

History of the Georgia Tech Library, with Emphasis on the Crosland Era

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To celebrate the fiftieth anniversary of the Engineering Libraries Division of the American Society of Engineering Education (ASEE) and the seventy-fifth anniversary of the creation of the Engineering School Libraries Committee (ESLC), the authors of this paper want to highlight the outstanding accomplishments of a former member of ESLC, Dorothy Murray Crosland, who was director of the Library at the Georgia Institute of Technology (Georgia Tech) for more than four decades. Dorothy Crosland was the longest serving head of the library in Georgia Tech's history. She made many notable contributions to the Library, the Institute, the profession, and beyond. This paper will focus on her accomplishments, particularly in the areas of Georgia Tech's library buildings, collections, and information science education.

Background

Georgia Tech opened its doors to students in 1888, and a temporary library was established in 1889 when English Professor Kenneth Matheson allowed students to view his personal collection, which was later moved to the Administration Building. The first librarian, Madge Flynn, was hired in 1901 with faculty status (Brittain, 1948). The second librarian was Laura Hammond, who was hired in 1905. In April 1906, Andrew Carnegie, a steel industrialist turned philanthropist, was in Atlanta for the dedication of an Atlanta public library that was named for him. During this visit, he was given a tour of Georgia Tech. As a result, Carnegie pledged \$20,000 for a library building on the campus, on the condition that Georgia Tech would spend \$2000 annually to support it ("'Andy' Carnegie Royally Greeted by Atlantans," 1906). The library building opened in 1907. In 1923, an addition was made to the Carnegie Library to accommodate the growing collection (Annual Report, 1949-1950). Hammond continued to be the Librarian until 1924. Frances Newman was hired as the third Librarian in January 1925. Newman requested a year's leave of absence in October 1925 to promote her fictional work, *The Hardboiled Virgin* ("'Hard-Boiled' Virgin," 1927). Crosland was the fourth librarian. Appendix I lists Georgia Tech's library directors/deans and their contributions after the Crosland era.

In 1925, Dorothy Murray was hired as an Assistant Librarian during Newman's leave of absence. When Newman resigned, Murray was named Acting Librarian from January to July 1927 and later was appointed the fourth Librarian in July 1927 (Brittain, 1948). In July 1953, her title was changed from Librarian to Director of the Georgia Tech Library. She continued as Director until she retired in 1971 ("Dorothy M. Crosland Papers, Biographical/Historical Note," n.d.).

Dorothy Crosland was born Dorothy Murray in 1903 in Stone Mountain, Georgia. She graduated in 1923 with a library degree from the Library School of the Carnegie Library of Atlanta (later known as the Emory University School of Library Science). She worked at the Carnegie Library, the public library of Atlanta, from 1923-1924, until she came to Georgia Tech ("Dorothy M. Crosland Papers, Descriptive Summary," n.d.). In August 1928, she married James Crosland and was known professionally as Dorothy Crosland or Mrs. J. Henley Crosland. She died in 1983 at the age of 78 in Monroe, Georgia ("Mrs. Crosland; former Georgia Tech librarian," 1983).

Crosland and the Library buildings

One of Crosland's major achievements was the building of the Price Gilbert and Graduate Addition libraries. Crosland was heavily involved in all aspects of both buildings, including the planning, construction, furnishings, and many other details. With Crosland's leadership and fundraising efforts, the historically important Price Gilbert Library building was dedicated in 1953, and the Graduate Addition was completed in 1969.

Price Gilbert Library

After World War II, the G.I. Bill (the Servicemen's Readjustment Act of 1944) encouraged veterans to attend colleges and universities, and enrollment at Georgia Tech increased dramatically. In the mid-1940s, enrollment was at least ten times the enrollment when the Carnegie Library opened in 1907. At this time, Crosland began her campaign for a new library to alleviate the severe shortage of space for students, library staff, and materials (Annual Report, 1945-1946). Despite having smaller libraries in specific departments such as architecture, aeronautics, and ceramics, some books had to be stored in the basement of the Knowles Dormitory due to space issues (Annual Report, 1946-1947).

Judge Price Gilbert, Sr. was a commencement speaker at a graduation ceremony in 1946. Earlier, he noticed the crowded conditions of the Carnegie Library while researching his book, *A Georgia Lawyer*. Although he was not an alumnus, he wished to contribute to Georgia Tech and felt that a new library building would be his gift to the Institute.

