

GEORGE FRIEDMAN; Resume Overview

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Education: BS ME, UC Berkeley, 1949; MS Engr'g, UCLA 1956; PhD Engr'g, UCLA, 1967

Registered Engineer: Mechanical Engineering #11026; CA; Control Systems Engineering #02815, CA

Record of Professional Work Experience

University of Southern California; 1995- ; Adjunct Prof, developing new grad courses, on PhD committees.
Northrop Corporation: 1960-1994. Corporate VP Engineering and Technology (CTO), Group VP Technical, Division VP Advanced Systems, Division Chief Scientist, Director of Systems Analysis and several lower ranking positions -- all involved with the development and application of advanced technology
ServoMechanisms, Inc: 1956-60; Developed instrumentation for the Titan, Thor, Redstone and Jupiter missile systems
LA Dept of Water & Power; 1949-56; ME Associate; designed and inspected water, power and heating systems
US Army; 1950-52; designed flight instrumentation for V-2 missile tests (von Braun's group at Redstone)
US Navy; 1948 (summer); performed trajectory analyses on Naval Ordnance Test Station rockets.

Specific Technical and Engineering Accomplishments and Contributions:

As Chief Technical Officer of Northrop Corporation, was responsible for the development of all engineering and technical processes, program reviews and technology investments for a \$8 billion aerospace company.
As Vice President, Technical, of Northrop's Electronic Systems Group, was the systems architect for the integrated avionics and defensive systems of the B-2 (stealth) Bomber, as well as integrated corporate resources.
As VP, Advanced Systems in Northrop, initiated the development of advanced navigation, guidance, control, electro-optical, acoustic, electronic countermeasures, missiles and terminally guided submunitions.
All of the above contributed to the acquisition of ~ \$50 billion in highly competitive new technology contracts.
Was one of the founders and third President of the new (1991) International Council on Systems Engineering.
Was the Vice President, Publications for the AES Society of IEEE and on Board of Governors for 12 years.
Was the Executive Vice President and am the Research Director for the Space Studies Institute in Princeton.
At USC, constructed new graduate courses in systems engineering, leading to PhD level; on 11 PhD committees.

Principal Technical Society Membership (including grades) and Activities, and other noteworthy activities

IEEE; Fellow; VP Publications AESS; Board of Governors AESS; Chair, Education and Sys Engr committees
INCOSE; Fellow; Founder, President ('94), Board of Directors, Journal Editor-in-Chief ('97), elections chair
AIAA; Assoc Fellow; Space Systems Technical Committee; Chair, Planetary Defense
SSI (Space Studies Institute, Princeton); Executive Vice President; Research Director (1993-present)
NASA/DOE/USAF Workshop on Planetary Defense; gave two briefings and contributed to final report (1995)
NATO Industrial Advisory Group on air-to-air missiles; chairman of terminal effectiveness subgroup (1977)
USAF Scientific Advisory Board; studies on Special Operations Forces, Unmanned vehicles, Missiles (85-87)
NSF Engineering Conference on decision-based design; Gordon Conference, NEC, May 1998
NSF/NASA workshop on Space Solar Power; chair of self-replicating automata sessions, April 2000
ADPA Conference on Artificial Intelligence for DOD; General Chairman; Los Angeles, CA; 1984
IEEE Computer Society Conference on Expert Systems; General Chairman; Anaheim, CA; June 1988
USC Conference on Systems Engineering Research, General Chairman, 2004
UCLA, Center for the Study of Evolution and the Origin of Life, member and lecturer

Professional Recognition

IEEE WRG Baker Award for best paper (Constraint Theory) in 1969 (out of ~3000 papers published that yr)
AIAA Space Systems Technical Committee's Outstanding Member; 1997
ADPA's Defense Preparedness Award, 1985
Northrop Corporation President's Award, 1991
Recognized as "First Fossil" in IEEE's *Evolutionary Computation, the fossil record*, IEEE Press, 1998