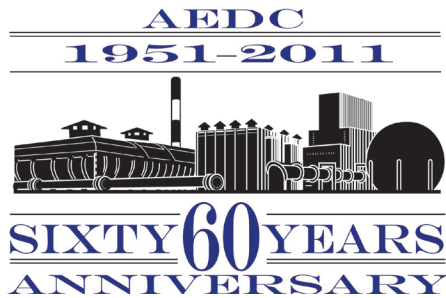


# AEDC Fellow reflects on 60 years of history



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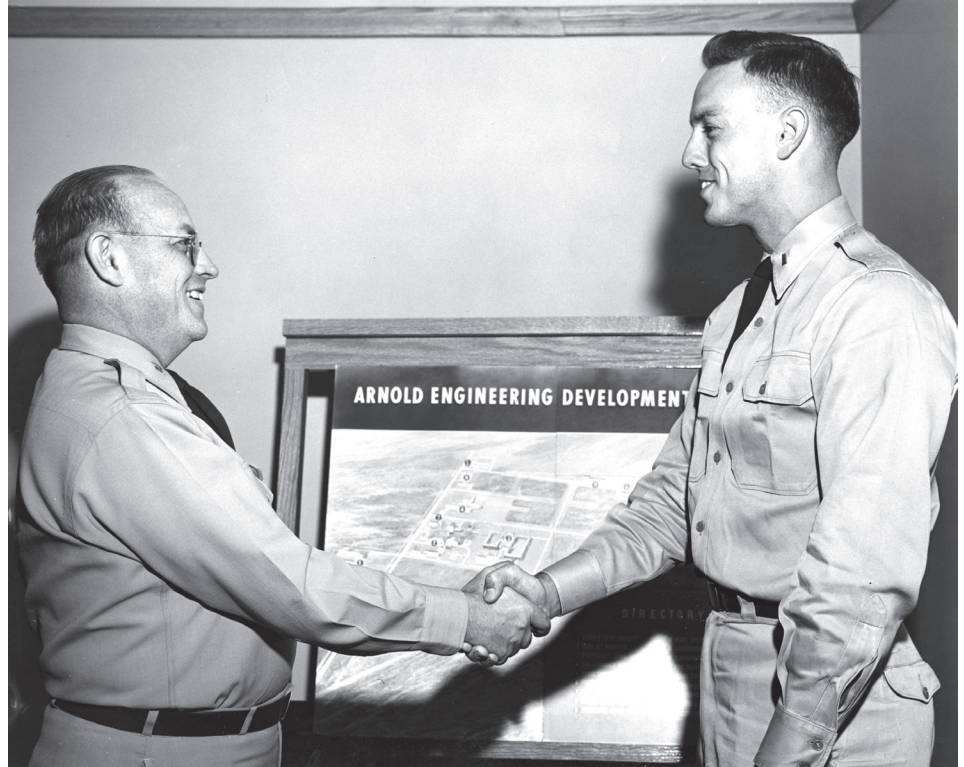
In 1989, Dr. James G. Mitchell became one of the first Arnold Engineering Development Center employees to be recognized by the AEDC Fellows program. This program had been established to recognize people who have made exceptionally distinguished contributions to the center's flight testing mission.

Dr. Mitchell grew up in Luverne, a small farming community in southern Alabama and later helped out in the country store his father managed. Even as he began his senior year in high school, a career in engineering, or any other field, was not something he had ever considered.

"I had no idea what I wanted to do for a living growing up," he said. "I only knew two things I didn't want to do. I didn't want to be a farmer and I didn't want to run the country store."

Shortly after World War II ended, great concern was already building in the nation about the Soviet Union's military build-up.

"Our military at that time was anticipating conflict right then with the Soviet Union," he recalled. "In my senior year in high school, some government man came through and gave a talk to our small class. He said that if you're really good in math and physics and science that you owed it to your country to be-



**AEDC Vice Commander Col. William L. McCulla, shakes the hand of Lt. James Mitchell, after pinning the junior officer with his 1st lieutenant bars in 1955. (AEDC File Photo)**

come an aeronautical engineer.

"Since I was a good Boy Scout and a patriot, I said, 'well, that sounds like a pretty good idea.'"

