliographical reference 1983.
	19pp typescript.
D.50, D.51	'Prerequisites (on equivariant stable homotopy) for Carlsson's lecture'. Bibliog. no.72 (1984).
D.50	28pp typescript.
	e a s _e t
D.51	Later draft, 51pp typescript + ms corrections.

	D.52-D.59	'The Segal conjecture for elementary abelian p-groups', with J H Gunwardena and H Miller. <u>Bibliog</u> . no.76 (1985).
	D.52	Letters to Miller <u>re</u> collaboration, 1981.
	D.53	29pp ms 'Draft for H Miller', July 1981.
	D.54	'Jerusalem manifesto April '82 Draft for Adams Gunwardena & Miller'; 'Seminar from Jerusalem'.
	D.55	Correspondence, 1982.
	D.56,D.57	'Function-Object Draft July '82'. 2 folders.
	D.58	'Draft Part I', February 1983.
	D.59, D.60	'Draft Part II', March 1983. 2 folders.
	D.61	Letters to J P May, 20 May 1984, H Miller, 9 June.
	D.62-D.65	129pp typescript. 4 folders.
	D.66-D.69	Material found with preceding: ms notes and drafts. 4 folders.
	D.70-D.72	'2-tori in E ₈ '. <u>Bibliog</u> . no.77 (1987).
	D.70	Correspondence with editors, 1984-86; 28pp ms.
10	D.71	24pp typescript.
	D.72	Ms drafts: '2-Tori in Exceptional Groups Draft 5', '2-tori in E ₇ ', 'A start on the Invariant-Theory'. 'The 6 8-dimensional relation in H * (BA(T))'.

'The work of M J Hopkins'. Not listed in Bibliog. D.73 but submitted for publication in the 'Proceedings of the Barcelona conference' (see C.603-C.605 of the previous catalogue). Letter from editor with referee's report, 15 May 1987; 12pp typescript. 'A generalisation of the Segal conjecture', with J-P Haeberly, D.74-D.93 S Jackowski and J P May. Bibliog. no. 78 (1988). D.74 Ms draft, August 1984, with covering letters to co-authors. Ms draft, December 1984, with covering letters to co-authors. D.75, D.76 2 folders. D.77 Correspondence, March 1985. Includes Jackowski's draft introduction. Ms draft 'A', c. July 1985, with covering letter and Notes D.78, D.79 to co-authors. 2 folders. Ms draft 'B', July 1985. 2 folders. D.80, D.31 D.82 Ms draft 'C', August 1985, with covering letters to co-authors. Ms draft 'D', September 1985, with covering letter to D.83, D.84 co-authors. 2 folders. Comments on 'D' and other drafts from co-authors, D.85 September-November 1985.

D.86	Letters to co-authors, January 1986, re draft 'F' (not surviving).	
D.87	Comments on 'F' from co-authors, January-March; 'A further generalisation of the Segal conjecture' by J P May.	
D.88	39pp typescript; letter from <u>Topology</u> , 13 May 1986.	
D.89-D.93	Material found with preceding: ms notes and pages of drafts. 5 folders.	
D.94, D.95	'A generalisation of the Atiyah-Segal completion theorem', with Haeberly, Jackowski and May. <u>Bibliog</u> . no.79 (1988).	
D.94	Correspondence from May, March-April 1985; 16pp photocopied ms (by May), 'Revised March 27, 1985'.	
D.95	9pp typescript.	
D.96, D.97	'Atomic spaces and spectra', with N J Kuhn. Bibliog. no.80 (1989).	
D.96	Correspondence with Kuhn and Editor, 1987-88; 5pp ms 'Note on atomic spectra', 19 June 1987.	
D.97	13pp ms with corrections; lOpp typescript.	
D.98, D.99	'Maps between p-completed classifying spaces', with Z Wojtkowiak. Bibliog. no.81 (1989).	
D.98	Letter to Wojtkowiak, 14 April 1988; ms note.	
D.99	9pp ms; 6pp typescript.	

D.100 'An Inquiry into some work of William M Singer'. Nd. Not listed in Bibliog.

15pp ms 'OLD'; 12pp ms 'NEW'.

- D.101 'On Wente's surface'. Nd. Not listed in <u>Bibliog</u>.

 10pp ms.
- D.102-D.104 'Draft 1'. Contents of Adams's folder so inscribed divided into three for ease of reference. Ms notes. Nd.
- D.105-D.108 'Draft 3'. Contents of Adams's folder so inscribed divided into four for ease of reference. Ms notes. Nd.

SECTION E	CORRESPONDENCE	E.300-E.319
E.300	Bousfield, A K	1979,1984
E.301	Carlsson, G	1982, nd
	Includes 6pp ms note by Adams 'On your paper abothe Segal conjecture'.	out
E.302	Drensky, V S	1984
	Friedlander, E M	1975
E.303	Goddard, P	1983
	Classification of G-bundles	
	Hikida, M	1981
	Resolution of K* (S).	
E.304	Jackowski, S	Nd
E.305	Kropholler, P H	1987-88
	'Invariants of some classical finite groups over GF(2)' by Kropholler and D P Carlisle, December 1987, sent to Adams for comment, with Adams's comments thereon. See also B.19-B.32 of the previous catalogue.	
		¥81
E.306,E.307	Lannes, J	1985-86
E.306	1985 September.	
E.307	1985 November-December, 1986. Includes 22pp ms 'Two theorems of J Lannes' by Adams, sent to Lar comment.	

Correspondence

E.308	Lees,	Nd
	Includes 8pp ms draft 'On Lees' problem' by Adam	ns.
E.309	Leruste, C	1975
	Liulevicius, A	Nd
E.310	Lusztig, G	1974-75
E.311	Mahowald, M E	1976
	May, J P	?1973
	Representation theory	
E.312,E.313	Priddy, S B	1973
	Re visit to Cambridge, September 1973-August 1974. Priddy of Northwestern University, Illinois, was Senior Visiting Fellow in Adams's Department.	
E.312	January - July	
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E.314	Samelson, H	1978
	Convergence of spectral sequences	
	Smith, L	1969
	Snaith, V P	1976

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E.315	Tangora, M C	1976
	Tits, J	1973
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E.316, E.317	Zahler, R S	1972-73
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