

IMPACT

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Featured article:
JIM LANSFORD

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2022 Hall of Fame

COLLEGE OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY



JIM LANSFORD

Jim Lansford grew up on, what was originally, a homestead farm in Skyline, Alabama. He graduated from Auburn University in 1980 with his bachelor's degree in electrical engineering and with his master's degree from Georgia Tech in 1982.

Lansford worked as a cooperative education student with the National Security Agency as his first engineering job. He continued working in defense-related jobs after receiving his bachelor's and master's degrees. After meeting Oklahoma State

University's Professor Rao Yarlagadda, Lansford decided to leave the industry and pursue his doctorate.

"A friend introduced me to Professor Yarlagadda at a conference and I was very impressed with his credentials. More importantly than the respect he had in the field of signal processing, he was modest, supportive and a genuinely kind person," Lansford said. "I knew after meeting him that if I wanted to get my doctorate, he was the right person to be my adviser."

OSU introduced Lansford to his best friend and wife of 35 years, Lynn Milburn Lansford. Not only did she attend OSU, but both of her parents worked as professors in the English department for over three decades. Lansford considers meeting his wife and her family to be a favorite memory of OSU along with his experience teaching.

"I taught a junior-level class and really enjoyed it; teaching as a graduate student while at OSU made a wonderful experience even more special," Lansford said. "It's very gratifying to see students do well in their studies and go on to successful careers. I have continued teaching as an adjunct professor at the University of Colorado Boulder (CU), over the last 12 years, and love seeing what my students achieve after graduation!"

Lansford made his residence in Stillwater from 1985 to 1988. After graduating from OSU in 1988, Lansford worked at the Georgia Tech Research Institute doing research in advanced radar detection algorithms. In 1990, he left to begin teaching as an assistant professor at the University of Colorado at Colorado Springs. He eventually left the university and helped found a startup as a chief technology officer (CTO) for Momentum Microsystems, which would start his 25-year journey working in standards and regulations for wireless communications.

In late 1996, Lansford was hired by Intel Corporation to be the technical lead for a new technology called HomeRF. HomeRF combined technology

from cordless phones with wireless local area networks in new ways that helped shape aspects of Wi-Fi technology. Four years later, Lansford became the vice president and the CTO of Mobilian Corporation. During his time as CTO at Mobilian, he helped the company raise over \$70 million in venture capital before its acquisition.

After the acquisition of Mobilian by Intel in 2003, Lansford was invited to be the CTO and one of the founders of Alereon, which was one of the leading startups developing ultra-wideband wireless technology. During his 7 years as CTO of Alereon, he helped raise over \$80 million in venture capital. In 2010, Lansford was hired by Cambridge Silicon Radio as the standards lead for their Wi-Fi technology efforts. The company was acquired by Qualcomm in 2015 and he has been with Qualcomm since the acquisition.

"As Bluetooth and Wi-Fi both started ramping up to billions of chips per year, a major problem loomed because they shared the same frequency band but were incompatible," Lansford said. "I was able to take ideas for coexistence we had developed at Mobilian and get them adopted by the Institute of Electrical and Electronics Engineers (IEEE), and in turn that technology was adopted by the communications industry."

This innovation was chosen by Microsoft as the most significant technology for computing platforms in 2001 at the Windows hardware engineering conference. Today, there are billions of phones and tablets that have this coexistence technology in them.

Lansford holds eight leadership positions in six different wireless standards organizations. He is the chair of the committee in IEEE that is the incubator for all new Wi-Fi technologies, an industry leader in ultrawideband communications and connected vehicle technology as well as the chief editor of the SAE standard that defines how cars communicate with each other to avoid collisions and hazards.

Over the past 12 years, Lansford has been using his career experience as a teaching opportunity for the students at CU. One piece of advice Lansford gives students before graduating is to show gratitude to those who have helped them along the way.

"I am grateful to many people for their influence on my life and career," Lansford said. "My mother was a teacher and strongly stressed the value of education, as well as integrity and honesty. Beyond that, I have had several teachers that altered the course of my life and career. My wife Lynn has also been a huge influence; she is a passionate humanitarian and has taken on many projects to make the world a better place, so she invites me to look beyond the bubble of my engineering world to the larger issues of humanity."