

MALCOLM DAVID SHUSTER

Acme Spacecraft Company
13017 Wisteria Drive, Box 328
Germantown, Maryland 20874

email: mdshuster@comcast.net

website: <http://home.comcast.net/~mdshuster>

Synopsis

Forty-one years cumulative technical experience in: estimation and control; spacecraft mission analysis; spacecraft data analysis; defense systems analysis; modeling and simulation; applied mathematics; experimental and theoretical physics; software requirements analysis, specification, validation, and verification; and teaching Physics and Engineering at all levels (comprising 20 distinct one-semester courses).

Education

M. S. (cum laude), Electrical Engineering, the Johns Hopkins University, Baltimore, Maryland, 1982.

Ph. D., Physics, University of Maryland, College Park, Maryland, 1971.

S. B., Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1965.

Professional Experience

- | | |
|--------------|--|
| 2001–present | Acme Spacecraft Company, Germantown, Maryland. Director of Research. |
| 1999–2001 | Orbital Sciences Corporation, Germantown, Maryland. Scientist, Space Systems Group. |
| 1994–1999 | The University of Florida, Gainesville, Florida. Professor, Department of Aerospace Engineering, Mechanics and Engineering Science. |
| 1987–1994 | The Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland. Senior Professional Staff, Space Department. |
| 1981–1987 | Business and Technological Systems, Inc., Seabrook, Maryland. Staff Scientist and Manager (1986–87), Space Systems Branch. |
| 1977–1981 | Computer Sciences Corporation, Silver Spring, Maryland. Senior Member of the Technical Staff, Attitude Systems Operation. |
| 1976–1977 | Carnegie-Mellon University, Pittsburgh, Pennsylvania. Visiting Assistant Professor, Department of Physics and Astronomy. |
| 1973–1976 | Tel-Aviv University, Tel-Aviv, Israel. Lecturer (martseh), Department of Physics and Astronomy. |
| 1972–1973 | University of Karlsruhe, Karlsruhe, Federal Republic of Germany. Wissenschaftlicher Assistent, Department of Physics. |
| 1970–1972 | Center for Nuclear Studies, Saclay, France. Ingénieur-Physicien, Department of Theoretical Physics. |
| 1965–1970 | University of Maryland, College Park, Maryland. Graduate Research Assistant (1967–70) and Graduate Teaching Assisitant (1965–67), Department of Physics and Astronomy. |

Publications Summary

Author or coauthor of 59 published journal articles, 55 conference papers, and more than 80 technical reports. Contributor to the books: *Spacecraft Attitude Determination and Control* (Springer, 1978); and *Fundamentals of Space Systems* (Oxford University Press,

1994 and 2005). Total volume of archival publications exceeds 800 pages. Total volume of all publications, including technical reports, exceeds 5000 pages.

Editorial Activities

Guest Editor, *Journal of the Astronautical Sciences*, Special Issue on Attitude Representations, Vol. 41, No. 4, October–December 1993.

Editorial Board, Space Technology Library, Springer, Berlin and New York (since the inception of the library in 1995).

Reviewer for Physics and Astronautics journals (1974–present).

Conference Activities

Local Arrangements Chairman and Exhibits Chairman, Third IEEE Symposium on Computer-Aided Control System Design, Arlington, Virginia, September 1986.

Publications Chairman, 26th IEEE Conference on Decision and Control, Los Angeles, California, December 1987.

Co-Organizer and Co-Chairman, IEEE Symposium on Factorized Estimation in Memory of Gerald J. Bierman, Austin, Texas, December 1988.

Program Committee, International Symposium on Spacecraft Ground Control and Flight Dynamics, SCD1, São José dos Campos (SP), Brazil, February 1994.

Technical Co-chairman, AIAA/AAS Astrodynamics Specialist Conference, San Diego, California, August 1996.

International Advisory Committee, Vth Panamerican Congress of Applied Mechanics, San Juan, Puerto Rico, January, 1997.

International Advisory Committee, VIth Panamerican Congress of Applied Mechanics, Rio de Janeiro, Brazil, January, 1999.

General Co-Chairman, AIAA/AAS Astrodynamics Specialists Conference, Denver, Colorado, August 2000.

AAS Space Flight Mechanics Technical Committee (1994–2001).

Awards

Bat-Sheva de Rothschild Foundation Award, 1974.

NASA Magsat Group Achievement Award, 1981.

BMDO MSX Group Achievement Award, 1994.

American Astronautical Society Dirk Brouwer Award, 2000.

Guest of Honor, The American Astronautical Society Malcolm D. Shuster Astronautics Symposium, Grand Island, New York, June 13–15, 2005.

Professional Societies

American Astronautical Society (fellow).

American Institute of Aeronautics and Astronautics (associate fellow).

American Physical Society (inactive).

British Interplanetary Society (fellow, inactive).

Institute of Electrical and Electronics Engineers (senior member).