## DOCUMENTS OF THE GENERAL FACULTY

## REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR NORMAN M. MARTIN

The special committee of the General Faculty to prepare a memorial resolution for Professor Emeritus Norman M. Martin, Department of Computer Sciences and the Department of Electrical and Computer Engineering, has filed with the secretary of the General Faculty the following report.

Alan W. Friedman, Secretary

General Faculty and Faculty Council The University of Texas at Austin

an W. Oprekwan

Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

## IN MEMORIAM NORMAN M. MARTIN

Norman Marshall Martin was Professor of Philosophy, Computer Sciences, and Electrical and Computer Engineering at The University of Texas at Austin from 1965 to 1990. In 1990, he was named Professor Emeritus of Philosophy and Computer Sciences, a title he held until his death at age ninety-two on July 13, 2016.

Martin was born on January 16, 1924, in Chicago, Illinois. In the early 1940s, he was a student at the Central YMCA College in Chicago, but in 1943, he volunteered to serve in the United States Army. He served as assistant forward observer with the Battery A 44th Field Artillery at Utah Beach, Normandy on D-Day, June 6, 1944. On July 13, he received fourteen wounds from mortar fragments and several broken ribs. Five of the wounds were life-threatening, and he lived with shrapnel in his right lung for the rest of his life. Yet he returned to action after four months in the hospital and fought at the Battle of the Bulge at the end of that year.

Martin worked in Information Control Intelligence of the Supreme Headquarters Allied Expeditionary Force for the remainder of the war, mainly interrogating captured German soldiers. His excellent German language skills greatly facilitated this work, although it is not clear that he enjoyed this endeavor. This intelligence work sought important Nazis who might be war criminals, so his assignment involved field research for witnesses and suspects. He said that this detective work was boring because it required extensive legwork that mostly ran into dead ends.

Martin received a Purple Heart and the Croix de Combattant Volontaires and, in 2014, the Chevalier de la Legion d'Honneur, the highest decoration the French government awards to foreign nationals as well as to French citizens. In a June 6, 2014, interview on KXAN television, he said that he was inclined towards pacifism before the war, but when he saw how serious the issues were, he decided that he had a duty to fight. Even while doing so, he maintained his great concern for individuals. He told a colleague that he felt bad, all his life, about killing a young German soldier.

After his discharge from the army, Martin enrolled in the University of Chicago, where he earned an M.A. in Philosophy. A 1950 Fulbright Fellowship enabled him to study mathematical logic at the University of Amsterdam, where he met Emilia van Deene, a mathematics student, who would become his wife. Fortunately, Martin excelled at languages: their courtship in Amsterdam was entirely in Dutch. Norman and Emilia were married for sixty-six years, during which they frequently prepared delicious Indonesian dinners. They had two daughters, Gabrielle Block (now of Mission Viejo, California), and Gwenwyn (Wendy) Janett (now of Newton, Massachusetts), four grandchildren (Naomi Janett Salamon, David Janett, Hannah Block, and Ethan Block), and two great-grandchildren (Anna and Noah Salamon).

After his studies in the Netherlands, Martin returned to the United States and earned his Ph.D. at the University of California at Los Angeles in 1952, writing a dissertation, "Sheffer Functions and Axiom Sets in m-valued Logic," under the direction of philosopher of science Hans Reichenbach. He then spent more than a decade as a researcher for the U.S. Air Force and Navy, working mainly in aerospace companies in Southern California. He would later say that he won the Cold War, a joke that was not entirely unwarranted. He drew on his expertise in logic and mathematics to develop early paradigms for computer design and architecture. He designed a major battlefield surveillance system and helped develop the first successful naval tactical data system. Some of his research led the United States military to prefer silicon to vacuum-tube designs, putting it years ahead of the Russian competition. His logical design underlay the architecture of the computers used for guidance and control of Atlas, Titan, and Minuteman ICBMs. Martin made many contributions to the early U.S. space program, and he designed and patented a prototype desktop computer a decade before IBM's first desktop.

Martin subsequently joined the faculty of The University of Texas at Austin, teaching a variety of courses in logic and computer design. He was a founding faculty member of the Department of Computer Science, playing an important role in developing the graduate curriculum when the Department was founded as a graduate-only program in 1966. He designed and taught the foundational courses in logic and design. Martin also played a significant role in developing the undergraduate computer science curriculum when the undergraduate program was created in the early 1970s. He was always an enthusiastic and committed supporter of computer science and persistent in his pursuit of ideas and results. He taught logic and foundational analysis to multiple generations of computer science students.

Fluent in several languages, Martin conducted advanced research in several disciplines and was conversant in political and military history. He published a series of influential papers on Sheffer functions in many-valued logics. He wrote two books on logical theory, *Systems of Logic* (Cambridge University Press, 1989) and *Closure Spaces and Logic* (Springer, 1996), the latter co-authored with his former student Stephen Pollard, Professor of Philosophy and Religion at Truman State University in Missouri. Besides research in logic, Martin also wrote articles on computer design, minimization theory, rocket science, tactical data systems, machine translation, logical empiricism, and the philosophy of mathematics. His broad interests also included history, especially flags, coats of arms, and other heraldic artifacts. When flying with him to a conference, one would sometimes see him reading a book on these subjects, and he would gladly explain their significance.

Martin's Ph.D. students included Bertram Bruce, Professor Emeritus of Computer Science and Information Sciences at the University of Illinois at Urbana-Champaign; John David Stone, Lecturer in Computer Science and Philosophy at Grinnell College; and David Willard Straight, Professor Emeritus of Electrical Engineering and Computer Science at the University of Tennessee at Knoxville. One of his former M.A. students (in both philosophy and computer science) said that he had an expansive and disciplined mind. Because of his breadth of knowledge, a conversation with Martin would often take surprising turns. He could engage in wide-ranging conversations touching on topics in modal logic, circuit design, and Indonesian cuisine. But he would invariably circle back to the original topic to tie up any "loose ends," often to the amazement of his students. He was justifiably proud of the fact that, while several UT professors hold appointments in three different departments, he was the only one to his knowledge who held appointments in three different colleges—Liberal Arts, Natural Sciences, and Engineering.

In addition to his work with students, Norman was an exceptionally friendly and supportive colleague, happy to discuss with us whatever we were teaching or working on. His delightful sense of humor never failed. We shall all miss Norman's kindness, friendship, wide interests, and enthusiasm, along with his excellent teaching and research.

This memorial resolution was prepared by a special committee consisting of Professors Michael Lauderdale (Chair), Elliot Naishtat, Clay Shorkey, Barbara White.

Distributed to the Deans of the College of Natural Sciences and the Cockrell School of Engineering on July 13, 2017, and posted under "Memorial Resolutions" at https://wikis.utexas.edu/display/facultycouncil/Wiki+Home.