During the early part of 1950, Crosland wrote several letters to Cherry Emerson, Vice-President of Georgia Tech, to demonstrate why a new library was needed and provided documentation of what was being built on other university campuses. All of this information would be presented to the Board of Regents of Georgia to justify the construction of a new library (Box 5, Series 2). Crosland continued to investigate the preliminary plans with other library directors and wrote to Emerson about her concerns. Mr. John Burchard, Head of Humanities and former director of libraries at the Massachusetts Institute of Technology, was invited to the campus to do a library building study. He supported Crosland's view that the Carnegie Library was too small and that a new building was needed (Annual Report, 1949-1950).

In 1951, Crosland's dream for a larger library became a reality. Groundbreaking ceremonies were held on July 5, 1951. The new building was named for Judge Price Gilbert, Sr. who gave the initial funds for the architectural studies and money for furniture in the new library. Crosland requested and later received an increase in staff, as well as an increase in the acquisitions budget (Annual Report, 1950-1951). The final square footage was 96,508, seated 800 patrons, and the building cost \$2,200,000.

Crosland worked with a professor and students from Industrial Engineering to plan moving the books from the Carnegie Building and the Knowles Dormitory to the new library building (Box 5, Series 2). The work started on Thursday, October 29. 1953 and was completed on Sunday, November 2nd. Many library staff members worked overtime and even some faculty and deans volunteered to assure that the material were shelved in the correct places.

The opening ceremony for Price Gilbert Library was on Saturday, November 21, 1953 (Box 5, Series 2). Distinguished guests included librarians from the Library of Congress, National Science Foundation, Department of Agriculture, and the University of Illinois. Mr. Burchard of Massachusetts Institute of Technology delivered the main address.

The new building brought the positive changes that were predicted by Crosland. In her 1955-1956 Report of Director of Libraries, Crosland noted an increase in the number of patrons in the library. The Wilby Room was used for meetings by 90 organizations and multiple professional short courses (Annual Report, 1955-1956). For example, during the academic year 1956-1957, 2,700 students attended classes in the very popular Music Room, 5,425 people signed up to use the small listening rooms, and 7,105 students received library instruction classes, including freshmen orientation sessions (Annual Report, 1956-1957).

After the Price Gilbert Library was finished, Crosland received letters from other university librarians asking about details of the library, recommendations and advice for constructing new libraries, and advice on dealing with architects, contractors, and plans. She replied to these requests with many details (Box 7, Series 2).

Graduate Addition

Crosland's outstanding accomplishment of the beautiful Price Gilbert Library was expected to satisfy the Georgia Tech's needs for many years. However, only twelve years after it was built, the Price Gilbert Library became overcrowded with both students and materials. Price Gilbert Library served undergraduates well, but the Institute faced the increased demands of faculty research and graduate students. New graduate programs were developed, and the population of graduate students grew significantly. The engineering curriculum changed with the times after Sputnik initiated the space age, along with many other technological advances. Crosland subsequently envisioned a new graduate addition (Annual Report, 1964-1965). She understood that "the library is the heart of the university" and set forth to make her vision of a new library addition a reality (Annual Report, 1965-1966).

Crosland was consistently concerned with her staff and the students. She remarked that the staff, while in the Price Gilbert Library, was "dedicated to friendly and courteous service" but could be "frustrated by crowded conditions, lack of space in which to work, and too little space for the students." "Stack areas are now so full that there is little space for new materials. Books and periodicals are being shifted continuously into areas less convenient for those who must use them" (Annual Report, 1965-1966). During the challenging period of time when the Library was reclassifying materials from Dewey to Library of Congress classification, she praised the entire library staff, including the library assistants, clerks, and janitors, for their dedicated efforts, cooperation and willingness to adaptive to change (Annual Report, 1966-1967).

Crosland was responsible for raising the funds needed for the new library addition and her Library building expertise was recognized nationally. Back in 1961, when she was invited to attend, along with a group of scientists and research librarians, a National Science Foundation

(NSF) meeting in Washington D.C., she provided advice on how the NSF could contribute to improving national research, such as through the support of library facilities (Boxes 20 and 21, Series 3).

In 1965, the Board of Regents of the University System of Georgia allocated \$2,000,000 for the new Graduate Addition and the United States Department of Health, Education and Welfare approved a grant of \$1,000,000 for it (Annual Report, 1965-1966). Georgia's Governor Carl E. Sanders and many other notable leaders attended or spoke at the groundbreaking ceremony for the new Graduate Addition, which took place on October 20, 1966 (Box 7, Series 2).

