

In Memoriam: Glen Langdon

To: UCSC Community

From: J.J. Garcia-Luna-Aceves and Patrick Mantey, Department of Computer Engineering

March 27, 2014



We are saddened by the death earlier this month of our colleague and friend Glen Langdon, professor emeritus of computer engineering.

Glen's professional experience included a distinguished career in industrial research as well as an outstanding career in academia. He started with IBM in New York, where his work led to journal publications in computer architecture. In 1974, he transferred to IBM's Research Division in San Jose. During his years there, Glen and a colleague were pioneers in data compression, inventing arithmetic coding. He was awarded 18 U.S. patents and wrote a book on "Logic Design" published in 1974. While at IBM, Glen taught for several years at Santa Clara University in their "early bird" graduate program in electrical engineering, and he earned a reputation there as an outstanding teacher. He wrote a book on "Computer Design" published in 1982, and in 1984-85 he taught (with Professor Michael Flynn) a graduate course in computer architecture at Stanford University using the new book.

Glen's commitment to education was underscored by his service as co-chair of the committee that developed the "Model Curriculum in Computer Science and Engineering" published by the IEEE in 1984. This is the model we followed in creating the computer engineering program here at UC Santa Cruz, and Glen served as an advisor to us in those first few years as we developed our program. He also served as a member of accreditation teams evaluating programs in computer engineering for ABET. His other academic contributions included stints as a visiting faculty member in Brazil. Some regard Glen as the father of the computer industry in Brazil, as their first computer (known as the "ugly duckling") was built by his students there and led to the Scopus computer company.

Glen was honored with election as an IEEE Fellow in 1986 "for contributions to the Brazilian computer industry, computer design education, and data compression coding algorithms."

Glen took early retirement from IBM in 1987 (though still consulting with IBM Research) and came full time to academia, joining the new Computer Engineering Department at UCSC, which had admitted its first students in the fall of 1984. As a member of the Computer Engineering Department, Glen helped develop and teach both undergraduate and graduate classes. He was always a champion of student interests and was very highly respected by, and close to, his graduate students. He was advisor for the first Ph.D. awarded in Computer

Engineering at UCSC, in 1992, and over the next ten years he directed seven more Ph.D.s, as well as several M.S. graduates. Glen retired from UC Santa Cruz in 2003.

Glen George Langdon, Jr.

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Resident of Aptos

Glen Langdon passed away peacefully on March 11, at the age of 77. He is survived by Marian, his wife of 50 years, his daughter Karen Hull (Chris), grandchildren Andrew and Melanie, his brother Bob (Mary) and his nephew Robert Glen. Glen was born on June 30, 1936, in Morristown New Jersey. When he was nine years old, the family moved to São Paulo Brazil, and Glen attended the American school there from 5th through 11th grade. He graduated from Clarkston High School in Washington and obtained his degree in Electrical Engineering from Washington State University. After two years as an Army Lieutenant at Fort Huachuca AZ, he resumed a career in Pittsburgh PA with Westinghouse.

There he re-met Marian, who had also lived in São Paulo. Their first date overlooking Pittsburgh's "Golden Triangle" began a 2 ½ year courtship. They were married in 1963, just after Glen completed his Masters at the University of Pittsburgh. The two moved to Endicott, NY, where both were hired by IBM. While there, Glen took courses toward a Ph.D. in Computer Engineering from Syracuse University.

Glen accepted a special 18-month assignment to teach a group of gifted students at the Escola Politécnica in São Paulo, and the family moved back to Brazil in February 1971. Under his guidance, the students developed and built the first completely Brazilian computer, the "Patinho Feio" (Ugly Duckling).

In 1974, Glen transferred to IBM's Research Division in San Jose CA. During his years at IBM, Glen and a colleague were pioneers in data compression, inventing arithmetic coding. Over his career, he was awarded eighteen US Patents in computer architecture and data compression, and was the author of two computer engineering books, one translated into Portuguese. He was also active in engineering education, and taught at Santa Clara University in their "Early Bird" graduate program in the mid 70s and 80s. He was co-chair of the committee that developed the "Model Curriculum in Computer Science and Engineering", published by the Institute of Electrical and Electronic Engineers (IEEE) in 1984. Glen was honored with election to IEEE Fellow in 1986 "For contributions to the Brazilian computer industry, computer design education, and data compression coding algorithms."

Glen took early retirement from IBM in 1987 and went full time to academia, joining the new Computer Engineering Department at UCSC, whose curriculum he was helping to shape. Glen and Marian built their home in Aptos and moved from San Jose in 1990. Glen was both program and overall chair of two Computer conferences, sponsored by the IEEE. An outstanding professor, Glen was honored at UCSC by the creation of the "Glen Langdon Endowed Prize", for incoming graduate students with IEEE affiliation. His graduate students knew him as warm and inviting as he guided them through their Master's and PhD studies. Marian has received letters from former colleagues and students praising Glen's patience, generosity and friendship as well as his exceptional engineering competence. He retired from UCSC in 2003.

Glen had a great sense of humor. He loved a good pun, and enjoyed jokes that used his Portuguese. He was a generous, loving, and protective father to his daughter and joyful grandfather to his grandchildren. The couple enjoyed sailing in upstate New York and in Santa

Cruz, and Glen joined Marian's tennis doubles foursome whenever a sub was needed. They participated in two lively wine-tasting groups, shared annual get-togethers with friends at Monterey Dunes, and were regular attendants of Shakespeare Santa Cruz and Cabrillo College productions. Travel included a cross-country road trip in 1992 from Maryland, where Glen had a summer stint at NASA Goddard, across eastern USA and western Canada. There were frequent visits with Karen and family in Washington State. They enjoyed several cruises, trips to England, Scotland and Portugal, and later, to Italy with Karen and Chris. Glen and Marian celebrated their silver anniversary with Marian's relatives in Australia and were twice in Christchurch, New Zealand, when Glen was on an Erskine Fellowship at the University of Canterbury.

A few years ago, Glen was diagnosed with dementia, but his generosity and friendship will long be remembered. The volunteers and staff at Cindy's Celebrations brightened Glen's Tuesdays for over a year. Since 2007, Glen has been in a long-term care facility in Redwood City. We appreciate the care he received at Lakeview Lodge, more recently from Hospice Vitas, and for our amazingly understanding neighbors and friends.

Plans for a summer celebration of Glen's life are in the planning stages. If you wish, donations may be made payable to UCSC with "Glen Langdon Endowed Prize" in the memo portion and sent to UC Santa Cruz, 1156 High Street UR, Santa Cruz CA 95064; to the [Alzheimer's Association](#) , 1777A Capitola Road, Santa Cruz CA 95062; or to a [charity of your choice](#) .