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B1984-0021

PATTERSON, Gordon Neil

Records [textual], 1935-1974, 1.45 metres

Twenty-five bound volumes containing correspondence, minutes, memoranda, notes, reports, manuscripts, publications, lectures, addresses, graphs, diagrams, drawings and photoprints assembled by Professor Patterson for his book, Pathway to Excellence: UTIAS -- the first twenty-five years (1977); bound photocopied volume of the Book of Aeronauts (1945).

Access: Open

**/Box (file) Subject** **Date (s)**

The titles given below are taken from the notations on the volumes. Each volume for the Pathway to Excellence may contain any or all of the above categories of material.

/001	(01)	Chapter I, References 1-16, Figures 1-6	1935-1945
	(02)	Chapter II, References 17-75	1945-1946
	(03)	Chapter III, References 76-132, Figure 7	1947
/002	(01)	Chapter IV-1, References 133-185, Figure 8	1948
	(02)	Chapter IV-2, References 133-185, Figure 8	1948
	(03)	Chapter V, References 186-209	1948-1949
	(04)	Chapter VI, References 210-233, Figures 9-12	1949-1950
/003	(01)	Chapter VII, References 234-265, Figures 13-15	1951-1955
	(03)	Chapter VIII, References 266-543 [266-387], Figures 16, 17	1949-1959
	(04)	Chapter VIII, References 266-543 [388-472], Figures 16, 17	1948-1958
/004	(01)	Chapter VIII, References 266-543 [473-494], Figures 16, 17	1954-1959
	(02)	Chapter VIII, References 266-543 [495-520], Figures 16, 17	1954-1959
	(03)	Chapter VIII, References 266-543 [521-543], Figures 16, 17	1958-1959
	(04)	Chapter IX, References 544-633 [544-592], Figures 18-25	1954-1956
/005	(01)	Chapter IX, References 544-633 [593-633], Figures 18-25	1956-1957
	(02)	Chapter X, References 634-884 [634-712], Figures 18-25	1949-1964
	(03)	Chapter X, References 634-884 [713-770], Figures 18-25	1959-1964
/006	(01)	Chapter X, References 634-884 [771-858], Figures 18-25	1960-1964

University of Toronto Archives

B1984-0021

/Box	(file)	Subject	Date(s)
/006	(02)	Chapter X, References 634-884 [859-884], Figures 18-25	1963-1965
	(03)	Chapter XI, References 885-912	1958-1971
/007	(01)	Chapter XII, References 913-985	1959-1970
	(02)	Chapter XIII, References 986-1048 [986-1020]	1963-1971
	(03)	Chapter XIII, References 986-1048 [1020-1048]	1969-1972
/008	(01)	Chapter XIV, References 1049-1159 [1049-1082]	1964-1972
	(02)	Chapter XIV, References 1049-1159 [1083-1110]	1967-1973
	(03)	Chapter XIV, References 1049-1159 [1111-1159]	1958-1970
/009	(01)	Chapter IV, References 1160-1207	1965-1974
	(02)	<u>The Book of Aeronauts, presented by the Division of Aeronautics, CSIR, to Sir George Julius. Melbourne, December, 1945.</u> Photocopy (bound)	1945

**University of Toronto Archives**

**B1993-0040**

**PATTERSON, Gordon Neil**

Records [textual; graphic], 1934-1991, 0.59 m. plus one oversized folder

Manuscripts, publications, notes, and correspondence relating to the activities of Professor Patterson in his capacity as an aeronautical engineer in England, Australia and as Director of the Institute for Aeronautical Studies at the University of Toronto.

**Access: OPEN**

**Series 1: Publications**

<b>/Box (folder)</b>	<b>Subject heading</b>	<b>Date(s)</b>
/001(01)	Biographical file. Curriculum vitae, list of publications, notes	1991
(02)	"Collected papers of Gordon Neil Patterson, Vol. I"	1934-1949
(03)	"Collected papers of Gordon Neil Patterson, Vol. II, 1948-1958: Shockwave studies"	1948-1958
/002(01)	"Collected papers of Gordon Neil Patterson, Vol. III, 1954-1961: Mechanics of rarefied gases"	1954-1961
/003(01)	"Collected papers of Gordon Neil Patterson, Vol. IV, 1964-1973: Mechanics of rarefied gases; general topics"	1964-1973
(02)	1973. "The next hundred years: aerospace engineering", <u>The Next Hundred Years: A lecture series given during 1973 to help commemorate the centennial of the founding of the Faculty of Applied Science and Engineering, University of Toronto, 51-75</u>	1973
(03)	1976. "Theory of wind turbines with contrarotation", Manuscript for UTIAS report, September, 1976	1976
(04)	<u>Message from Infinity: A correlation of space science and religious thought</u> . Second edition, first revision, 1985. Revised and corrected manuscript for possible third edition	198-
(05)	<u>Message from Infinity: A correlation of space science and religious thought</u> . Endorsements, appraisals and comments; errata sheet	198-
/004(01)	<u>Priorities in Geolunar Space</u> . Manuscript	1988
(02)	<u>Priorities in Geolunar Space</u> . Promotional material	198-
(03)	Cockrell, D. J. and E. Markland, "A review of incompressible diffuser flow", <u>Engineering Aircraft</u> , 35, 10 (October, 1963), 286-292 [review of Patterson's "Modern diffuser design" (1938)]	1963

