Saul I. Gass

Born February 28, 1926, Chelsea, Mass.; operations research scientist who helped pioneer in applications of linear programming and their compute-based solution, who wrote the first text on linear programming, and who had a major role in the development and operation of the first US manned space project's real-time computational system.

Education: BS, education, Boston University, 1949; MA, mathematics, Boston University, 1949; PhD, engineering science, University of California, Berkeley, 1965.

Professional Experience: mathematician, US Air Force, 1949-1955; IBM Corp.: applied science representative, project manager, Project Mercury, 1955-1959, and 1960-1963, manager, civil programs, 1965-1969; director, operations research, CEIR, 1959; vice president, MATHEMATICA, 1970-1975; professor, College of Business and Management, University of Maryland, 1975-present; Westinghouse Professor, University of Maryland, 1983-1992; council member, ACM, 1960-1962; secretary, AFIPS, 1962-1965; president, Operations Research Society of America, 1976-1977; director, Winter Simulation Conference, 1978-1982; president, Omega Rho International Honor Society, 1986-1988.

Honors and Awards: George E. Kimball Medal for Distinguished Service, Operations Research Society of America, 1991; Outstanding Faculty Award, University of Maryland Alumni Association, 1980.

From 1949 to 1955 Dr. Gass was employed as a mathematician by the US Air Force and worked for the Aberdeen Bombing Mission, Los Angeles, Calif., and the Directorate of Management Analysis, Washington, D.C. (headquarters USAF). In the latter position, he was a member of the Air Force's Project SCOOP, the group that first developed the basic concepts and early applications of linear programming. Gass helped formulate new approaches to solving military planning and programming problems and developed new computational procedures for solving such problems on the Univac I.

Gass joined IBM as an applied science representative and was assigned to the Washington Commercial and Federal Offices from 1955 to 1958. In this position he assisted a wide variety of customers, both civilian and federal, in the solution of their computational problems. In 1959 he joined CEIR, Inc., as director of the Operations Research Branch. Gass rejoined IBM in 1960 as manager of the Simulation Group of the Project Mercury Man-in-Space Program. Here he was responsible for the development of a full range of real-time simulation procedures used to validate the IBM-developed Project Mercury Computational and Data Flow Equipment System, and to train NASA flight controllers. In May 1961, he was appointed project manager of IBM's total efforts on Project Mercury. The IBM group developed and operated Project Mercury's real-time computational and data-flow system that included a duplexed computing center at the Goddard Space Flight Center, Greenbelt, Md.; an engineering and communications subsystem between Cape Canaveral and Goddard; and a computational subsystem for analysis of lift-off and orbital data that enabled flight controllers to monitor

all phases of a Project Mercury mission. In 1963, he received an IBM resident graduate fellowship and completed his doctoral studies in operations research at the University of California, Berkeley, in 1965. For his dissertation, Gass developed the duplex method for the solution of large-scale linear-programming problems under the supervision of George B. Dantzig.

In 1966 Gass was a full-time member of the Science and Technology Task Force of the President's Commission on Law Enforcement. He was responsible for developing the Task Force's approach to how science and technology can best serve law enforcement agencies. For the IBM Federal Systems Division (1966-1970), he was manager of federal civil programs and was responsible for applying information retrieval and other data procedures, advanced graphic techniques, and operations research to urban problems.

Gass joined MATHEMATICA, Inc., in 1970, and managed the operations research projects being conducted in the Washington, D.C., area. He joined the University of Maryland as professor and chairman (1975-1979) in Management Science and Statistics of the College of Business and Management. Gass has served as a consultant to the US General Accounting Office, the National Institute of Standards and Technology, and other federal and private operations research and systems analysis organizations.

BIBLIOGRAPHY

Significant Publications

Gass, Saul L, *Linear Programming,* McGraw-Hill, New York, 1958 (5th edition published in 1985).

Gass, Saul I., *An Illustrated Guide to Linear Programming,* McGraw-Hill, New York, 1970.

Gass, Saul L, *Decision Making, Models, and Algorithms,* John Wiley and Sons, New York, 1985.

Gass, Saul L, and R. Sisson, *A Guide to Models in Government Planning and Operations,* Sauger Books, Potomac, Md., 1975.

UPDATES

Portrait replaced (MRW, 2012)