



IN MEMORIAM

John Stacy De Groot
Professor of Department of Applied Science
UC Davis
1934 – 2007

John S. De Groot, Professor Emeritus of Applied Science at the University of California, Davis, was born in 1934. He died from complications of liver cancer on January 16, 2007 at the age of 72. From UCLA, John received his bachelor's degree in physics in 1959, his master's degree in 1964, and his doctorate in 1967. He taught briefly at UCLA before joining UC Davis as an assistant professor in the Department of Applied Science in 1969, and remained at UCD retiring as professor in 1994.

There were three distinguishing traits that guided John's life: First, his unbridled enthusiasm for science; second, his unflinching faith in the quality and aspirations of his students, and finally his unbounded optimism to succeed in everything that he undertook.

John had a driving passion for science his whole life. He was president of the science club at his high school in Los Angeles and spent countless hours drawing detailed designs of rockets and other scientific creations. He obtained his Ph.D. degree in physics from UCLA, where he contributed to new discoveries in plasma physics. Several journal and magazine articles were written about him over the years. John often said he was the luckiest man on earth because he loved his work so much.

The most enduring aspect of John's enthusiasm for science was his passionate belief in fusion energy. John Nuckolls, Director Emeritus of LLNL said this, "I was inspired by John's energy and enthusiasm, his intelligence and creativity, his deep professional commitments to the mastery of fusion, to his students, and to the University of California. In the early 1970s, John made a unique contribution to creating X Division — one of the world's leading inertial fusion science groups. ... X Division's revolutionary ideas, scientific progress, and supercomputer calculations catalyzed global efforts on inertial fusion. Hundreds of Livermore engineers and scientists developed the world's most powerful fusion lasers — including SHIVA and then NOVA."

John was a well-loved professor, deeply appreciated by students and faculty alike for his talent and passion for teaching, as well as his open heartedness and generosity towards anyone who came into his path. His physics lectures were spiced with his wit and wonderful sense of humor, and he turned a lot of people on to the joy of science.

From a former student's perspective, John was a unique mentor and advisor. As for being a master motivator, Dr. Rick Spielman, who as an undergraduate was interviewing at various universities for potential graduate work, said, "I saw immediately that John was very different from the other physics professors I had met. First, he cared deeply about the field of plasma physics; second, he was truly concerned about his students; and lastly he had a level of exuberant enthusiasm and optimism for science, history, and life that was remarkable."

Dr. Spielman subsequently chose John De Groot as his advisor, and remembers John fondly, “John was that unique academic advisor who rarely told you what to do but instead had you convince him what you already knew you should do. Those conversations were very educational for me and were a major part of the growing up that students have to do. Even with his busy life he was always available to his students. His door was usually open for everyone. I do not know how he got his academic work done given the line of students that was usually outside his door. It is worth repeating that John was exuberantly enthusiastic about everything. He would often say in a loud voice (usually jumping up and down) – ‘great, fantastic, let’s do it’. This enthusiasm infected all of us and provided the defining trademark of all of his students.”

He formally retired in 1994, but was recalled in 1999, to serve as Vice- Chair of the Department of Applied Science from 1999 to 2001. During this time, John worked closely with Professor Richard Freeman, then Chair of the Department of Applied Science, to establish the undergraduate program in Optical Science and Engineering, which began accepting students in 2000. John was also instrumental in the initial phase of the establishment of the undergraduate program, Computational Applied Science, which opened in 2002. Throughout this phase, it is the fortitude and optimism that John displayed, time and time again, in front of myriads of committee reviews and potential industrial affiliates that unified the sense of the departmental commitment to become full- fledged UC Davis department, offering both undergraduate and graduate educational options to its students.

After returning to emeritus status in 2002, John continued part- time research aimed at harnessing the vast power of thermonuclear fusion, the process that powers the sun and other stars, for power generation. He carried out research at the Lawrence Livermore National Laboratory and the Sandia National Laboratory in Albuquerque, N.M., and collaborated with other fusion researchers in the U.S. and around the world. “John De Groot devoted a major part of his professional career to one of the most difficult and most important challenges of our age — the quest for fusion energy; creating on earth the energy source of the sun and stars.” John Nuckolls said. At this juncture, the National Ignition Facility is just coming into its own, John’s goals are already far beyond that. “... the horizons of John De Groot’s imagination were far beyond ignition. We discussed his work on direct conversion schemes to enhance the efficiency of future fusion power plants.” He continued his work, consulting and speaking around the country, and was always at work on one interesting project or another. Most recently, he was at work on a documentary based on his extensive research on the topic of fusion energy, harnessing the vast power of thermonuclear fusion, the process that powers the sun and other stars, for power generation. He began writing the documentary titled, “Fusion: Energy Independence, Freedom from Oil,” with his daughter, Rachael, who plans to finish it.

Beyond all of these attributes, John De Groot was a devoted family man. John loved to camp and hike. He traveled often with his family, including trips across the country and to Europe. John took his family camping to practically all of the national campsites in the western United States, stopping at virtually every historical monument or point of interest a long the way. In their later years, he and his wife, Nancy, who preceded him in death, nurtured a love of nature with frequent trips to the ocean and forests.

John is a unique and beloved man. He will be missed by all; especially his family, which consists of his son, Anthony, and his daughter, Rachael, and their families.

Richard R. Freeman, Ph.D.
Professor Emeritus, University of California, Davis
Dean, School of Mathematical and Physical Sciences
Ohio State University,
Columbus, OH

Richard Spielman, Ph.D.
Vice President - Pulse Power
Ktech Corporation
Albuquerque, NM

Yin Yeh, Ph.D. (Chair of committee)
Professor, Department of Applied Science
University of California, Davis
Davis, CA