

My connection to software development started during my tenure at the Department of Electrical Engineering at Universidad Tecnica del Estado, Valdivia, Chile, after graduation with a BS in Electrical Engineering in 1973. In 1976, I founded, together with university colleagues "Informatica Sur," a computer service company dedicated to train technical people in coding and algorithm development in Southern Chile. It was my first encounter with IBM-360, that was the standard computer system in business and academia in Chile, at that time. The company did not survive, when I left Chile for a MS degree in Louisiana Tech University, Ruston Louisiana. During my Ph.D. years at Washington University in St. Louis, Missouri, I was involved in computer simulation, working with another big IBM machine. My dissertation was "Robot Modelling and Feedback Control," it was a big challenge to develop as mathematical dynamic model and simulate it in a computer. I remember developing thousands of lines of code in Fortran, plus the work of punching the cards to feed the computer and produce the simulation of the algorithm for the robot model and their control strategies. In 1986, I accepted an offer in one university in Puerto Rico, Universidad Inter-American in San German, and additionally worked for the industrial sector as a consultant in robotics and automation for the pharmaceutical industry, designing vision systems and training engineers in high automation and expert system technology. In the academia, I organized the IEEE Student Computer Chapter as part of the IEEE Western Puerto Rico Section, where I was the Chairman. In 1998, I accepted a position of researcher at Universidad Metropolitana, in San Juan, Puerto Rico, where I was the Director and Principal Investigator of several NSF funded projects, Model Institutions for Excellence (MIE), Caribbean Computing Center for Excellence (CCCE), AGMUS Institute of Mathematics, among others. With these grants, we impacted thousands of economically disadvantage students from across Puerto Rico and US Virgin Islands, since the CCCE was a multi campus initiative (University of Puerto Rico, Mayaguez, Humacao, Bayamon), Inter American University (San German, Metro), Polytechnic University, Universidad del Turabo, Universidad del Este and Universidad Metropolitana). We used early research experiences to motivate students to select science, technology, engineering, mathematics, and computer science (STEM-C) fields, as their majors in college and graduate school. A network of research mentors was implemented to place scholars of NSF grants in the US mainland, the Americas, Europe, Asia, Africa and Oceania. Early in 2000 we started sending students to the Richard Tapia Annual Conference. It has been as tradition for the computer science and computer engineering majors of my mentoring group to apply for the Richard Tapia Annual Conference. The MIE and CCCE ended and we do not have funding to support students travelling any longer. Our scholars are reaching BS, MS and Ph.D. status, and Richard Tapia Annual Conference had made a great contribution to their success. Since 2018, I am full time in my foundation, Scientific Caribbean Foundation, dedicate to continue mentoring and support economically disadvantage students in STEM-C fields.