

Thomas C. Adamson, Jr.

### Professional Biographical Data

**Date of Birth** March 24, 1924

**Education** 1949 B.S., Aeronautical Engineering, Purdue University  
1950 M.S., Aeronautics, California Institute of Technology  
1954 Ph.D., Aeronautics, California Institute of Technology  
(Guggenheim Fellowship 1950-1952)

**Experience** Professor Emeritus, February 1992-

Chairman, Department of Aerospace Engineering, The University of Michigan, January 1983-December 31, 1991

President and Treasurer, Applied Analysis Inc., 1979-1986

Professor Department of Aerospace Engineering, The University of Michigan, July 1961-January 1992

Associate Professor on leave to Institute of Science and Technology, The University of Michigan, July 1960-June 1961

Associate Professor of Aeronautical Engineering, The University of Michigan, September 1957-June 1961

Assistant Professor of Aeronautical Engineering, The University of Michigan, February 1956-September 1957

Lecturer in Aeronautical Engineering, The University of Michigan, February 1955-September 1955

Associate Research Engineer, Engineering Research Institute, The University of Michigan, November 1954-February 1956

Research Engineer, Jet Propulsion Laboratory, California Institute of Technology, June 1952-August 1954

Jet Propulsion Laboratory, California Institute of Technology, research, 1951 (summer)

Assistant Research Engineer, Hypersonic Laboratory, Guggenheim Laboratories at California Institute of Technology, October 1949-June 1950 (part-time)

Assistant Research Engineer in Aeronautics, Mechanics  
Section, Cornell Aeronautical Laboratory, Buffalo, NY, 1948-  
1949 (summer)

## **Professional and Honorary Societies**

### **Societies**

Fellow of American Institute of Aeronautics and Astronautics

Member of Combustion Institute

Founding Member of Society of Engineering Sciences (1963)

Member of Institute of the Aeronautical Sciences (1950-1963)

Senior Member of American Rocket Society (1961-1963);  
Member (1953-1961)

### **Honor Societies**

Tau Beta Pi

Sigma Xi

Sigma Gamma Tau (Honorary Member)

## **Honors and Awards**

### **Editorial Activities**

Distinguished Faculty Achievement Award, The University of Michigan,  
1980

Lyons Township High School Hall of Fame, 2000

Outstanding Aerospace Engineer Award, Purdue University, 2006

Listed in Who's Who in America (38<sup>th</sup> edition through 60<sup>th</sup> edition)

Who's Who in Frontiers of Science and Technology

Who's Who in the Midwest

Who's Who in Technology

Who's Who in American Education

American Men and Women of Science

Past Member of Editorial Board of International Journal of Turbo and Jet-  
Engines

## **Professional Activities and Service**

### **National and State**

AIAA Subcommittee Coordinator, Final Selection Committee, Fellow Grade, 1994

Board Member, François-Xavier Bagnoud U.S. Foundation, 1994-2004

François-Xavier Bagnoud Aerospace Prize Board, 1992-; Chairman 1992-1999

AIAA Institute Development Committee, 1991-1992

Review Committee, Graduate Programs, Department of Aeronautics and Astronautics, University of Washington, Seattle, 1991

Visiting Committee, Department of Aeronautics and Astronautics, Stanford University, 1991

NASA – Reviewer for Space Grant College Proposals, 1989

Review Committee Aeronautics Department, Caltech, 1987

Board of Trustees, Michigan Aviation Hall of Fame, 1987-2010

Texas State Board, Peer Reviewer for Advanced Technology and Advanced Research Programs of Texas Higher Education Coordinating Board, 1986

AIAA, Final Selection Committee, Fellow Grade, 1986

AIAA, Peer Group Selection Committee, Fellow Grade, 1983, 1984 and 1988

AGARD-NATO Lecture Tour to Toulouse and Paris in France, Delft and Amsterdam in Holland, Brussels in Belgium, and London in the U.K., 1978

Co-Chair (with M. F. Platzer) of ONR Workshop on “Transonic Flow Problems in Turbomachinery,” Monterey, California, 1976

AIAA, Chair, Session II, Air Breathing Propulsion, 13<sup>th</sup> Aerospace Sciences Meeting, 1975

Host, Annual Meeting of Project SQUID, ONR, 1974

JANNAF-ICRPG Flow Mechanics Committee, Plume Technology Group, 1970-1973

AIAA Technical Committee on Propellants and Combustion, 1969-1972

NAS-NRC Committee on Basic Research Advisory to U.S. Army Research Office, Durham, 1969-1972

NRC-NAS Committee on Fire Research, 1966-1970

Combustion Institute – Papers Subcommittee, 8<sup>th</sup> International Symposium on Combustion, 1959