On November 21, 1969, exactly sixteen years after the Price Gilbert Library building was dedicated, the Graduate Addition to the library was formally dedicated (Annual Report, 1969-1970). The Graduate Addition was nearly one and an half times as large as the Price Gilbert Library. The nine-floor new building had 2,000 seats, plus lockers, carrels, individual student tables, study rooms and a seminar room. A conference room on the ninth floor of the Graduate Addition has become one of the most beautiful rooms to be found in any library. Mrs. M. A. Ferst donated furnishings for this conference room in memory of her husband, a 1911 graduate of Georgia Tech. Mr. Price Gilbert, Jr., a library supporter, gave the Library \$100,000 which was used to purchase carpets, curtains, furniture and a large chandelier in the Rotunda (Annual Report, 1968-1969).

Crosland realized the importance of honoring alumni and other leaders by recognizing their contributions with plaques and with the naming of rooms. As an example, in January 1967, Crosland's efforts resulted in the installation of a plaque in the Library's Monie Ferst Memorial Room, honoring one of the Atlanta's most active people in commerce, industry and philanthropy and one of Georgia Tech's most outstanding alumni (Box 7, Series 2).

Crosland remarked that, "During these years the Library grew and matured from one serving the Institution and the State primarily to one serving the region and the nation" (Annual Report, 1969-1970). In recognition to Crosland's endless efforts and dedicated contributions to the Library, the Graduate Addition was renamed Crosland Tower in 1985.

Crosland and the library's collections in science and technology

Another one of Crosland's notable achievements was in collection development. The Georgia Tech Library's extensive collection of books, periodicals, serials, technical reports, and documents supported the scientific and technical communities of the greater Atlanta area and throughout the entire southeast region, in addition to supporting the institutional and research activities on campus. The *Blue Print*, Georgia Tech's official publication, had an issue dedicated to Crosland for her 30 years services for the Georgia Tech Library at that time (Dedication, 1957). When Crosland began to work for Georgia Tech in 1925, the library held approximately 21,000 volumes and subscribed to less than 100 periodicals, with two professional librarians and one clerical assistant. During the 1960-1961 academic year, the serials collection (including journals) had grown to 7,409 (Georgia Tech Library Notes, 1961, v.4 n.6). In 1971, as Crosland stated in her last annual report of the library, that the collection grew to more than a million

items and the staff increased to 75. The serials and periodicals now numbered 9,396 items (Annual Report, 1970-1971). Appendix II shows the summary of library collection statistics in 1970-1971. Behind these numbers, the library, under Crosland's leadership, endeavored to meet the changing instructional and research needs of the university, and earned an exceptional reputation in industry, and in regional and international research communities.

The establishment of Georgia Tech's Engineering Experiment Station (EES) in 1934 increased demands for research literature and publications. The initial areas of EES's research focus were textiles, ceramics, and helicopter engineering. EES later became the Georgia Tech Research Institute. The library's collection had been meeting the research needs of Georgia Tech; many reference books, annual reports of many companies, and engineering station bulletins were added to the collection. However, Crosland felt that the engineering journals and transactions were not adequate. To expand and enhance its collection, Crosland understood that she needed to try different funding methods. Clear with her vision, Crosland invested her tireless efforts in seeking additional sources, such as grants, technical report depository programs, exchange programs, as well as gifts and donations, to build the best possible scientific and technical collection.

Grants and the European buying trip

Crosland was active in seeking and obtaining grants from various sources to add valuable publications to the collection. In 1946, she received a Carnegie grant to travel to Europe to seek rare journal volumes and books to add to the library collection. Crosland traveled to eight European countries, such as Great Britain, Denmark, the Netherlands, and Switzerland. She returned with many issues of important scientific journals, which were unavailable during World War II. Crosland also obtained additional grants from the Rockefeller Foundation, the NSF, and Georgia Tech Alumni clubs to purchase scientific works. She purchased and was given many rare journal volumes and missing issues, the value of which well exceeded the travel expenses. In her letter to a donor who helped to make her trip possible, Crosland wrote: "I was quite flattered when Professor A. J. S. Pippard, Dean of Engineering of the Imperial College of Science and Technology, London, not only gave me some of his valuable time but also offered letters of introduction to other engineering schools. His letter to the Secretary of the Institution of Civil Engineers was instrumental in a gift of a long file of journals and some missing volumes that we needed to complete our file of the Transactions of the Institution" (Box 15, Series 3).

