

**Fawwaz Ulaby, Fellow, IEEE**, National Academy of Engineering  
Williams Professor of Electrical Engineering and Computer Science  
UNIVERSITY OF MICHIGAN

**Role in the Center: Co-Investigator**

**Areas of Research:** Bistatic radar sensing

1301 Beal Avenue  
Ann Arbor, MI, 48109-2122

Phone: (734) 647-1789

Fax: (734) 647-2106

E-mail: ulaby@eecs.umich.edu

## **A. PROFESSIONAL PREPARATION**

**American University of Beirut**  
**University of Texas**

Physics, B.S., 1964  
Electrical Engineering Ph.D., 1968

## **B. APPOINTMENTS**

**Vice President for Research, University of Michigan**  
**Professor, EECS Department, University of Michigan**

1/1999-12/2005

9/1984-present

## **C. SYNERGISTIC ACTIVITIES**

Fawwaz T. Ulaby is the R. Jamison and Betty Williams Professor of Electrical Engineering and Computer Science at the University of Michigan, where he recently completed a seven-year term as Vice President for Research (1999-2005). He is a member of the National Academy of Engineering and serves on several national scientific boards and commissions. Since joining the University of Michigan faculty in 1984, Professor Ulaby has directed large, interdisciplinary, NASA projects aimed at the development of high-resolution satellite radar sensors for mapping earth's terrestrial environment. He also served as the founding Director of a NASA-funded Center for Space Terahertz Technology. Over the past 10 years, he served as Principal Investigator on two ARL-funded Collaborative Technology Alliance in Advanced Sensors programs managed by BAE Systems. Professor Ulaby has authored eight books and published over 600 scientific papers and reports. His recent undergraduate textbook on "Applied Electromagnetics," published by Prentice Hall, has been adopted by some 80 universities across the United States. He is the recipient of numerous awards including ) the NASA Group Achievement Award (1990), the University of Michigan Regents Medal for Meritorious Service (1996), and the IEEE Millennium Medal for Outstanding Achievements and Contributions (2000). Over his 30-year academic career, he has supervised over 100 MS and Ph.D. graduate students. In 2002 he received the William Pecora Award, a joint recognition by NASA and the Department of the Interior. In 2006, he was awarded the IEEE Thomas Edison Medal.

## **D. RELATED PUBLICATIONS**

1. Nashashibi, A.Y., K. Sarabandi, P. Frantzis, R. DeRoo, and F.T. Ulaby, "An Ultra-Fast Wideband MMW Polarimetric Radar for Remote Sensing Applications," IEEE Trans. Geosci. Remote Sens., vol. 40, no. 8, pp. 1777-1786, Aug. 2002.
2. Xie, H., L. Pierce and F.T. Ulaby, "Speckle Reduction Using Wavelet Denoising and Markov Random Field Modeling," IEEE Trans. Geosci. Remote Sens., vol. 40, no. 10, pp. 2196-2212, Oct. 2002.
3. El-Rouby, A. , A.Y. Nashashibi, and F.T. Ulaby, "Application of Frequency Correlation Function to Radar Target Detection," IEEE Trans. on Aerospace and Electronic Systems, vol. 39, no. 1, pp. 125-139, Jan. 2003.
4. Kouskoulas, Y., L. Pierce, and F.T. Ulaby, "A Computationally Efficient Multivariate Maximum Entropy Density Estimation (MEDE) Technique," IEEE Trans. Geosci. Remote Sensing, vol. 42, no. 2, pp. 457-468, Feb. 2004.
5. Kouskoulas, Y., F.T. Ulaby and L. Pierce, "The Bayesian-Hierarchical Classifier (BHC) and its Application to Short Vegetation Using Multifrequency Polarimetric SAR," IEEE Trans. Geosci. Remote Sens., vol. 42, no. 2, pp. 469-477, Feb. 2004.
6. Nashashibi, A.Y. and F.T. Ulaby, "Detection of Stationary Foliage-Obscured Targets by Polarimetric

- Millimeter-Wave Radar," IEEE Trans. Geosci. Remote Sens., vol. 43, no. 1, pp. 13-23, Jan. 2005.
7. Ulaby, F.T., "Engineering in the Age of Biology," Proceedings of the IEEE, vol. 94, no. 5, May 2006, pp. 863-864.
  8. Ulaby, F.T., "Electronic Journals Versus Print: Publishing in the Electronic Age," Proceedings of the IEEE, vol. 94, no. 6, June 2006, pp. 1043-1044.
  9. Ulaby, F.T., "The Legacy of Moore's Law," Proceedings of the IEEE, vol. 94, no. 7, July 2006.
  10. Ulaby, F.T., "Climate Change and the Proper Role of Scientists and Engineers," Proceedings of the IEEE, vol. 94, no. 8, August 2006.
  11. Ulaby, F.T., "Scientific Research: Investing in the Future," Proceedings of the IEEE, vol. 94, no. 9, September 2006.