

John W. Backus Papers
A Finding Aid to the Collection in the Library of Congress



Manuscript Division, Library of Congress
Washington, D.C.
2004

Contact information: <http://hdl.loc.gov/loc.mss/mss.contact>

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Prepared by Laura J. Kells

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Collection Summary

Title: John W. Backus Papers

Span Dates: 1951-2001

Bulk Dates: (bulk 1953-1991)

ID No.: MSS84968

Creator: Backus, John W., 1924-2007

Extent: 2,000 items

Extent: 12 containers plus 1 oversize

Extent: 4.8 linear feet

Language: Collection material in English

Location: Manuscript Division, Library of Congress, Washington, D.C.

LC Catalog record: <https://lccn.loc.gov/mm2003084968>

Summary: Computer scientist. Correspondence, memoranda, reports, writings, speeches, notes, slides, photographs, and other papers relating to his work on programming languages, particularly FORTRAN.

Selected Search Terms

The following terms have been used to index the description of this collection in the LC Catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically.

People

Backus, John W., 1924-2007--Political activity.

Backus, John W., 1924-2007.

Organizations

International Business Machines Corporation.

Subjects

Ballistic missile defenses.

Calculators.

Computers.

FORTRAN (Computer program language)

Programming languages (Electronic computers)

Occupations

Computer scientists.

Provenance

The papers of John W. Backus, computer scientist, were given to the Library of Congress by Backus in 2003.

Transfers

A sound recording has been transferred to the Motion Picture, Broadcasting, and Recorded Sound Division where it is identified as part of the John W. Backus Papers.

Copyright Status

Copyright in the unpublished writings of John W. Backus in these papers and in other collections in the custody of the Library of Congress is reserved. Consult a reference librarian in the Manuscript Division for further information.

Access and Restrictions

The papers of John W. Backus are open to research. Researchers are advised to contact the Manuscript Reading Room prior to visiting. Many collections are stored off-site and advance notice is needed to retrieve these items for research use.

Preferred Citation

Researchers wishing to cite this collection should include the following information: Container number, John W. Backus Papers, Manuscript Division, Library of Congress, Washington, D.C.

Biographical Note

Date	Event
1924, Dec. 3	Born, Philadelphia, Pa.
1942	Attended University of Virginia, Charlottesville, Va.
1943-1946	United States Army, studied engineering at University of Pittsburgh, Pittsburgh, Pa., and medicine at Flower and Fifth Avenue Medical School, New York, N.Y.
1949	B.S. in mathematics, Columbia University, New York, N.Y.
1950	M.A. in mathematics, Columbia University, New York, N.Y.
1950-1953	Programmer, IBM, New York, N.Y.
1953-1959	Manager, programming research, IBM, Yorktown Heights, N.Y.
1959-1963	Staff member, T. J. Watson Research Center, IBM, Yorktown Heights, N.Y.
1963-1991	IBM fellow, Yorktown Heights, N.Y., and Almaden Research Center, San Jose, Calif.
1968	Married Barbara Una Stannard
1976	Received National Medal of Science (National Science Foundation)
1977	Received A. M. Turing Award (Association for Computing Machinery)
1993	Received Charles Stark Draper Prize (National Academy of Engineering)
2007, Mar. 17	Died, Ashland, Oreg.

Scope and Content Note

The papers of John Warner Backus (1924-2007) span the years 1951-2001, with the bulk of the material dating from 1953 to 1991. They relate primarily to his work as a computer scientist at IBM from 1950 to 1991 where he developed FORTRAN, the first commercially successful high-level programming language. Documents in the Backus Papers are arranged in numerical order according to a system prepared by Backus. His item list containing descriptive comments about individual items or groups of items is located at the beginning of the collection. Another copy is appended to this register.

Included in the collection are correspondence, memoranda, reports, papers, speeches and lectures, notes, articles, manuals, and historical retrospectives relating to Backus's activities as a pioneer in computer programming. Items from the early years include notes on his work with IBM's Selective Sequence Electronic Calculator, a 1954 preliminary report on specifications for FORTRAN, early programming manuals, correspondence with the first FORTRAN customers, photographs from a meeting of the committee working on the international algebraic language ALGOL, and a paper from 1959 in which Backus proposed what later became the Backus-Naur Form (BNF) used to describe grammatical rules for high-level programming languages.

From 1963 until his retirement in 1991 Backus held the position of IBM Fellow and pursued his own research projects relating to mathematical theories of programming and the development of functional programming languages. This work is documented in annual reports, internal project papers, texts of lectures, and photographs of calculations on blackboards. Also included are files documenting Backus's political activism as a member of Computer Professionals Against ABM (anti-ballistic missile system) in the early 1970s and as an opponent of the strategic defense initiative in the 1980s.

Arrangement of the Papers

This collection is arranged in numerical order according to a system prepared by Backus.

Container List

Container	Contents
BOX 1	Item list, undated
BOX 1	Item numbers
BOX 1	Nos. 1-20, 1953-1994, undated (22 folders)
BOX 2	Nos. 21-33, 1958-1987, undated (16 folders)
BOX 3	Nos. 34-50, 1980-1990, undated (19 folders)
BOX 4	Nos. 51-65, 1954-1959, 1973, 1981-1991, undated (17 folders)
BOX 5	Nos. 66-91, 1951-1961, 1972-1987, undated <i>See also Oversize</i> (26 folders)
BOX 6	Nos. 92-118, 1953-1958, ca. 1966, 1975-1983, undated (27 folders)
BOX 7	Nos. 119-134, 1955-1961, 1971-1982, undated (18 folders)
BOX 8	Nos. 135-143, 1964-1989 (13 folders)
BOX 9	Nos. 144-164, 1963-1989, undated <i>See also Oversize</i> (22 folders)
BOX 10	Nos. 165-184, ca. 1959, 1967-1972, 1979-2001, undated <i>See also Oversize</i> (21 folders)
BOX 11	Nos. 185-194, 1961-1965, 1972-1974, 1988-1991, undated (14 folders)
BOX 12	Nos. 195-211, 1985-1994, undated (17 folders)
BOX OV 1	Oversize
BOX OV 1	Item numbers
BOX OV 1	No. 71, circa 1951-1952 (Container 5)
BOX OV 1	No. 164, 1985 (Container 9)
BOX OV 1	No. 169, 1982 (Container 10)