

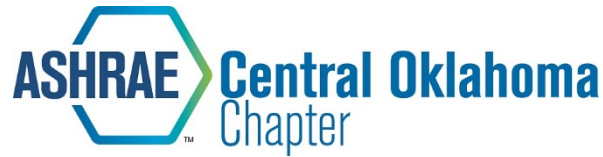
Hall of Fame: Dr. Faye McQuiston

In last month's chapter newsletter, I wrote about our chapter Hall of Fame that began in 1992 with the inaugural inductee, William J. "Bill" Collins, Jr., followed by Louis C. Nettleship the next year, then Bobbie Vermillion, Faye McQuiston, and Harry Rountree, all inducted in 1994. I then dedicated the article to a short biography of Harry Rountree. This month's article highlights Dr. Faye McQuiston; his personal history and his significant contributions to Oklahoma education, ASHRAE, and the HVAC industry globally.

Faye Clem McQuiston was born on January 23, 1928, in Noble County in the Sumner community near Perry, Oklahoma. His parents, Beryl Faye McQuiston and Irene Josie (Tillman) McQuiston, were sharecroppers and ranchers. He was raised on the farm and attended a small, one-room school named Windy Center located about 10 miles east of Perry. After graduating from Sumner High School in 1945, he entered Oklahoma A&M College in the fall of 1945 on the advice of his Uncle Keith McQuiston, with little idea of what to expect. After two years of having a good time but with a dismal record, he left that endeavor to assist an uncle with an equipment sales business, transporting farm equipment from Oklahoma to Nebraska and other northern states. Later, he worked as a salesclerk for the Western Auto store in Perry. With the Korean Conflict looming, he entered the United States Army in the fall of 1950. After basic training, where his ROTC instruction from Oklahoma A&M College paid off, he served with an Explosive Ordnance Disposal Squad at Aberdeen Proving Grounds, Maryland, until he entered Engineering Officers Candidate School (OCS) at Ft. Belvoir, Virginia, as a Staff Sergeant. Following graduation from OCS as a Second Lieutenant, he served in a training unit at Ft. Leonard Wood, Missouri, for a time before going to Korea. In Korea, he served in the 622nd Engineering Field Maintenance Company, responsible for heavy maintenance on large earthmoving equipment. While there, he became the Commanding Officer of the unit. Upon rotation back to the United States, he became the Post Engineering Field Maintenance Officer at Ft. Leonard Wood until his discharge on August 15, 1955. He was quite proud of his military service and credited it with laying a sound foundation for his professional career.

Faye met Helen Webb Whitmore while serving in the Army at Ft. Leonard Wood. They were married in the post chapel on August 16, 1955, the day after his release from active duty. They then left for Stillwater, Oklahoma, where he reentered Oklahoma A&M College, which would change names to Oklahoma State University two years later. With the help of Helen working and the GI Bill, he became an honor student, graduating from OSU with a Bachelor's of Science Degree in 1958 and a Master's Degree in 1959, both in Mechanical Engineering. They moved to Ft. Worth, Texas, in 1959 where he was employed as an Engineer by General Dynamics Corporation and in 1961, moved to Arlington, Texas, where he was employed as a Research Scientist by Chance Vought Corporation, later becoming Ling-Temco-Vought Corporation. While there, he taught at night at Arlington State University. The lure of a teaching position brought him back to OSU in 1962. In 1967, Faye was granted a National Foundation Faculty Fellowship to attend Purdue University, West Lafayette, Indiana, to pursue his PhD, graduating in 1970. The family returned to OSU in the fall of 1969, and Dr. McQuiston continued his tenure at OSU for the remainder of his career.

During Faye's second stint at Oklahoma State, from 1955 to 1959, he took a course taught by Bob Irwin, an Oklahoma Chapter ASHAE member and a part-time instructor in the School of Mechanical Engineering. The "art and science" was very antiquated at that time, and the textbook Professor Irwin used focused mainly on steam heating. Little did Faye know at the time, but in about 20 years, he would author a textbook on HVAC that would be used at the University.



When Faye returned for his third stint at OSU in the fall of 1962, he worked as a lab director with limited teaching duties. There was no formal program in HVAC at that time; however, he did design and air-condition most of the lab before taking leave in 1967 to attend Purdue in pursuit of his PhD.

