

## DOCUMENTS OF THE GENERAL FACULTY

**REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR  
C. PHILIP JOHNSON**

The special committee of the General Faculty to prepare a memorial resolution for C. Philip Johnson, professor, civil engineering, has filed with the Secretary of the General Faculty the following report.

John R. Durbin, Secretary  
The General Faculty

**IN MEMORIAM  
C. PHILIP JOHNSON**

Professor C. Philip Johnson died of heart failure on September 10, 1996, at the age of 61. He was born in Golden, Mississippi, and earned civil engineering degrees from Mississippi State (BS) in 1957 and the University of Arkansas (MS) in 1961. He was an assistant professor at the University of Arkansas for two years before earning a PhD from Berkeley in 1968 and returning to the University of Arkansas as an associate professor. His work at Berkeley was one of the first applications of the now well-known finite element method for analyzing thin shells. He joined the civil engineering department at The University of Texas in 1969.

The technical contributions of C. P., as he liked to be called, were mainly in the areas of structural mechanics and computer application. He developed the first undergraduate courses using computer methods in the civil engineering department. At the graduate level, he introduced the first courses in Computer Methods for Structural Analysis, Finite Element Methods, Numerical Methods of Plates and Shells, and Numerical Methods for Finite Elements. His last new courses were Graphical Interfaces for Desk Top Computers and Computer Aided Structural Engineering. He was keenly interested in the use of the digital computer to bring about new or improved ways of solving problems characteristic of the engineering discipline, and much of his professional career was devoted to the development of computer programs to make solutions easier for others. He organized and developed UT Austin's first civil engineering department computer laboratory.

He wrote 19 major computer programs that were developed mainly for students and faculty. The principal ones were SHELL, BASP, FRAME, and OTRC-Riser. His program BASP has had the greatest professional impact, with numerous publications by former students and colleagues that utilized BASP in their solutions. Even though the basic BASP program is over 20 years old, it still is state-of-the-art for buckling problems and is used at many universities for teaching and research. During his last five years, Johnson's research focused on interface design and real-time graphics. Two state-of-the-art workstation approaches for deep-water risers (*OTRC-Riser-91*) and tension leg platforms (*OTRC-TLP-2D93*) were developed with UT copyrights. These software packages are easy to use, yet they are capable of producing real-time graphical simulation of realistic deep-water structures.

In 1972, along with Bob Dunham, Tinsley Oden, and Eric Becker, Philip Johnson founded the Texas Institute of Computational Mechanics (TICOM). TICOM provided a focus for the young faculty and their young discipline. Philip's dedication to the idea that advances in computational methods must be of use in real engineering problems remained a strong influence in the development and growth of TICOM toward its present day guise as the interdisciplinary Texas Institute for Computational and Applied Mathematics (TICAM) research institute and the Computational and Applied Mathematics (CAM) degree program. He is also fondly remembered as the preeminent poker player of TICOM.

Philip's career can best be summarized by the word service. He did little for personal gain. His goal, as stated in one of his annual reports, was to set examples upon which others could build, to direct graduate students toward the cutting edge of computer technology in structural analysis, and to continue to update his classes to reflect new technology as it emerged. He demanded attention to detail by his students and he felt the elegance of a solution was important. He was known to give very interesting problems on examinations, which the faculty called "Philip's problems." They usually involved springs, and were deceptively simple. Many students will remember being stumped by such problems. Philip was mild mannered in most matters, with the possible

exception of UT football and politics. He tested his demeanor by regularly eating hot peppers, which he dearly loved. No pepper could be found that could bring a tear to his eye. Besides his love for computers, reading Stephen King novels and fishing were his hobbies.

C. P. is greatly missed by his wife Carol, their son Craig, a UT graduate and a member of the longhorn band, and the many colleagues, friends, and students at UT who knew him for nearly three decades.

This memorial resolution was prepared by a special committee consisting of Professors Joseph A. Yura (chair) and Eric B. Becker.

Distributed to the Dean of the College of Engineering, the Executive Vice President and Provost, and the President on January 4, 2001. Copies are available on request from the Office of the General Faculty, FAC 22, F9500. This resolution is posted under "Memorials" at: <http://www.utexas.edu/faculty/council/>.