Patent depository

Patent documents are an invaluable source of scientific and technical information. The literature of patents represents an excellent source of both historical and current scientific and technical information, often surpassing the journal and the technical report as a source of information (Walker, 1990). In her letter to the Commissioner of the Patent Office dated January 29, 1946, Crosland wrote: "... more and more this library is called upon for patents. Just last week, a man flew to Atlanta from Jacksonville, Florida expecting to find a patent collection at Georgia Tech. Because we are an engineering institution and because we do have an Engineering Experiment Station doing much research, we seem to be expected to have all patents." She later added: "If

there is not a collection in the South, then surely some institution or library should assume the responsibility and begin one" (Box 21, Series 3). Because of Crosland's insistent efforts, in May 1946, a patent collection was established at the Georgia Tech Library, allowing the library to receive current issues of printed U.S. patents. The Library became one of the first 22 patent depositories in the United States.

In 1949, the library held only slightly more than 1,000 patent documents, including a complete file of the *Official Gazette of the United States Patent Office*, issued U.S. patents from 1946 on, *British Abridged Patent Specifications* and patents from the Canadian Patent office. By 1961, the library's patent holdings were more than one million. To eliminate binding costs and to save shelf space, the library began to receive all U.S. patents on microfilm in January 1966. Today, these patent microfilms are kept in a climate controlled high-density storage for research.

Technical reports and depositories

The technical report can be compared to the patent in terms of its use within and outside the science and technical literature. Technical reports are either generated by private enterprise and its research-and-development (R&D) component, or by governmental support of research. Contracts with the federal government almost always require a report summarizing the project (Walker, 1990).

During the 1930s, technical reports were considered at the time furnishing "newer information faster" (Box 4, Series 2). Crosland understood the importance of technical reports and was actively involved in acquiring them based on research needs. She was instrumental in participating in several depository programs. For instance, with the Library of Congress's Cooperative Plan, the Georgia Tech Library received valuable research reports from the Massachusetts Institute of Technology (MIT) Radiation Laboratory, and many other research institutions. In the mid-1940s, the library was also designated as a depository for the Army Map Services. In 1950, the Georgia Tech Library was made a Depository for the Atomic Energy Commission (AEC), together with fifty or so other research libraries. Reports from AEC were made available to engineers, scientists, industrialist and others to help foster scientific research and industrial development in Georgia and the southeast region. Under Crosland's direction, the Library also added reports from the National Aeronautics and Space Administration (NASA), the Office of Scientific Research and Development (OSRD), which was superseded by the National Defense Research Committee (NDRC), and the Rand Corporation, as well as miscellaneous AD and PB reports (Library of Congress, 2015). At the end of 1970, these report collections, including reports in microform, numbered well over a half million items (Annual Report, 1970-1971). See Appendix II for additional information. These reports were invaluable to EES and to engineering researchers in the southeast region.

In 1958, the library was granted by the Office of Technical Services (Department of Commerce) its second depository of translation materials, including sections of the *Referativ Zhurnal*, abstracts from leading scientific periodicals, and important articles from journals and books. The Georgia Tech Library was chosen, in 1962, as one of the twelve Regional Technical Report Centers in the country. Three agencies, the Department of Defense, NASA and AEC, that produced an estimated 90% of the government's unclassified technical reports at the time, had

agreed to provide copies of their reports for deposits in each of the centers. The Georgia Tech Library served the southeast region, which included Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee (Georgia Tech Library Notes, 1962, v.5 n.6 p.1).

From time to time, Crosland spent considerable effort to write to or to visit in person United States Senators and other officials regarding specific government publications and successfully secured many documents from various agencies. In 1963, the Georgia Tech Library was designated as an official depository for U.S. Government publications. Crosland was once invited to speak at a conference to a group of library professionals about "getting to know one's way around in Washington." She discussed in detail, backed up with facts, the three important concepts: people, courage, and conviction (Crosland, 1966).

The Farmington Plan, sponsored by the Association of Research Libraries, was a voluntary agreement under which more than sixty libraries had accepted special responsibility for collecting foreign publications. For many years, the Georgia Tech Library had initially been responsible for the textile industries section (Library of Congress classification range: TS1300-1949). In 1969, Georgia Tech Library picked up additional subject responsibilities, such as electrical (TK1-4659, and TK4661-9999), and aeronautical (TL500-999) engineering technology (Box 15, Series 3).

