



IN MEMORIAM

Gordon John VanDalen
Professor of Physics
UC Riverside
1951 – 2009

Emeritus Professor of Physics Gordon VanDalen passed away April 30, 2009, following a long illness. Gordon will be remembered for his many roles at UCR: undergraduate student, graduate student, postdoc, professor, department chair, and associate dean. He was well known for his extraordinary service to the University and his dedication to teaching and to his students. He was presented with the UCR Distinguished Teaching Award in 1994 and was elected a Fellow of the American Association for the Advancement of Science. He was a versatile physicist who made important contributions to many areas of experimental high energy physics.

Born in Tokyo in 1951, where his father – a chief warrant officer in the air force – was stationed, Gordon and his family subsequently moved to Germany, Texas and northern California to accommodate military assignments. They settled in the Inland Empire after Gordon's father was transferred to Norton Air Force Base. Gordon graduated from Pacific High School in San Bernardino, from where it was a short move to UCR for college.

Gordon earned his bachelor's degree in 1974, having been a Phi Beta Kappa scholar. He matriculated in the UCR physics graduate program. His thesis advisor was Emeritus Professor of Physics Anne Kernan. The topic of his thesis was a study of charm meson production at the Intersecting Storage Rings at the CERN laboratory in Geneva Switzerland, which was the world's first proton- proton collider.

After obtaining his Ph.D. in 1978, Gordon turned down job offers at Fermilab and elsewhere, instead choosing to stay in Riverside with Anne Kernan's group. In 1982, he was appointed assistant professor in the UCR Department of Physics. He joined the nascent UCR program in heavy ion physics, studying the properties of relativistic nuclear collisions using data samples collected at the Berkeley Bevalac. Concurrently, he developed an interest in electron- positron scattering, becoming a member of the Time Projection Chamber (TPC) Collaboration at the Stanford Linear Accelerator Center (now the SLAC National Accelerator Laboratory). Gordon played a prominent role in the TPC computing and offline software efforts and became an expert in the physics of virtual photon- photon scattering. He was promoted to full professor in 1989.

Gordon joined the 330- person- strong OPAL Collaboration at CERN in the mid 1980's to study electron-positron annihilations at the highest available energies. He spent a sabbatical year at CERN in 1990, during the experiment's initial year of data collection, to serve not only as the experiment's first offline computer manager but also as its initial Deputy Physics Coordinator. In the latter role, he was a principal architect of the early OPAL physics results. Gordon played a key role in the measurement of the mass and width of the Z boson – a central goal of the OPAL physics program – and later became a leader in OPAL studies of the tau lepton.

Gordon had long been fascinated by neutrinos, which are almost massless particles that interact weakly, and in the possibility that neutrinos might oscillate between the three known species. In latter part of the 1990's he

joined the Liquid Scintillator Neutrino Detector experiment at the Los Alamos National Laboratory to search for evidence of neutrino oscillations in an accelerator environment. Indeed, he and his collaborators observed a signal consistent with neutrino oscillations. The results were controversial, however, because – to be consistent with other data – they required more than three light neutrino species. Gordon pursued this interest, contributing to the early stages of a follow- up experiment called MiniBooNE. He then turned to neutrino-electron scattering at the Spallation Neutron Source at Oak Ridge National Laboratory, contributing ideas and suggesting methods to determine electroweak parameters and search for exotic physical processes.

On campus, Gordon served as the Associate Dean for Physical Sciences in the College of Natural and Agricultural Sciences from 1990 to 1993. He was chair of the Department of Physics in 1994-1995. Gordon was devoted to teaching excellence, and almost single- handedly revised the lower- division physics curriculum and laboratories. His revisions and innovations proved to be very effective and are still in use today.

Due to illness, Gordon retired from the University in 2003, moving to Prescott, Arizona, where he kept his interests in physics and teaching active by taking a one- dollar- per- year position at Embry- Riddle Aeronautical University. True to form, Gordon devoted his time to mentoring undergraduates and pursuing new scientific interests, this time in space physics and the use of antiprotons for cancer treatment.

Gordon will be remembered as a versatile, erudite scientist and humanist endowed with charm and humility. He had wide- ranging interests, a devious sense of humor, and many friends. He is sorely missed. He is survived by his wife Carol, his two sons John and Stephen and their spouses, and one grandchild.

Bill Gary (chair)
Sun- Yiu Fung
Steve Wimpenny
Jose Wudka
UCR Department of Physics and Astronomy