This picture was taken just after he received the Guggenheim Medal at the Stanford University Faculty Club, on December 2, 2004. He is surrounded by family. Left to right: Lynette Perkins—daughter-in-law, James Lomax—son-in-law, Tracy Perkins—granddaughter, Bill Perkins—son, Anne Perkins—daughter.

COURTLAND D. PERKINS

1912–2008

Elected in 1969

"Leadership in the fields of airplane stability and control and airplane dynamics."

BY IRVIN GLASSMAN, SAU-HAI (HARVEY) LAM, ROBERT G. JAHN, AND ROBERT M. WHITE

COURTLAND DAVIS PERKINS, professor emeritus in the Department of Mechanical and Aerospace Engineering at Princeton University, died January 6, 2008, at the age of 95. With his passing the department, the entire university, and the world of aerospace technology lost one of their most gifted and effective scholars and institutional leaders.

No memorial resolution can satisfactorily encompass the depth and breadth of this fine man's gigantic impact on the evolution of the aeronautical engineering profession and its practices. Nor can it adequately highlight his dominant role in the development of that portion of the Princeton University School of Engineering and Applied Science that now comprises a full panorama of undergraduate and graduate education, basic research, and pragmatic applications in the contemporary aerospace sciences. Nonetheless, we should endeavor to recall a few vignettes of his remarkable performances on several institutional stages.

A native of Philadelphia (born December 27, 1912), Court received his undergraduate education at Swarthmore College, graduating in 1935, supplemented by a master's degree from the Massachusetts Institute of Technology in 1941. As World War II enveloped our country, he positioned himself in the Flight Technology Unit of the US Army's Wright-Patterson

Stability and Control Center, and by the war's end was already a recognized authority on the fundamentals of that portion of the burgeoning science of aeronautics.

With the portfolio of basic understanding and pragmatic insights thus acquired, in 1945 he was appointed by the founding chair, Daniel Sayre, to join Princeton's fledgling Aeronautical Engineering Department, and so distinguished himself in his scholarly work and administrative savoir faire that he succeeded Sayre as chair in 1951. Somewhere in that brief period he also found time to coauthor (with Robert Hage) and publish the seminal textbook *Airplane Performance, Stability and Control* (John Wiley, 1949), which immediately became the standard text in the field and remains widely used and celebrated to this day.

The ensuing 27 years of his inspiring departmental oversight began with the construction and use of a variety of experimental facilities on Princeton's Forrestal Campus that were rarely found at other academic institutions—an assortment of wind tunnels, rocket test stands, towing tracks, chemical and electrical propulsion research laboratories, and, most remarkably, a fully operational airfield, hangar, and flight research laboratory with a number of test aircraft available not only for undergraduate flight instruction and experience but also for faculty and graduate student research projects.

Himself an avid pilot, Court was famous for rigging control surfaces and instrumentation devices on some of the test aircraft in the Forrestal hangar to obtain ad hoc flight data that were inaccessible by more conventional means. His masterful history, "Development of Airplane Stability and Control Technology," presented in his 1969 von Kármán Lecture, doubtless benefited from these Princeton facilities and his personal experiments, as well as his having in some way been involved in every major commercial and military aircraft development program up to that time.

The early portion of this epoch was also marked by the appointment of an outstanding cadre of internationally renowned faculty of the stature of Luigi Crocco, Martin Summerfield, Lester Lees, Wallace Hayes, and Seymour

Bogdonoff, among many others who, along with the aforementioned research facilities, in turn attracted a succession of brilliant students destined to become leaders in the aerospace industry. Graduates James and John McDonnell, Norman Augustine, Philip Condit, and Renso Caporali all eventually ascended to become chief executive officer or chair of McDonnell-Douglas, Lockheed-Martin, Boeing, and Grumman aerospace firms. A similarly impressive list of graduates left Princeton to lead academic departments here and abroad or to populate major government or philanthropic directorates, and a succession of astronauts have further distinguished this Princeton family.

With reference to Court's own public leadership roles, this space allows little more than passing acknowledgment of the constellation of government, commercial, and agency positions he held over his incredibly productive career: chief scientist of the US Air Force as well as assistant secretary for research and development, chief engineer for the US Army, chair of the NATO Advisory Group for Aeronautical Research and Development, and president of the American Institute of Aeronautics and Astronautics, among many others. At the close of his departmental chairmanship, Court agreed to serve one year as associate dean of the school, to help with its ongoing development efforts.

In 1975 Dr. Perkins took early retirement from Princeton, becoming professor emeritus, when he was elected president of the National Academy of Engineering, a position in which he served two terms. He was chosen because of his managerial skills and his ability to deal comfortably with the multiple constituencies of the members—academia, business, and government. Upon his election, he also became vice chair of the National Research Council and chair of the NRC's Assembly of Engineering.

As NAE president he had three goals: to increase the number of members, improve the financial resources, and promote the NAE's visibility and thereby enhance its public recognition. During his presidency, the NAE elected the first foreign associates [now called foreign members] and doubled the size of

its membership by expanding the criteria for membership. Upon completion of his term, the NAE had an endowment of $5.2 million, making it a viable financial institution.

To improve the public's understanding of engineering Dr. Perkins funded roundtables, or quick-turnaround studies, that addressed technological topics such as competitiveness in the civil aviation industry, guidelines for reauthorization of the Clean Water Act, and recommendations for improving engineering education. Topics for the symposium held during the annual meeting addressed engineering issues such as the outlook for nuclear power (1979) and genetic engineering (1981) and the long-term effect of technology on employment/unemployment (1983). And a 1978 report, *Technology, Trade, and the US Economy*, by an NRC committee with NAE oversight addressed US industrial competitiveness in a global market.

In recognition of his lifetime of service to Princeton and to his professional world, the university awarded him an honorary doctorate in 2001, the first ever presented to a member of its engineering faculty. And in 2004 he received the Daniel Guggenheim Medal, widely recognized as the highest honor in aviation.

In closing this less-than-adequate professional review, we feel most compelled to testify to the incomparable charm, affability, and humble confidence with which Court pursued and dispatched his panoply of responsibilities. No student, faculty member, staff person, or outside professional colleague ever entered Court's Princeton office to present a report, a problem, an idea, or any other need, however complex, egregious, or preposterous it might appear, that was not greeted with a hearty smile, a personal anecdote or two, a touch of urbane wisdom, and a reliable promise for responsible action. And this sunny and positive disposition so permeated the entire establishment over which he presided, that learning and teaching and creating in his department became fun, and it was a very happy place to be and to flourish.

There is no doubt that his personal radiance not only enhanced his own credibility and effectiveness but also

enabled and inspired many others to propagate their own talents and interests much more productively.

Ave et vale, dear Court. We shall miss you immensely, but your memory is secure.