Gifts and donations

Crosland built important relationships with alumni, leaders and other prominent individuals, which resulted in frequent valuable gifts and donations. For example, her annual reports during the 1950s and 1960s consistently included long lists of donors, gifts and donated items. Crosland began to build a rare book collection in the 1950s. She acquired a copy of the 1687 first edition of Sir Isaac Newton's *Philosophiae Naturalis Principia Mathematica* and later acquired the beautiful nine-volume Dutch edition of Joan Blaeu's *Grooten Atlas* published in the 1660s. Gifts from alumni and friends came in many forms: books, periodical subscriptions, furniture, art objects as well as money. Notable donors included Mrs. Frank Neely, Mrs. M. A. Ferst, and Mr. Price Gilbert Jr. Examples of donations include a Picasso vase, a set of English bone china, and various paintings of notable figures. Many of these items still fascinate students and visitors ("Rare Books," n.d.).

Bibliographic services and document delivery

At the American Chemical Society's meeting held in San Francisco in March 1949, Crosland copresented a paper titled: "The Georgia Tech Library as a Tool for Science and Industry." She stated that, the library "has not lost sight of the forest because of the trees; it has for some time, however, devoted an appreciable part of its efforts to the development of a collection of value to science, engineering, and industry in other than instructional work; that is, in graduate research, departmental research, experiment station research and in industrial operations." She lead the effort, with the Georgia Tech EES's Technical Information Division, to develop a literature

research program, and later created a plan to increase services to industry, such as publishing a "Monthly Summary of Industrial Developments" (Weil & Crosland, 1949).

Crosland embraced library automation and other new library technologies. In the mid-1960s, the Library became one of the sixteen U.S. and Canadian libraries to take part in the MARC Project (Machine Readable Catalog), which was a pilot program launched by the Library of Congress. As a result, a system was set up in the Library to produce a machine-readable file of catalog data, catalog card and book catalogs. This laid the foundation for the Library's online access to locally loaded tapes (catalog, commercial indexes and others) in the 1980s.

In early 1969, the library implemented a policy of delivering free copies of non-circulating periodicals to faculty for their research needs (Annual Report, 1968-1969). This later became the Library Extends New Delivery Service (LENDS) when photocopies of journal articles were delivered to faculty.

Interlibrary loan services

Dr. Marion Luther Brittain, who served as the fourth President of Georgia Tech from 1922-1944, stated, in his book titled *The Story of Georgia Tech* (Brittain, 1948):

The Georgia Tech Library is recognized as being outstanding in all fields of engineering. Its research collection is becoming known through the country. Request for loans come from far-off California, Canada, Texas, and from nearby States. The Army and Navy engineers have used its materials to further research. Recently, an engineer made the statement that it was the finest technical collection in the South. It will continue to grow, to serve the needs not only of the students and faculty, but also of research workers and engineers of this State and the South.

Crosland understood that building a strong scientific and technical collection was very important and she also realized that it was equally important that this collection serve the broader research community. The strength of the Georgia Tech Library collection was evidenced by the wide distribution of interlibrary loans to borrowing libraries within and outside the United States. The library's 1970-1971 Annual Report shows that 74% of interlibrary loans for books were filled for 220 institutions in 48 states, District of Columbia and Canada, and 26% of interlibrary loan requests were books borrowed from other libraries for the use by Georgia Tech students and faculty. During the same period, 81% of photocopy requests were for 264 institutions in 48 states and 12 foreign countries (Annual Report, 1970-1971).

Below is a sample quote from a letter received by the interlibrary loan librarian in 1960 (Georgia Tech Library Notes, 1960, v3 n5):

Your constant cooperation in the interlibrary of scientific and technical materials has aided us tremendously in the gigantic work load we are attempting to perform for the Air Force Missile Test Center.

Georgia Tech Library's unique collection and services gained a reputation as one of the nation's leading scientific and technical libraries (Price, Kinman, & Vidor, 1986).

Crosland and information science

Crosland's third achievement was her role in establishing a graduate program in information science which is now Georgia Tech's College of Computing. In addition to her success in making possible two library buildings with exemplary collections and high quality services, Crosland was a leader in the field of information science and helped educate information science personnel. As a pioneer in the field of information science, Crosland was recognized by the federal government and by national academic institutions.

Since 1953, Crosland strove to arouse interest in improving education for science librarians and information specialists. Through Crosland's efforts, the library received an NSF grant to support "Programs for Training Personnel for Scientific and Technical Libraries" (Annual Report, 1961-1962). Crosland and other Georgia Tech faculty organized two conferences on the Georgia Tech campus; the first conference was held October 12-13, 1961, and the second one was held on April 12-13, 1962. These conferences were attended by engineers, scientists, and librarians from all over the United States and parts of Europe. Papers from both conferences were published in the proceedings (National Science Foundation, 1962). After these successful sessions, the School of Information Science was formed at Georgia Tech in 1963.

