Book Information

A successor to the classic Artech House Microwave Remote Sensing series, this comprehensive and up-to-date resource previously published by University of Michigan Press provides you with theoretical models, system design and operation, and geoscientific applications of active and passive microwave remote sensing systems. To facilitate understanding and use of the material, the book includes 50 MATLAB-based computer codes and the book’s website (http://mrs.eecs.umich.edu/) includes interactive modules based on theoretical and empirical models.

Market

Microwave and remote sensing engineers, researchers, and students.

Contents

Electromagnetic Wave Propagation; Remote-Sensing Antennas; Microwave Dielectric Properties of Natural Earth Materials; Radar Scattering; Microwave Radiometry and Radiative Transfer; Microwave Radiometric Systems; Microwave Interaction with Atmospheric Constituents; Radiometric Sounding of the Atmosphere; Surface-Scattering Models and Land Observations; Volume-Scattering Models and Land Observations; Emission Models and Land Observations; Radar Measurements and Scatterometers; Real- and Synthetic-Aperture Side-Looking Airborne Radar; Interferometric SAR; Radar Remote Sensing of the Ocean; Spaceborne Altimetry; Radiometric Remote Sensing of the Ocean.

About the Author

Fawwaz Ulaby is the Leith Distinguished University Professor of Electrical Engineering and Computer Science and former Vice President for Research (1999-2006) at the University of Michigan. He earned a B.S. degree in physics from the American University of Beirut (1964) and a Ph.D. in electrical engineering from the University of Texas at Austin (1968).

David Long is on the faculty of the Electrical and Computer Engineering department at Brigham Young University where he is the Director of the BYU Center for Remote Sensing. He earned his Ph.D. in Electrical Engineering from the University of Southern California (1989) and B.S. and M.S. degrees in Electrical Engineering from Brigham Young University (1982 and 1983, respectively).