Dr. Gearold Johnson’s influential, wide-ranging career in Colorado State University’s Engineering department has been guided by a simple principle: do whatever you have to do solve a problem, be that problem becoming an aeronautical engineer, using solar energy to power buildings, or inspiring generations of future engineers.

Born on January 11, 1940, Johnson grew up in Des Moines, IA, building model airplanes, reading books, and delivering newspapers. His interest in science and engineering came from these early passions. His parents didn’t understand his wanting to go to college, but his vision of himself as an aeronautical engineer was too strong to be denied. He attended Purdue University starting in 1958, paying his way with his savings. After five semesters, he was forced to leave the university because his money ran out. “So I hitchhiked to Los Angeles and lived on the beach while I tried to find a job,” he says.

He worked odd jobs at Capitol Records in LA to make enough to go back to Purdue and turned down the company’s offer to come back post-graduation, saying “I had to go become an aeronautical engineer for a little while first.” After finishing his Bachelor’s degree in aeronautical engineering, he did just that, working for Boeing on the Apollo project that put a man on the moon. As momentous as the moon landing was, Johnson had the sense that “we had nothing to do after we did that … so that led me, in effect, to start trying to decide about my own future … because I didn’t think I had a future in aerospace at that point.” He returned to Purdue to earn his Master’s and PhD degrees in mechanical engineering.

In 1970, Gerry began a postdoc fellowship through NATO. He continued doing his doctoral work which consisted of computational studies of fluids. In Brussels, where the lab was located, he met Lionel Baldwin, the Dean of Engineering at Colorado State University, who was there on sabbatical. After working together, Baldwin offered him a job at CSU when he returned to the States. “They created a position for me in the computer center,” he explains, where he helped manage the one computer on campus. “I was really a modeler, in a sense. My PhD work was in computational fluid dynamics, but it was really modeling. I was a very early computer user.” During his second year, he started teaching mechanical engineering courses for a professor that went on sabbatical, and then in 1973 he was hired as an assistant professor.

On campus, Johnson was a multifaceted figure. “There’s no place you can put your finger and say, that’s what I did,” he says with a laugh. He was involved with the solar program, “modeling for heating and air conditioning of buildings using solar as the energy source,” and became involved in to the computer science department, to the point that “essentially, over time, I evolved into a computer scientist.” His published work covers a range of topics, from atmospheric science to electrical engineering to science policy and education.

He decided that international work should be an integral part of an academic career, so he helped found a micro-computing organization called Euromicro and an international conference called Computing Frontiers. He is proud of the conference for doing unusual things, like publishing failed experiments, “because, as an engineer, I very strongly believe we learn more from our mistakes than our successes. And almost no organization will publish articles that don’t work.” He worked at Milan Polytechnic in Italy and was an advisor on engineering education to the Director General of UNESCO for 10 years. He also coached youth soccer. Despite all of these accomplishments, he asserts, “My whole career revolves around the students. I think that’s all any university is about.”
Johnson cherished the role of teacher and advisor. The greatest reward of his illustrious career? “Commencement. I love commencement. It’s a time of happiness and joy. And you see the fruits of your labor.” He advised 11 PhDs and over 65 Master’s students, and even after retiring, he returned to co-teach an introductory engineering course, helping to change the perspective of what an engineer does. “Engineering in a sense has been turned upside down from the 20th century,” he explains. “Engineers have got to become a lot more social. They’ve got to understand societal issues – economics, political science, religion, culture, things that most engineers have absolutely no interest in.” They modeled the class on getting students interested in these things and received reports from advisors that the class produced “the most excited engineering students they’ve ever met.”

In his 23 years (plus a few after retirement) with the CSU Engineering department, Johnson has passed down his engineering philosophy, arguing that it is something more than just an applied science, “that engineers will use anything they have to to solve a problem. I tell my freshman students, if voodoo works, use it. You can’t wait for science.” “Science,” he says, “is about understanding the universe. And the universe in engineering is about creating a better tomorrow.”