Considered landmarks for the future development of personnel for the science information field, these conferences resulted in the formation of Georgia Tech committees to study the scientific and technical library personnel issues. Committee members visited training centers in the United States and in Europe (Annual Report, 1961-1962). Library staff and faculty members completed feasibility studies for starting both short courses and graduate degree programs for training information science personnel (Crosland, 1963). The Georgia Tech committees concluded that there was a tremendous need both in quantity and quality for science librarians and other science information personnel. Personnel needs could be met by a variety of programs (Georgia Tech Library Notes, 1962, v.5 n.4 p.1). Three distinct types of science information specialists were identified: science librarian, technical literature analyst, and information scientist (as defined in Appendix III).

The work of the short course committee resulted in two Georgia Tech short courses in late 1962. One was a "Short Course for Industrial Information Specialists" conducted by library staff and EES researchers, and the other short course was "Mathematics of Information Storage and Retrieval" (Crosland, 1963). Many requests to repeat the short courses were received but it was

not possible to offer another course due to the time consuming preparations needed for the new degree courses.

The work of the long range degree program committee resulted in the new Georgia Tech master's program in Information Science which began in September 1963 (Annual Report, 1962-1963). Crosland played a major role in the establishment of the Georgia Tech School of Information Science and she considered it to be one of her most outstanding accomplishments. In the spring of 1964, Crosland recruited Dr. Vladimir Slamecka to head the new Information Science program, and then she persuaded Georgia Tech President Edwin Davies Harrison to hire him.

The School of Information Science first appeared in the Georgia Tech Course Catalog in July 1964. Options within the Information Science degree program provided for both the information scientists and the technical literature analysts (Box 17, Series 3). In 1965, the first person to receive a master's degree in information science was a woman, Joanne Butterworth. A Ph.D. program was officially added in July 1968. The first Georgia Tech Ph.D. in Information Science was awarded in September 1970. The School of Information Science officially became the School of Information and Computer Science in July 1970, and later the School changed its name to the College of Computing in 1990.

Dorothy Crosland had a leading role in advancing the field of information science and establishing the Georgia Tech's School of Information Science, which was the first United States master's program in information science.

Crosland's service to the Institute and the profession

Crosland contributed in many ways to help Georgia Tech. For instance, as early as 1945 she supported Colonel Blake R. Van Leer (former Georgia Tech President, 1944-1956) and Mrs. Van Leer's campaign to admit women to Georgia Tech. In 1952 Crosland wrote to the Board of Regents stating that it was time for women to be admitted to this engineering focused university. Women students were eventually admitted in 1952. Crosland mentored women throughout their years as students at Georgia Tech ("Dorothy Crosland - Crusading Librarian," 2002).

Crosland served in leadership roles in local and national professional organizations, such as president of the Georgia Library Association, Council Member from the Association of College of Research Libraries (ACRL) of the American Library Association (ALA), and member of the Executive Board of the Southeast Library Association. Crosland was a member ASEE's Engineering Schools Library Committee (Box 1, Series 1). Additional leadership roles are listed in Appendix IV Timeline.

Despite her busy schedule, Crosland found time to contribute to the profession. For example, she was one of three librarians on the General Committee for ACRL Pure and Applied Science Section to create *A Recommended List of Basic Periodicals in Engineering and the Engineering Sciences, Monograph 9*, published on July 1953. As another example, Crosland collaborated with W.H. Cady of U.S Finishing Company in Rhode Island to write *Literature of Dyes*,

Mordants, and Bleaches, a 15 page chapter in volume 10 of Literature Resources for Chemical Process Industries, published by the American Chemical Society in 1954. Additionally, Crosland was co-editor of the April 1954 issue of Library Trends (Box 1, Series 1).

Conclusion

Crosland devoted 46 years of her career to help establish and develop an outstanding library with an excellent science and technology collection, providing high quality service to Georgia Tech students and faculty. In her final 1970-1971 annual report, Crosland stated "I leave behind two magnificent buildings, one of the finest collections in scientific and technical literature to be found in any library and a staff unequaled anywhere." Constantly going beyond her required responsibilities, Crosland pushed forward agendas for the library, Georgia Tech, the broader research and education community, and the library profession. She had a passion for the Georgia Tech Library; she knew how to make academic and political connections in order to turn her innovative ideas into reality. Crosland was greatly respected and appreciated locally and nationally. In 1945, Crosland was named Atlanta's Woman of the Year in Education, and in 1962 she was named an honorary alumna by the Georgia Tech Alumni Association.

