

**MEMORIAL RESOLUTION**  
**ROBERT D. BENT**  
**(December 22, 1928 - January 2, 2011)**

Robert D. Bent, Professor Emeritus of Physics, was born on December 22, 1928 in Cambridge, Massachusetts, and died in Indianapolis, Indiana on January 2, 2011 at age 82. When he was eight years old, he and his family moved to Columbia, Missouri, where his father was a professor of chemistry and dean of the Graduate School at the University of Missouri. Bob began playing the cello in second grade and later on he took up basketball and tennis.

Bob received an AB degree in physics from Oberlin College in 1950 and then went on to study physics at Rice University (then the Rice Institute), receiving the PhD degree in 1954. He remained at Rice as a post-doctoral student in nuclear physics for one year. During his last year in Houston, Bob met Mary Alice Keating, a 1954 Rice graduate, through their shared interest in music (piano and cello). They were married in 1956. Bob spent three years doing post-doctoral work at Columbia University from 1955-1958.

In 1958 Bob joined the physics department at Indiana University as an assistant professor to teach and to do research in experimental nuclear physics at the old cyclotron located in the basement of the original physics building, Swain Hall West. He and his students made measurements of the lifetimes of unstable nuclei, and he continued his analysis of these measurements at Oxford University in 1962-63 with a Guggenheim fellowship. In 1962 Bob was elected a Fellow of the American Physical Society, an honor awarded to about ten percent of the membership.

In the 1960s plans were developed to build a new cyclotron at Indiana University on the north side of the Bloomington campus. Bob helped plan the experimental program, and after the cyclotron was completed in 1975, he carried out important experiments at the new Indiana University Cyclotron Facility (IUCF). One of his specialties was to use the high energy proton beam at the cyclotron to collide with targets of various nuclei to produce "pions" (pi mesons), unstable particles that decay in a tiny fraction of a second. He and his co-workers published more than 60 research articles in refereed physics journals.

Bob was promoted to associate professor in 1962 and to full professor in 1966. He retired in 1996. In 1983-84 he was associate director of the Indiana University Cyclotron Facility. After his retirement, he was the Roger Newton Professor at the Indiana University Institute for Advanced Study for three years.

Bob was an innovative teacher and especially enjoyed teaching students who did not major in physics. He helped develop a course in sound at the request of the dean of the School of Music. He also taught several courses related to environmental issues connected with our use of energy. His teaching on the environment led to his developing a research interest in this

subject. He continued this effort at the IU Institute for Advanced Studies, where he developed the materials for a book (eventually published in 2002) with co-editors Lloyd Orr (Economics) and Randall Baker (SPEA) entitled *Energy: Science, Policy, and the Pursuit of Sustainability*. For several years, he also served on the Sustainability Commission of the City of Bloomington.

Bob had a lifelong interest in music and tennis. He continued to play the cello and to engage in competitive tennis for many years. A cellist from childhood, he played in string quartets, small ensembles, and large orchestras, including the Bloomington Symphony Orchestra (playing cello in both the first and fortieth concert seasons). He played tennis on his high school team, on the varsity team of Oberlin College, and in a large number of local Bloomington age-group tournaments

During his early college years, Bob and his family and a few friends built a traditional, Scandinavian-style log cabin in the north woods of Minnesota. He and his family used this location for relaxation and renewal for more than sixty years. After his retirement, Bob recorded this adventure in a book created from letters, pictures and family memoirs.

Bob is survived by his wife Mary (Keating) Bent of Bloomington, a daughter, Lisa Scott (and husband, Perry Scott) of Indianapolis, two sons, Jason (and wife, Erica Duke) of Anchorage, Alaska, and Alan (and wife, Amanda) of Fairbanks, Alaska, and his brother, Henry A. Bent (and wife, Anne) of Pittsburgh, Pennsylvania.

In memory of Bob Bent's creative work in nuclear and environmental physics, be it resolved that this memorial resolution become part of the minutes of the Indiana University Faculty Council and that copies of it be sent to members of Bob's family.

Andrew Bacher  
Don Lichtenberg  
Professors Emeriti in the Department of Physics