University of Toronto Archives

B1993-0040

**Series 2: Aeronautical Research Laboratory Melbourne, Australia**

Dr. Patterson was head of the Aerodynamics Division of the Aeronautical Research Laboratory of the Council for Scientific and Industrial Research in Melbourne, Australia from July, 1939 to June, 1945.

/Box (folder)	Subject heading	Date(s)
/004(04)	"Book 1: 'Theory and design of propeller-type fans'"	194-
(05)	"Book 3: 'Ducted airscrews and jet propulsion'"	194-
/005(01)	"Analysis of a given propeller, Part I:" Manuscript	193-
(02)	Patterson, G. N. "Lectures on compressible fluid flow". Australia. Council for Scientific and Industrial Research. Divison of Aeronautics.	194-
(03)	Australia. Council for Scientific and Industrial Research. Divison of Aeronautics.  "Report No. A.6: The 9 ft. x 7f. wind tunnel at C.S.I.R. Division of Aeronautics, Fishermen's Bend, Melbourne". Mimeographed	194-
(04)	Australian Council for Aeronautics. Inaugural Document and Reports ACA-1 to 12, 1944. Contains four reports on wind tunnel theory by Patterson: "Ducted fans: design for high efficiency"[ACA-7]; "Ducted fans: Approximate method of design for small slipstream rotation [ACA-8]; "Ducted fans: Effect of the straightener on overall efficiency" [ACA-9]; and "Ducted fans: High efficiency with contrarotation" [ACA-10].	1944
(05)	Australian Council for Aeronautics. Report ACA-14: "Wind tunnel tests on ducted contra-rotating fans", by J. F. M. Scholes and G. N. Patterson, February, 1945	1945

University of Toronto Archives

**B1995-0012**

**Patterson, Gordon Neil**

1930-1990, 1.31 m.

Correspondence, certificates, contracts, addresses, drafts of articles and books (including audiotapes), and photoprints documenting the activities of Gordon Neil Patterson, founder and first director of the Institute for Aerospace Studies, U. of T.

Access: Open

**Series 1: Biographical**

0.46 m

This series consists of biographical information and certificates [one is oversized] relating to Dr. Patterson's academic studies at the University of Alberta and the University of Toronto.

<b>Date(s)</b>	<b>/Box (file no.)</b>
1930-196-	/001 (01) - (02)
1931	/002 (01)

**Series 2: Correspondence**

0.26 m of textual records

The correspondence in this series is arranged largely as it was organized by Dr. Patterson.

The first file, of largely personal correspondence, covers the years 1946-1990. It originally also included the material in the next few files: his correspondence as a member of the board of Spar Aerospace in the 1970s, and his memoranda on the establishment and expansion of the Institute of Aerophysics (1949-1958) which were included with his 1989 correspondence on the celebration of the fortieth anniversary of the Institute for Aerospace Studies.

The remaining correspondence files relate to several of Dr. Patterson's publications: The Molecular Flow of Gases (1954), Priorities in Geolunar Space (1988-1990), and Pathway to Excellence. Most of the correspondence relates to the last volume. All of it, except for a file on book orders and complimentary copies (1971, 1977), was entitled by Dr. Patterson as "correspondence not referenced in the book Pathway to Excellence" (1938-1975).

B1995-0012

**Series 2: Correspondence**

<b>Date(s)</b>	<b>/Box (file no.)</b>
1938-1990	/001 (03) - (13)
1958-1974	/003 (01) - (06)

**Series 3: Contracts**

0.07 m of textual records

In his research Dr. Patterson specialized in shock wave studies and in the mechanics of rarefied gases. Many of these studies were done under contract to the Defence Research Board in Ottawa, the U.S. Naval Ordnance Laboratory in Silver Springs, Maryland, and the Air Force Office of Scientific Research in Washington, DC.

The correspondence and contracts in these files document the work done for the above organizations and others.

<b>Date(s)</b>	<b>Box/file no.</b>
1949-1962	/004 (01) - (08)

**Series 4: Addresses**

0.07 m of textual records

In his role as director of the Institute of Aerophysics (later Aerospace Studies), Dr. Patterson was a frequent speaker at scientific gatherings and, less often, at other events.

The handwritten and typed drafts and printed copies of his addresses in this series provide a representative sampling for the years 1950 to 1978.