This paper highlighted only a few of Crosland's impressive accomplishments. Not only did she leave two library buildings with outstanding technical collections, Crosland also had a significant impact on information science. Crosland's vision and persistence in providing high quality services to the research and instruction communities paved the road for the Library's technological innovations in the late 1970s and 1980s. She was instrumental in helping to change the culture of the Institute.

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Dorothy Crosland looking at the *Blaeu Atlas* ("Crosland, Dorothy," Georgia Tech History Digital Portal).



Photo courtesy of Georgia Tech Archives

Appendices

Appendix I. Library directors after Crosland

Edward Graham Roberts served as Director of Libraries from 1971 to 1984 ("Dean and Director of Libraries Photographs," n.d.). Along with Dorothy Crosland, he contributed to the founding of the School of Information and Computer Science in 1963 and taught Information Science courses until 1973. Because of his strong belief in cooperation among libraries, he supported the formation of the Southeastern Library Network (SOLINET) and served on its inaugural Board of Directors in 1973 (Gribben, 1988). SOLINET was a collaboration among libraries in the southeastern part of the United States to provide "computer-based bibliographic service." In 1978, a machine-readable catalog replaced the physical card catalog; Georgia Tech was one of the first libraries in the nation to make this significant conversion. Circulation services became automated in 1982 (Price, Kinman, & Vidor, 1986).

Miriam A. Drake served as Director and later Dean from 1984 to 2001 ("Dean and Director of Libraries Photographs," n.d.). Early in her tenure, microcomputers were used by the staff (Price, Kinman, & Vidor, 1986). She implemented GTEL (Georgia Tech Electronic Library), which includes "full-text information systems, digital libraries, and multimedia products." Library instruction and in-depth consultations with faculty and students increased dramatically during her time at the Georgia Tech Library. She was also called a "visionary advocate for library technology and the effective use of government information" (Fiels, 2015).

Richard W. Meyer was the Dean and Director of Libraries from 2001 to 2008. An important accomplishment was "the establishment of the Digital Initiatives department, the foundation of Georgia Tech's institutional repository" ("Dean and Director of Libraries Photographs," n.d.). He oversaw the installation of 100 workstations in the library commons area. In order to meet the student study needs, he implemented 24-hour access to the libraries from Sunday to Thursday. Under Meyer's direction, the Library won the ACRL's Excellence in Academic Libraries Award in 2007.

Catherine Murray-Rust became Dean of Libraries in 2008. She is the Georgia Tech's representative to the Association of Research Libraries (ARL) ("Library Connect – Catherine Murray-Rust," n.d.). Murray-Rust is spearheading the Library Next Project. The vision is to move the library to the 21st century, "enabling Georgia Tech students and faculty to explore the past and design the future by bringing together inspirational spaces, curated content, expert guidance and scholarly communities" ("Reimagination and Renewal," 2015). The Library Service Center building where Emory University and the Georgia Tech store the print collection was completed in March 2016; it houses 95% of the Georgia Tech's print collection. The Library Next project will transform Library services and spaces to match the changing research, teaching, and learning needs of the Georgia Tech in the 21st century.

Appendix II. Sample Annual Report

Georgia Tech Library Annual Report 1970/71 Summary of Statistics

The Library Collection

The Library Collection	
	<u>Total in Library</u>
	<u>June 30, 1971</u>
Volumes	
Books	483,463
Technical Reports	
(excluding microtext)	72,543
Government Documents	172,850
Total Volumes	728,856
Microtext (Physical Units)	
Microfilms (reels)	7,579
Microcards	82,861
Microfiches	418,438
Total Microtext	508,878
Miscellaneous	
Films	584
Filmstrips	154
Globes	2
Maps	67,478
Pamphlets	56,100
Phonorecords	9,195
Pictures	16,274
Slides	28,928
Total Miscellaneous	178,715
Total Library Items (excluding	
periodicals and serial)	1,416,449
Periodical and Serial Titles Currently Received	
Periodicals	4,928
Serials	4,468
Total Current Periodical and Serial Titles	9,396

Appendix III. Definitions and abbreviations

Definitions

Information Scientist: One who studies and develops the science of information storage and retrieval, who devises new approaches to the information problem, and who is interested in information in and of itself.

