In Memoriam

Lawrence (Larry) Whicker

Dr. Lawrence (Larry) Whicker, born on 3 October 1934 in Knoxville, Tennessee, received his B.S. and M.S. degrees in electrical engineering from the University of Tennessee in 1957 and 1958, respectively. He started his career at Sperry Microwave Systems before beginning his Ph.D. degree study at Purdue University, West Lafayette, Indiana, graduating in 1964.

From 1964 to 1970, Dr. Whicker was manager of the Microwave Physics Department at the Westinghouse Aerospace Division in Baltimore, Maryland. Work there consisted of the development of ferrite control components and microwave integrated circuits. In 1970, he became head of the Microwave Technology Branch at the Naval Research Laboratory in Washington, D.C. The position required the direction of 13 Ph.D.-level researchers and their staffs. Areas of research included superconductivity, monolithic integrated circuits, surface acoustic waves, and microwave control components. In 1984, he rejoined the Westinghouse Company as manager of gallium arsenide (GaAs) technology. In 1987, he became manager of GaAs programs, with his work including the GaAs Man-Tech Industry Consortium and RF (GaAs) wafer scale integration.

Dr. Whicker’s technical work made significant contributions to the development of active and passive phased-array radar systems. These radars continue to be used in all branches of the military and underpin many vital radar systems such as those utilized on airborne early warning and control systems, the B1 bomber, the Aegis missile defense radar systems on Navy ships, and F-22 fighters.

In December 1995, Dr. Whicker retired from industry. Until his sudden passing, he was president of LRW Associates. Activities included consulting for U.S. Department of Defense laboratories, acting as administrator for the IEEE Microwave Theory and Techniques Society (MTT-S) technical committees, and assisting in the organization and management of the MTT-S and RF Integrated Circuits symposiums. He was also an administrator for the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society and an adjunct professor with the University of North Carolina at Charlotte.

Dr. Whicker published over 100 papers on ferrite control components and active array technology and was the editor of two books on ferrite control components. In 2000, he contributed a book chapter titled “Analysis and Design Consideration for Monolithic Circuit Transmit-Receive Modules.”

Dr. Whicker’s professional activities include serving as president of the MTT-S in 1977, chairing the IEEE Technical Activities Board (TAB) Periodicals Committee and IEEE TAB Meetings Committee, and serving as general chair of the 1976 Ultrasonic Symposium and the 1980 MTT-S Symposium. He was elevated to Fellow of the IEEE in 1980 and later to Life Fellow. He also received the IEEE Centennial Medal.

In 1970, he became head of the Microwave Technology Branch at the Naval Research Laboratory in Washington, D.C.
Dr. Whicker achieved notable recognition, having been awarded a Ford Foundation Fellowship, the IEEE Young Engineer Award, and the Aviation Week Laureate Award for RF wafer scale integration.

Dr. Whicker’s family has asked that those wishing to honor his memory donate to the IEEE Foundation in his name online at https://www.ieefoundation.org/how-to-give/tribute-giving or by sending a check to IEEE Foundation, 445 Hoes Lane, Piscataway, NJ 08854. Donations in Dr. Whicker’s memory will support the IEEE Life Members Graduate Study Fellowship in Electrical Engineering.

From the Guest Editor’s Desk (continued from page 29)

- “Think Outside the Band: Design and Miniaturization of Absorptive Filters” by Matthew A. Morgan
- “The RFID Connection: RFID Technology for Sensing and the Internet of Things” by Hengying Shan, John Peterson III, Sutton Hathorn, and Saeed Mohammadi
- “Compact, Portable, and Easy to Use: A Perspective on Transistor Modeling for Gallium Nitride High-Power Amplifier Design” by John Wood.

As you can see, there is something here for everyone. The range of topics also reflects the broad impact that wireless technologies have on our lives, touching on telecommunications, health, space, and so much more. In addition to the five feature articles, this special issue includes several columns from RWW 2019 Steering Committee members describing the conference’s themes, technical program, and workshops.

As guest editor of this IEEE Microwave Magazine special issue on RWW 2019, I would like to thank Editor-in-Chief Robert Caverly for giving us the opportunity to introduce readers to our upcoming RWW 2019 events. I also want to thank Associate Editor Christian Fager and Assistant Editor Sharri Shaw for their help and support in the publication process of this special issue.

I encourage you as readers of IEEE Microwave Magazine to take time to browse through these articles and get a feeling for the various topics offered by our individual conferences. I hope you will enjoy reading this special issue on RWW 2019 and consider joining us for this special week. See you in Orlando!

Book/Software Reviews (continued from page 144)

Modeling,” explains resistors, capacitors, and transistors.

The second section details the design of power amplifiers and includes ample “tips and tricks.” Chapter 4, “Power Amplifier Design,” discusses class A, class B, class C, matching, stability, gain, voltage standing wave ratio, broadband and balanced amplifiers, and Doherty linearization. Chapter 5, “LNAs,” examines low-noise amplifiers (LNAs) and reviews thermal noise, short noise, noise modeling, and low-noise design.

Chapter 6, “Passive Circuitry,” covers the Bode–Fano limit, transmission-line discontinuities, directional couplers, isolators and circulators, switches, phase shifters, attenuators, filters/diplexers, splitters/combiners, baluns, mixers, and antennas.

The last section concludes with a focus on component integration, providing detail on design methods for military operations, high manufacturing yield, and preventing measurement issues. Chapter 7, “Microwave Integrated Circuits,” reviews monolithic microwave integrated circuit hybrid, multichip modules packaging, component design, manufacturing practices, and engineering practices for high yield.

Chapter 8, “Transmit/Receive Module Integration,” discusses integration techniques, cross-talk, leakage, oscillation, ground loops, coupling, electromagnetic interference shielding, and thermal and mechanical considerations.

Chapter 9, “On the Measurement Bench,” explains test fixture design and provides tips for making it all work.

This book includes a great deal of practical RF/microwave engineering knowledge to solve real-world issues, not only in designing but in manufacturing as well. Every RF/microwave engineer should have a copy on his or her desk as a “go-to” book.