<b>Date(s)</b>	<b>Box/file no.</b>
1950-1978	/005 (01) - (23)

University of Toronto Archives

B1995-0012

**Series 5: Manuscripts and publications**

0.45 m

In spite of a demanding administrative schedule, Dr. Patterson published frequently. As Director of the Institute of Aerophysics, he wrote the introduction to its Annual Progress Report for twenty years (1954-1974); copies are not included in this series and may be found in the University Archives Print Room. The items listed in this series complement, but do not duplicate, those in similar series in other accessions in this fonds.

Included in this series is drafts of articles and books and selected printed copies, along with covering correspondence.

Inclusive dates, 1950-1990

/Box (folder)	Title	Date(s)
/005(24)	"AFORS [Air Force Office of Scientific Research] meeting at the Institute of Aerophysics, University of Toronto". Draft	n.d.
(25)	"Supersonic research at the University of Toronto". TS	1950-11-30
(26)	"DRB grants 126 and 127 - University of Toronto. Report on the activities of the Institute of Aerophysics for the period March 1950 to February 1951". TS	1951
(27)	"Major research projects at the Institute of Aerophysics, 1951-52". TSS	1952
(28)	"The dynamics of gases in the transition regime", pp. 487-491	[196-]
(29)	"A synthetic view of the mechanics of rarefied gases" [28th Wright Brothers Lecture], <u>American Institute of Aeronautics and Astronautics</u> , 3, 4 (April, 1965), 577-90, and press release from University of Toronto	1965-04
(30)	"Case for a Canadian program", MS, TS	1966
(31)	"Another milestone", <u>CASI Transactions</u> , 1, 1 (March, 1968), 119	1968-03
	"Research related to communications satellites: A brief to the Working Group on Continuing Research and Development of the Task Force on Satellites", TS, 13 p.	1968-05-08

University of Toronto Archives

B1995-0012

/Box (folder)	Title	Date(s)
/005(32)	"A brief survey on hypersonics in the next decade" (introduction by G. N. Patterson), TS, 8 p.	1969-02-03
(33)	"Some aspects of the current state of aerospace research in Canada - A university viewpoint", TS, 5 p.	1971
	"Role of the CASI Transactions", <u>CASI Transactions</u> , 4, 1 (March, 1971), 1. TS, copy	1971-03
(34)	"Foreword" to special issue on UTIAS 19491-74 Quarter Century Symposium, <u>Canadian Aeronautics and Space Journal</u> , 20, 5, (May, 1974), 178	1974-05
(35)	"Theory of wind turbines with contrarotation", <u>UTIAS Report</u> , 218 (July, 1977)	1977-07
(38)	"An evaluation of `A theoretical and experimental study of the flow of rarefied gas past a sphere", TS, 3 p.	1977-07-04
	"Technical Forum--Hydrogen Fued", <u>Canadian Aeronautics and Space Journal</u> , 25, 4 (fourth quarter, 1979), 382	1979
(39)	"The future role of hydrogen fuel in an electrical society", <u>UTIAS Report</u> , 241 (October, 1979)	1979-10
(40)	"The universe and manned space flight", <u>UTIAS Review</u> , 49 (November, 1986)	1986-11
(41)	Green, J. J. "The growth of aeronautical research in Canada during the post-war decade", Eleventh British Commonwealth and Empire Lecture, 1955-10-06.  Mentions Patterson's role.	1955
/006(01) -(03)	<u>Pathway to Excellence: UTIAS, the first twenty-five years</u> . Original TS	1977
(04)	<u>The Race for Unlimited Energy</u> . Copy	1979
-(05) -(08)	<u>The Molecular Nature of Aerodynamics</u> . Photocopy of handwritten MS; copy	1981
/007(01) -(02)	<u>Message from Infinity</u> , 2nd ed. Original TS, copy	1985
(03)	<u>Message from Infinity</u> . Correspondence with publishers	1983-1987
(04)	<u>Message from Infinity</u> . Correspondence (general)	1984-1990



University of Toronto Archives

B1995-0012

/Box (folder)	Title	Date(s)
/007(05)	<u>Message from Infinity</u> . Correspondence re copies placed in libraries	1984-1987
/001S -/006S	<u>Message from Infinity</u> . Six audiotapes of Gordon N. Patterson dictating the contents of the book	[198-]
(14) -(15)	<u>Priorities in Geolunar Space</u> . MS, sections 12-25	[198-]
/008(01) -(06)	<u>Priorities in Geolunar Space</u> . MS, sections 26-54, and printed copy	[198-]

**Series 6: Graphic material**

Photographs of Gordon Patterson, director of the Institute of Aerospace Studies from 1949-1974; early images of building, equipment and staff of the Institute including a composite of the 1st graduating Ph.D. class in 1950.

9 photoprints

Date(s)	Box/file no.
1933-198-	/001P - /002P