### **University**

Search Committee for Vice President for Research (Chair), 1992

Russel Award Committee, 1988-1991 (Chair, 1991)

Distinguished Faculty Achievement Award Committee, 1983-1986 and 1988-1991

Conflict of Interest and Commitment Committee, 1984-1985

Search Committee for Provost and Vice President of University, 1985

Rackham Graduate School Divisional Board, Physical and Engineering Sciences, 1978-1980

### **College and Department**

Ph.D. Committees 74; Chair 14, Co-Chair 3

Chair of Review Committee for Laboratory for Scientific Computation, 1990

Search Committee, Chair of Atmospheric, Oceanic and Space Sciences, 1990

Executive Committee, College of Engineering, 1981-1983

Review Committee for Department of Electrical Engineering and Computer Sciences, 1980 and 1985

Department Graduate Committee, 1959-1963; Chair 2 years: 1961-1963

### **Consulting**

Vickers Incorporated (long-term) (thermodynamics)

Dow Chemical Company (rocket fuels)

Chrysler Missile Company (reacting flows)

Bendix Aerospace Systems Division (hypersonic and reacting flows, rocket plume interaction with equipment on the moon)

Conductron Corporation (combustion)

Chemotronics (detonations, combustion)

Instituto Nacional de Technica Aeroespacial, "Esteban Terrodos" (fluid mechanics)

KMS Fusion Company (thermodynamics)

Applied Analysis, Inc. (transonic flow)

Ford Scientific Laboratories (combustion, emission problems, flow in wheel wells and under the hoods of automobiles)

### **Seminars**

Northwestern University

State University of New York at Buffalo

Cornell

Caltech

University College London

Oxford

Delft

Purdue

University of California at San Diego

University of Madrid

University of Cincinnati

Ohio State University

Allison Division of General Motors

### **Selected Invited Papers, Presentations**

"The Structure of Rocket Exhaust Plumes without Reaction at Various Altitudes," 21<sup>st</sup> Meeting AGARD Combustion and Propulsion Panel, NATO, London, England, 1963.

“The Structure of Shock Wave Boundary Layer Interaction in Transonic Flow,” Symposium Transsonicum II, Gottingen, Germany, September 1975.

“Asymptotic Solutions for Nonsteady Transonic Channel Flows,” (with A.F. Messiter), Symposium Transsonicum II, Gottingen, Germany, September 1975.

“Shock Wave-Turbulent Boundary Layer Interactions at Incipient Separation,” (with A.F. Messiter) , Specialists Workshop on Viscous Interaction and Boundary Layer Separation, Ohio State, August 1976.

“Transonic Shock Wave-Turbulent Boundary Layer Interactions at Incipient Separation,” (with A.F. Messiter) , invited 45-minute lecture at ONR Transonic Flow Conference, UCLA, March 1976.

“Shock Wave-Turbulent Boundary Layer Interactions at Incipient Separation,” (with A.F. Messiter) , presented at 13<sup>th</sup> Annual Meeting of Society of Engineering Science, Hampton, VA, November 1976.

Co-Editor (with M.F. Platzer) of “Transonic Flow Problems in Turbomachinery,” Hemisphere Publishing Corporation, 1977.

“Interaction Between a Shock Wave and a Turbulent Boundary Layer in Transonic Flow,” and “Transonic Shear Flow in a Three-Dimensional Channel,” AGARD-NATO Lecture Tour; lectures given in France at Toulouse and Paris, in Holland at Delft and Amsterdam, in Belgium at Brussels, and in England at London, April 1978.

“Analysis of Two-Dimensional Interactions Between Shock Waves and Boundary Layers,” (with A.F. Messiter) , invited article in Annual Reviews of Fluid Mechanics, Vol. 12, 1980.

“Analysis of Supersonic Inlet Diffuser,” presented at ONR/AFOSR Workshop on Mechanisms of Instability in Liquid Fueled Ramjets,” Atlanta, Georgia, March 1983.

“Asymptotic Methods for Internal Transonic Flows,” (with A.F. Messiter) , Proceedings of Transonic Symposium, NASA Langley Research Center, April 19-21, 1988, Vol. 1, pp. 261-291. Presented at the Symposium.

“Viscous Effects on Critical Flow in the Exit Region of a Thin Channel,” International Workshop on Advances in Analytical Methods in Aerodynamics,” Miedzzydroje, Poland, July 12-14, 1993.

**Reviewer for**

Journal of Fluid Mechanics, AIAA Journal, Combustion and Flame,  
Physics of Fluids

**Registered in Indiana**