

Gerald “Jerry” Payne

Gerald (Jerry) L Payne, Professor Emeritus, passed away on April 23, 2026. Jerry was born on March 11, 1938, in Columbus, Ohio. He received his B.S. and M.S. degrees in Physics from the Ohio State University in 1961. After graduation he served for one year as an Electronics Officer in the U. S. Navy on the U.S.S Parsons. Following sea duty, he was an instructor at the U.S. Navy Post Graduate School in Monterey, CA, where he met his future wife, Candia Draves Payne. In 1964 Jerry started graduate school at the University of California, San Diego, and earned his Ph.D. in 1967. Following his graduation, Jerry had a two-year post-doctoral research position with the nuclear theory group at the University of Maryland. He joined the faculty of Department of Physics at the University of Iowa in 1969, where he remained until his retirement. Jerry was named a Fellow of the American Physical Society in 1996 and an inaugural APS outstanding referee in 2008. Jerry and Candy raised their three daughters, Tracy, Lucy and Beth in Iowa City.

In 1975 Jerry spent a sabbatical at the Los Alamos National Laboratory where he started a long collaboration with staff members, Jim Friar and Ben Gibson. Jerry’s research in nuclear physics was on the quantum mechanical three-body problem. The three-body problem serves as a laboratory for testing realistic nucleon-nucleon interactions. In the early 1960’s L.D. Faddeev reformulated the three-body Schrödinger equation in a form that incorporated the correct boundary conditions for scattering, however the equations were too complicated for the computers of the 1960’s. Jerry was one of the first physicists to solve the three-body problem with realistic interactions. Due to his collaboration with Jim and Ben he had access to the state-of-the-art computational facilities at Los Alamos. Three-body calculations with realistic nucleon-nucleon interactions are sufficiently complicated that the only way to test them is to compare calculations with the same interactions using different numerical methods. Initially there were several groups in the world using different methods to get benchmark solutions to the three-body problem. Jerry’s calculations were known to be the gold standard among these groups. His research was supported by the Department of Energy until his retirement. He had over 100 publications at the time of his retirement.

In 1977 Jerry considered leaving the academic world and took a leave of absence to work as a research scientist at the Lockheed Palo Alto Research Laboratory, doing plasma physics research. Encouraged by Jim Van Allen, he returned to the University of Iowa the following year. He remained a consultant at Lockheed until 1987 and continued doing research with the Iowa plasma physics group. Jerry was happy to return to Iowa and began his impactful collaboration with Ben and Jim, which is referred to in the nuclear physics community as the “Iowa-Los Alamos group”.

In the Fall semester of 1991 Dwight Nicholson, the Department Chair, two other faculty members and one graduate student were shot and killed. Dwight took care of most of the details of running the department. After the shooting, in addition to dealing with the impact on the Department's faculty, staff and students, there was very little institutional memory of how the department functioned. Jerry stepped in with the support of the faculty and provided the leadership that was needed to shepherd the department through this difficult period. He was appointed interim chair 5 days after the shooting and was appointed DEO of the department during the following year. He remained DEO until he stepped down in 1997.

Jerry was a popular instructor. He enjoyed teaching. He had a dry sense of humor that enamored him to his students. He continued teaching while he was department chair. Jerry mentored six Ph.D. students, and several M.S. and undergraduate research students.