



- Chair, Mellon College of Science Review Committee and member of the Mellon College of Science Strategic Planning Committee (1998)

**Superconducting Super Collider Laboratory** **1990 - 1995**  
**Dallas, Texas**

Associate Director and  
 Head of the Physics Research Division 1990 - 1994  
 Deputy Director 1994 – 1995

- Developed the scientific staffing structure for the Laboratory and chaired its Scientific Staff Committee.. Established, recruited, and nurtured internal experimental and theoretical physics groups that grew to over 50 physicists.
- Planned, recruited, and managed the Physics Research Division within budget during growth to 370 scientific, technical, project management personnel and annual budget of over \$70M
- Developed and implemented overall plan to manage the SSC experimental research program that included two detector-laboratories, each with 1000 collaborating scientists worldwide; established technical, cost, and schedule baselines; interacted with diverse people representing the international scientific community, US and foreign governments, and the State of Texas. Documented technical achievements and helped transfer the relevant pieces for incorporation in CMS and ATLAS at the LHC.

**Stanford Linear Accelerator Center** **1967 - 1990**  
**Stanford University**  
**Stanford, California**

Professor 1973 - 1990  
 Associate Professor 1969 - 1973  
 Research Associate 1967 - 1969

- Carried out research in theoretical physics, especially in the nature of CP violation, the physics of heavy quarks, and the phenomenology of electroweak interactions; gave numerous review talks and lectures at international conferences and summer schools
- Acted as thesis advisor for ten Stanford Ph.D. students; organized and lectured in the annual SLAC Summer Institute of Particle Physics aimed at the postdoctoral level (1976 – 1990)
- Served as a member of many laboratory and professional advisory committees both inside and outside of Stanford; served on and chaired the Executive Committee of the Division of Particles and Fields of the American Physics Society; organized and participated in national high energy physics study groups
- Long-term visitor at Fermilab, Caltech, the Institute for Advanced Study, and the Weizmann Institute

**California Institute of Technology  
Pasadena, California**

**1965 - 1967**

Research Fellow in Theoretical Physics (Advisor: M. Gell-Mann)

- Carried out research in theoretical high energy physics, with particular emphasis on broken Symmetries, current algebras, and sum rules for strong and electromagnetic interactions

## EDUCATION

Princeton University 1962 - 1965  
Ph.D. in Physics (Advisor: M. L. Goldberger)

Michigan State University 1958 - 1962  
B.S in Physics

## AWARDS/HONORS

Fellow of the American Physical Society (1985)

Citation: For highly original and timely contributions to the phenomenology of elementary particle reactions, especially for his creative interplay with the experimental program at SLC, including the elucidation of scaling behavior in deeply inelastic scattering.

Member of three-student team placing first in North America in the 1961 William Lowell Putnam Undergraduate Mathematics Competition

National Science Foundation Postdoctoral Fellow 1965 - 1966

National Science Foundation Predoctoral Fellow 1962 – 1965

## OTHER PROFESSIONAL ACTIVITIES

2015 - Present Member of the Major Policy Committee for the Hunt Botanical Institute

2014 - present Member of the MPC Corporation (Carnegie Mellon and University of Pittsburgh joint venture) Board of Directors

2012 - present Member, Board of Councilors, Okinawa Institute of Science and Technology

2012 - 2016 Member, Executive Board, LSST Dark Energy Science Collaboration

- 2012 - present Member of the Board of Directors of the Association of Universities for Research in Astronomy (AURA).
- 2012- present Chair of the AURA Management Council for the LSST (AMCL) overseeing construction of the LSST.
- 2009 - present Member of the Board of Directors of the Large Synoptic Survey Telescope Corporation (LSSTC); Member of the Executive Board of the LSSTC (2010-2016)
- 2007 Co-Organizer, China-US Workshop on Possible Parity Restoration at High Energy, June 11-12, 2007, Beijing China
- 2006 Co-Organizer, China-US Workshop on Future PRC-US Cooperation in High-Energy Physics, June 11-18, 2006, Beijing, China.
- 2006 Member, NSF LHC Operations Review Panel
- 2005 Member, NSF Review Panel for the Kavli Institute of Theoretical Physics at UCSB
- 2005 Member, DOE/NSF HEPAP-NSAC Neutrino Scientific Assessment Group
- 2005 Member, DOE/NSF HEPAP LHC-LC Subpanel
- 2004 Member, DOE/NSF HEPAP Quantum Universe Subpanel
- 2003 Member, DOE/NSF HEPAP Particle Physics Project Prioritization Panel (P5)
- 2002 Member, Subpanel on Performance Measurement in the DOE Office of Science
- 2001 Member, NSF/DOE HEPAP subpanel on Long Range Planning
- 1999 – 2005 Chair, HEPAP
- 1997 - 1998 Chair, HEPAP subpanel on “Planning for the Future of U. S. High Energy Physics”
- 1995 - 2008 Co-senior Advisor to the Institute of High Energy Physics in Beijing under the US-China Joint Agreement on High Energy Physics
- 1995 - 1997 Member, NSF Special Emphasis Panel for Elementary Particle Physics
- 1995 - 1998 Member, URA Visiting Committee for Fermilab
- 1995 - 1997 Member, Review Committee, Physics Division, Lawrence Berkeley National Laboratory

- 1993 Dothan Memorial Lecturer, Tel Aviv University
- 1990 - 1995 Member, High Energy Physics Advisory Panel (HEPAP) to the Department of Energy
- 1989 Member, HEPAP subpanel on "High Energy Physics and the SSC Over the Next Decade"
- 1989 - 1992 Member, Brookhaven Program Advisory Committee
- 1988 - 1992 Member, Advisory Board, Institute of Theoretical Physics, UC Santa Barbara
- 1988 Chairman of the Steering Committee for Snowmass 88: Summer Study on High Energy Physics in the 1990s
- 1989 Chairman, Division of Particles and Fields, American Physical Society
- 1988 - 1991 Member, Advisory Board, Modern Physics Letters A and International Journal of Modern Physics A
- 1987 Chairman, Sakurai Prize Committee of the American Physical Society
- 1985 - 1988 Editor, Journal of Modern Physics A
- 1985 - 1988 Editor, International Journal of Modern Physics A
- 1985 Member, SSC Detector Cost/Model Advisory Committee
- 1983 - 1985 Member, Editorial Board of The Physical Review
- 1982 Visiting Professor, Weizmann Institute
- 1981 - 1984 Member, Review Committee, High Energy Physics Division, Lawrence Berkeley Laboratory
- 1980 - 1985 Member, Cornell Program Advisory Committee
- 1978 - 1981 Member, Fermilab Program Advisory Committee
- 1978 - 1980 Member, Particle Data Group Review Committee
- 1976 - 1990 Co-Director, Stanford Linear Accelerator Center Summer Institute on Particle Physics
- 1974 Visiting Professor, Institute for Advanced Study
- 1976 - 1981 Member Experimental Program Advisory Committee of the Stanford Linear Accelerator

Center

- 1973 Visiting Professor, California Institute of Technology
- 1972 - 1974 Member, Executive Committee, Division of Particles and Fields, American Physical Society
- 1972 - 1974 Member, Bevatron Scheduling Committee
- 1972 Visiting Professor, Fermilab
- 1969 - 1972 Member, Stanford Linear Accelerator Center, Program Advisory Committee