

## Daniel Guggenheim Medal

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### MEDALIST FOR 2004

*For outstanding contributions to aeronautics in research and teaching in stability and control, and superlative leadership at the national and international levels.*



### COURTLAND PERKINS

Courtland Davis Perkins was born in Philadelphia, Pennsylvania, on December 27, 1912. Perkins began his education at the Germantown Friends School from which he graduated in 1931, Cum Laude.

Perkins then went to Swarthmore College, in Swarthmore, Pennsylvania, where he enrolled in the Engineering Department. He graduated with Honors in 1935 with a B.S.D. in Mechanical Engineering. On graduating from Swarthmore, Perkins wanted to get into aeronautics, but as this was the depth of the depression the opportunities were non-existent. He found a position with the American Radiator and Sanitary Corporation in the fall of 1935 and stayed with them until 1939 at which point he had risen to be the Philadelphia Branch Engineer. During this period he learned to fly and owned a small two-place airplane with one of his colleagues.

In the fall of 1939, he continued his education as a graduate student at Massachusetts Institute of Technology (MIT) in the Aeronautical Engineering Department. He became a Research Assistant and graduated with his Master's degree in Aeronautical Engineering in the spring of 1941. Perkins then accepted the position of Engineer in the Aircraft Laboratory of the Engineering Division of the U.S. Army Air Forces at Wright Field in Dayton Ohio. He was assigned to the Stability and Control Unit of the Aerodynamics Branch and rose to be Chief of this Unit during the war years. His work in the conduct of research in the technology of the stability and control of military aircraft provided him with a foundation for authoring with Robert Hage a classic book on aeronautical engineering entitled "Airplane Performance Stability and Control," which was published in 1949.

Also while at Wright Field, Perkins had a hand in the development of the first test pilot school of the Army Air Forces (which subsequently grew into the important Air Force Test Pilot School operating at Edwards Air Force Base in California) and also created liaison programs with the National Advisory Committee for Aeronautics (NACA) and with the aircraft industry.

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At the end of the war in 1945, Perkins joined the faculty of Princeton University to help establish a new Department of Aeronautical Engineering within the School of Engineering and Applied Science. He was appointed Chairman of this Department in 1951, and witnessed its growth to be one of the country's powerful engineering education and research programs in this field.

Twelve years later he was made Chairman of the newly merged Department of Aerospace and Mechanical Sciences, and went on to Associate Dean of the School of Engineering and Applied Science.

During his tenure at Princeton, Perkins continued his activities with the now U. S. Air Force. He was one of the original members appointed to the newly organized Air Force Scientific Advisory Board (SAB) in 1946. He remained a member for many years in various capacities including Chair from 1969 to 1972 and again from 1977 through 1978, Chairman of its important Aerospace Vehicles Panel, and Senior Scientist.

Twice during his years at Princeton, he took leave-without-pay to serve the Department of Defense. In 1956-1957 he held the position of Chief Scientist of the Air Force, and in 1959-1960 he held the Presidential appointment of Assistant Secretary Air Force for Research and Development under President Eisenhower. In each case he returned to Princeton at the end of his tour.

While at Princeton, Professor Perkins helped Dr. Theodore von Karman with the establishment of a new NATO organization, the Advisory Group for Aerospace Research and Development (AGARD). When Dr. von Karman died in 1963, Perkins became Chairman and helped reorganize this valuable NATO organization. Again during this period he was elected the second President of the American Institute for Aeronautics and Astronautics and worked with this important professional society in many ways over the years.

Perkins also served a member of the Space Science Board of the National Academy of Sciences from 1964 to 1970, as a member of the Defense Science Board of the Department of Defense from 1969 to 1973 and again from 1977 through 1978, and was a member of NASA's Space Program Advisory Committee serving as Chairman of its Space Systems Committee from 1972 to 1977.

In April of 1969, Perkins was elected to membership in the National Academy of Engineering (NAE) of the United States of America, and in 1975 was elected to the Presidency of this organization. He was elected to two terms and served until June 30, 1983. The presidency of the Academy was a full-time job so the first three years were served while on leave from Princeton. Princeton would not grant any further leave, so he took early retirement from Princeton in 1978, and became Professor Emeritus. He continued as President of the NAE until June 30, 1983.

In 1986, Perkins was appointed a Senior Review Officer of the Central Intelligence Administration (CIA) and served as a member of the Senior Review Panel of this agency. He retired from this connection with the CIA in 1989.

Perkins was an Honorary Fellow of the American Institute of Aeronautics and Astronautics, a Fellow of the Royal Aeronautical Society of Great Britain, a member of the International Academy of Astronautics, a member of the American Academy of Arts and Sciences, a Corresponding Member of the National Academy of Engineering of Mexico, a Fellow of the American Association

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of American Scientists, and a member of the American Helicopter Society, Sigma XI and Tau Beta Pi. The French named him to their Legion d'Honneur in 1977.

Perkins was awarded many honors and awards, including the first NATO von Karman medal, Honorary Doctor of Engineering Degrees from the Rensselaer Polytechnic Institute, Lehigh University and Swarthmore College, two Meritorious Civilian Service Awards and two Exceptional Civilian Service.

Court Perkins was a charismatic and highly successful leader of a multitude of organizations. All those who have had the privilege of knowing, working with and learning from him have been enriched by the experience. He always made the hard work seem like fun. Perkins died on January 6, 2008.