Information Science: The science that investigates the properties and behavior of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability. The processes include the origination, dissemination, collection, organization, storage, retrieval, interpretation, and use of information. The field is derived from or related to mathematics, logic, linguistics, psychology, computer technology, operations research, the graphic arts, communications, library science, management, and some other fields.

Technical Literature Analyst: One who is trained in a substantive technical field, who has, in addition to the depth thus provided, some breadth of technical knowledge and a thorough knowledge of the technical literature. He can analyze the literature for researchers who are investigating problems in the areas of the analyst's technical competence. Analysis implies a search, an organization, and an evaluation of the literature in question. In his ability to deal with the technical literature, the analyst differs from the conventional science librarian in that he is sufficiently deep in science to be able to make value judgments of its literature. At higher levels this person generally performs not only analysis but synthesis of the literature as well (Box 17, Series 3).

Abbreviations

ACRL - Association of College & Research Libraries

AEC - Atomic Energy Commission

ALA - American Library Association

ASEE – American Society for Engineering Education

EES - Engineering Experiment Station

ESLC - Engineering School Libraries Committee

LENDS - Library Extends New Delivery Service

MARC - Machine-Readable Cataloging

MIT - Massachusetts Institute of Technology

NASA - National Aeronautics and Space Administration

NDRC - National Defense Research Committee

NSF - National Science Foundation

OSRD - Office of Scientific Research and Development

R&D - Research and Development

SOLINET – Southeastern Library Network

Appendix IV. Timeline

- 1888 Georgia Institute of Technology was founded in Atlanta
- 1889 English Professor Kenneth Matheson allowed students to borrow books from his personal library in the Administration Building
- 1901 Madge Flynn hired as the first Librarian at Faculty status
- 1905 Laura Hammond hired as the second Librarian
- 1907 Carnegie Library dedicated
- 1923 Addition to Carnegie Library completed
- 1925 Frances Newman hired as third Librarian and took a leave of absence in October
- 1927 Dorothy Murray appointed as Acting Librarian in January and then became the fourth Librarian in July
- 1928 Murray married and was known professionally as Dorothy Crosland or Mrs. J. Henley Crosland
- 1936 Crosland started advocating for additional funds to buy additional scientific and technical reports
- 1940s Crosland began her campaign to build a new library to replace the small Carnegie Library
- 1946 Crosland received a Carnegie grant to buy European books and journals to add to the library's collection
- 1946 The library became the 22nd patent depository library in the United States
- 1949-1951 Crosland was elected and served as President of the Georgia Library Association
- 1950 The library was made an AEC (Atomic Energy Commission) depository
- 1950-1951 Crosland was elected and served as ALA/ACRL Chairman of the Engineering Section Farmington
- 1951 Groundbreaking for the Price Gilbert Library
- 1952 Crosland and Mrs. Van Leer started a campaign to admit women to Georgia Tech
- 1952-1954 Crosland was elected and served as President of the Southeastern Library Association
- 1953 Crosland started investigating methods to teach scientific information literacy
- 1953 Crosland's title was changed to Director of Libraries
- 1953 All books were moved from the Carnegie Library and the Knowles Dormitory basement to the Price Gilbert Library, and the Price Gilbert Library was dedicated a few days later.
- 1955-1956 Crosland was elected and served as ALA/ACRL Chairman of the Building Committee
- 1958 The library became the depository of translation materials by the Office of Technical Services (Department of Commerce)
- 1960s –Library was one of the 16 libraries in the U.S. and Canada taking part in the MARC project

- 1961 and 1962 After receiving a NSF grant to study Programs for *Training Personnel for Scientific and Technical Libraries*, Crosland organized two conferences on this topic
- 1962 Crosland and some library faculty taught short courses on information science
- 1962 The library became one of twelve Regional Technical Report Centers in the nation
- 1963 The library became an official depository of U.S. Government publications
- 1963 Crosland and other faculty started the Information Science Master's Program
- 1964 Vladimir Slamecka recruited by Crosland to be Dean of the School of Information Science
- 1965 Crosland started the campaign for a library for graduate students
- 1966 Groundbreaking for the Graduate Addition Library
- 1969 Dedication of the nine-story Graduate Addition Library
- 1971 Edward G. Roberts became the second Director of Libraries
- 1984 Miriam A. Drake became third Director of the Libraries
- 1985 The Graduate Addition Library was renamed Crosland Towers
- 2001 Richard W. Meyer becomes Dean and Director of the Libraries
- 2008 Catherine Murray-Rust became the Dean of Libraries

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