When Dr. McQuiston returned to OSU for his fourth and final time, in the fall of 1969, with his PhD degree, he started a new program in HVAC. His PhD dissertation dealt with modeling of heating and cooling coils, which only scratched the surface of what he wanted to do, and he was anxious to pursue that subject further. The course taught by Bob Irwin had lost its faculty sponsor when Irwin died in the 1960s, and a faculty member from the school of Architecture had been assigned. The new faculty sponsor was very unpopular with the volunteers that did the work, among them Bill Johnson and Richard (Sam) Ellis, active Central Oklahoma Chapter ASHRAE members. Bill quickly approached Dr. McQuiston to become the new faculty sponsor. This was the best break Dr. McQuiston hoped for and was the beginning of the enduring HVAC program at OSU that continues to this day.

Dr. McQuiston began research on finned tube coils focusing on mass transfer and dehumidification as an extension of the work he started at Purdue. In the years from 1970 to 1976, his research, together with work conducted by Carrier, resulted in modeling techniques applicable to almost any finned tube coil. Dr. McQuiston's graduate students, and he himself, wrote several modeling programs for the HVAC and nuclear industries. He helped Thermal Corp. of Houston, TX, with a number of projects including a very large Air Force test facility in Tennessee. Many publications resulted from this research. Another project resulted in a computerized duct fitting database. That project laid the groundwork for duct design programs to access the database. There were other less significant projects dealing with Psychrometric calculations, attic ventilation, etc. Most small projects aided the more significant ones.

In the 1970s, Dr. McQuiston was teaching his comprehensive HVAC course; however, the available texts were very limited and out of date, so he ended up developing his own notes for the class. Over a period of a couple of years, he was teaching entirely from his notes. In about 1975, a John Wiley editor was visiting and inquired about what text was being used for the HVAC course. Of course, Dr. McQuiston showed him his notes, about 3 inches thick! The editor suggested a book be written for Wiley and an agreement to do so was finalized.

Dr. McQuiston quickly found that he had taken on a monumental task along with all his other work. Dr. Jerald Parker and he had worked together in earlier years (1962-67) on some of his projects and he recognized Dr. Parker as very competent in heat transfer and fluid mechanics, although he was not into HVAC subjects. Dr. Parker was also a good writer. Therefore, Dr. McQuiston asked Dr. Parker to become a secondary author for the new book, Heating, Ventilating, and Air-Conditioning Analysis and Design. Dr. Parker initially helped with the more basic subjects and later developed a great interest in the HVAC field.

The book became an instant success with the first edition copyrighted in 1977. Over the years, the book was in constant revision to keep up with the rapidly changing field. In the 1980s, Dr. McQuiston and Dr. Parker traveled throughout the South and Southwest conducting workshops and seminars to educate engineers in the HVAC industry and to promote the book. Dr. McQuiston retired from teaching in 1990; however, his work on new editions of the book continued. In the early 1990s, Dr. McQuiston and Dr. Parker were working on the 4th edition when they asked a young Dr. Spitler to provide input. When it came time to write the 5th edition, they invited Dr. Spitler to join them as co-author. The 6th edition came out in 2005 when Dr. McQuiston was 77 years old. Over the years, the book gained widespread use throughout the US and spread to many foreign countries. It has been translated into Korean, Chinese, Spanish, and Greek languages, and has over 100,000 copies printed. Some have speculated that

this textbook has done more to educate the world's HVAC engineers than any other book in history. If you don't already have a copy, you can find his book by searching: ISBN-13: 978-1119894148.

In his retirement, Dr. McQuiston was very active in ASHRAE, especially at the Chapter level, rarely missing a meeting. He treasured his many friends in ASHRAE and the industry. He earned many awards, but was especially interested in ASHRAE history, writing numerous historical papers, ultimately receiving the Society's prestigious Lou Flagg Historical Award in 2016 at age 88, for his biography on Bill Collins. Dr. McQuiston passed away on January 29, 2017, in Stillwater, Oklahoma.



Dr. Faye McQuiston – 1980

(showing enthusiasm over the first ever orange cover for the chapter roster)

Dusty Stoabs, PE
ASHRAE Central Oklahoma Chapter Historian