Dr. Mitchell, who has always considered himself a risk taker, said from that moment on, he never looked back nor questioned his decision.

Dr. Mitchell came to AEDC in 1953 to work as an engineering aide the summer before graduating from Auburn. Working with some of the brightest engineers on a state-of-the-art ground testing complex during its early years left an indelible impression on a man determined to find his place in their world.

Describing his first impressions of AEDC, he said, "I loved it; everybody loved it. We had the world's best test complex and resources. At Arnold Center, all of us who worked there had a chance to produce data

and information that nobody else could produce. You were welcome to give papers anywhere because, when you went to international meetings, you were right on top of the list there with your information and what you could do.

"So, I was very fortunate in riding the crest of the aerospace wave in this country, starting in the early 1950s. You got on that wave, we did not have a resource problem and it was a great place to work and a great time to work in this business."

Before and during his college career, the Korean War was underway.

"I graduated from Auburn on a Thursday, March 1954, and they handed me my lieutenant bars and my bachelor's degree within an hour of each other," Dr. Mitchell said, who had enrolled in the school's ROTC program. "And the following Monday I am at an Air Force

base [Wright –Patterson AFB] just that quick.”

Originally, Dr. Mitchell planned on going into the Air Force as a career and fly.

“The Air Force also had something going right then, every officer was going to fly an airplane,” he said. “Well, at that age, that sounded great. I flew little light aircraft around the college town, Piper Cubs. The idea of them paying me to fly a jet sounded like the most wonderful thing in the world.

“Not knowing that you had to be on active duty a certain number of years before you applied to go, I went back and found some papers well before I even graduated or was commissioned and applied to go to graduate school.”

Shortly after earning his master’s degree in aeronautical engineering from the Air Force Institute of Technology, Dr. Mitchell, found that a career in the Air Force was not to be.

As the Korean War was winding down, the Air Force was not actively pursuing anyone to become a pilot.

“So, having been so nice to waive all the requirements before, I applied to go to flight school and the word I got back was no, you have to put in three years payback for the year and half schooling you got which puts you two or three months over the age of 25 which is the limit for going to flight school,” he recalled. “And I said OK guys; you’ve convinced me that you don’t want me in the Air Force.”

Dr. Mitchell, who had returned to AEDC in 1955, took off his uniform in 1957. Then he began to look for a job in the civilian sector, but he wanted to remain at AEDC if possible.

“I got offered a job in the Engine Test Facility and Gas Dynamics Fa-



**A more recent photo shows AEDC Fellow Dr. James Mitchell and his wife, Lou Ann, attending a charity event in Tullahoma. (Photo provided)**

cility,” he said. “Arnold Center offered me what I considered the most interesting job.”

Dr. Mitchell began his civilian AEDC career at the von Kármán Gas Dynamics Facility, as a test engineer in tunnel B.

“The initial facilities were, of course all this support stuff, but that goes without saying. But the Engine Test Facility, the basic engine test facility, those cells have now been closed, the T-cells. The von Kármán facility, with its Tunnels A, B and C, were, still are, uniquely qualified.

“Nobody else has supersonic and hypersonic tunnels of that size that run on a continuous basis. They were great opportunities. Propulsion wind tunnels 16S and 16T were and still are unique. Nobody else has a 16-foot transonic tunnel and it’s probably one of the busier tunnels AEDC has still.”

After two years into his career at AEDC, Dr. Mitchell said he made an important discovery.

“I found out something as a test engineer and found out a lot about

myself,” he said. “I was working in Tunnel B. We ran on the second shift, always. Found out two things, I didn’t want to spend my life working the second shift. I never saw my young kids. When they were home, I was asleep. When I was awake, they were in school. The other thing I found out was I only knew what was going on in my tunnel and the test I was running. I found out that my interest was much broader than that. I wanted to know what was going on everywhere and have an input into it if I could.”

Dr. Mitchell, who retired in 1988 as the center’s chief scientist, said he more than fulfilled his goal of having an impact on AEDC as a whole. He recently reflected on what impact AEDC has had on the nation.

“AEDC’s legacy is making possible some of our best weapon systems over the past 50 years,” he said. “We can point out example after example of where the testing data we have taken at AEDC has permitted things to be built that probably