

Biodata for Martin Summerfield

Born: 20 October 1916, New York, NY

Died: 18 July 1996, Hightstown, NJ

Education

B.S. (Physics)	Brooklyn College	1936
M.B. (Physics)	California Institute of Technology	1937
Ph.D. (Physics)	California Institute of Technology	1941

Employment

1940–1943	Assistant Chief Engineer, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
1943–1945	Chief, Special Engines Project, Aerojet General Corporation, Pasadena, CA
1945–1949	Head, Rocket Research Division, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
1949–1975	Professor of Aerospace Engineering, Princeton University, Princeton, NJ
1975–1978	Chief Scientist, Princeton Combustion Laboratories, Division of Flow Industries, Inc.
1975–1978	Professor (Part Time) of Aerospace Engineering, Princeton University, Princeton, NJ
1978–1980	Astor Professor of Applied Science, New York University, New York City, NJ
1983	Visiting Professor, National Cheng-Kung University, Taiwan, Republic of China (2 months)
1985	Visiting Professor, East China Technical Institute, Nanjing, People's Republic of China (2 weeks)
1978–1994	President and Chief Scientist, Princeton Combustion Research Laboratories, Inc.



Affiliations

Franklin Institute Research Laboratories, General Advisory Committee (1962–1972)
U.S. Army Ballistic Research Laboratory, Scientific Advisory Council (1970–1977)
U.S. Army Materiel Command, various Technical Committees (1960–1996)
Member, U.S. Congress, Office of Technology Assessment, Committee on Space Applications (1979–1980)
Member, National Finance Committee, AIAA (1975–1985)
Member, Advisory Council, National Cheng-Kung University, Institute of Aeronautics and Astronautics (1984–1996)
Member, National Publications Committee, AIAA (1963–1996)
Member, National Research Council, Committee on Energetic Materials (1984–1986)
Chairman, National Research Council, Committee on Piro Toxicity (1984–1990)

Society Memberships

Honorary Fellow, American Institute of Aeronautics and Astronautics (AIAA)
Member, American Society of Mechanical Engineers (ASME)
Member, International Combustion Institute
Fellow, American Association for the Advancement of Science (AAAS)
Member, American Defense Preparedness Association (ADPA)
Member, American Technion Society
Member, Sigma Xi
Member, International Academy of Astronautics
Member, National Academy of Engineering (NAE)

Awards and Honors

President, American Rocket Society, 1962
Vice President, Publications, AIAA, 1963–1965
Vice President, International Astronautical Federation, 1963–1965
Pendray Award, American Rocket Society, 1954
Wyld Award, American Institute of Aeronautics and Astronautics, 1977
Coauthor, Best Paper of 1978, American Society of Mechanical Engineers, Heat Transfer Division
Who's Who in America, since 1952
Member, National Academy of Engineering (NAE), since 1979
Member, Peer Selection Committee for New Members, National Academy of Engineering, 1983–1986 (3-year term)
Member, Committee on Membership, 1987 (1-year term), National Academy of Engineering

Editorships

General Editor, series on High Speed Astrodynamics and Jet Propulsion, Princeton University Press, 1949–1952
Editor-in-Chief, *Journal of the American Rocket Society*, 1951–1962
Editor-in-Chief, *AIAA Journal*, 1963
Editor-in-Chief, *Acta Astronautica*, Pergamon Press, England, 1963–1973
Editor-in-Chief, Progress in Astronautics and Aeronautics, (AIAA Book Series), 1960–1990; Member, Editorial Board, 1990–1996

Areas of Expertise

Combustion processes and gas dynamics; characteristics of fuels and propellants; solid propellant ignition and combustion; internal ballistics of guns and rocket engines; combustion instability mitigation; metal combustion and erosion by hot gases; free-piston ballistic compressors; flamespread rates through packed beds of powder; smoldering combustion of cigarettes; smoldering combustion of plastic foams; regenerative liquid propellant guns; compression-ignition sensitivity of liquid explosives and monopropellants; fluidized bed combustion of coal; cannon recoil systems; catalytic combustion of fuels; flammability characteristics of gas mixtures; chemical process investigations; energy conservation strategies; space flight systems; electric pulse-power generator systems; microgravity research on combustion.