

## **Darold Wobschall, Associate Professor, Tenured**

### **Education**

- 1966 Ph.D. Biophysics, State University of New York at Buffalo  
1960 M.A., Physics, University of Buffalo  
1953 B.A., Physics and Chemistry, St. Olaf College, Northfield, Minnesota

### **Employment**

- 1999 to present President, Esensors Inc.  
1971 to present Associate Professor, Department of Electrical Engineering, State University of New York at Buffalo, retired to 16% of full-time in August, 2000  
1967 to 1971 Assistant Professor, Electrical Engineering and Biophysical Sciences  
Joint appointment.  
1990 to 1999 VP/Technology, Sensor Plus, Inc.  
1982 to 1990 President, Index Electronics, Inc.  
1967 Postdoctoral Fellow, full-time.  
1962-1966 Cancer Research Scientist, halftime,  
Roswell Park Memorial Institute, Buffalo (Biophysics Dept.)  
1960 to 1969 Research Physicist (Applied Physics Dept.), Cornell Aeronautical Laboratory, Buffalo

### **Other related experience including teaching, industrial, governmental, etc.**

Dr. Wobschall is President at Esensors Inc. and a member of the faculty of the Department of Electrical Engineering. His research includes topics in electronic instrumentation, sensor development, and bioengineering. He is the inventor of the in cyclotron resonance mass spectrometer and has a number of patents in the sensor area. Courses taught emphasize the design of sensors and electronic instruments, including microprocessor-based devices.

As owner and founder of several businesses, he has attained experience in the applied aspects of electronic instrument design and manufacture. His current interest is the development of a series of sensors (websensor) with an Internet address.

A seminar, "Sensor Applications and Interfaces," has been given periodically by Dr. Wobschall at national sites.

### **Selected Publications (from 40)**

1. S. Mrozowski and D. Wobschall, "Electron Spin Resonance in Chars of Some Simple Carbonaceous Materials", *J. Chem. Phys.*, 69, (1961).
2. D. Wobschall, J.R. Graham, Jr., and D.P. Malone, "Ion Cyclotron Resonance and the Determination of Collision Cross Sections", *Phys. Rev.* 131, 1565 (1963).
3. D. Wobschall, "Ion Cyclotron Resonance Spectrometer", *Rev. Sci. Instr.*, 25, 466 (1965).
4. D. Wobschall and D.A. Norton, "Absorption Spectra and Formation Constants of SteriodIodine Complexes", *Archives of Biophys. and Biochem.*, 122, 85 (1967).
5. D. Wobschall, "Bilayer Membrane Elasticity and Dynamic Response", *J. Colloid Interface Sci.*, 36, 385 (1971).
6. K. Jacobson and D. Wobschall, "Rotation of Fluorescent Probes Located Within Lipid Bilayer Membranes", *Chem. Phys. Lipids* 12, 117 (1974).
7. D. Wobschall & C. McKeon, "Step Conductance in Bilayer Membranes Induced by AntibodyAntigenComplement Interaction", *Biochem. Biophys. Acta* 413, 317321 (1975).
8. D. Wobschall, "A Frequency Shift Dielectric Soil Moisture Sensor", *IEEE Geosci. Electronics*, Vol. GE16, 112118 (1978).
9. D. Wobschall and S. Hejazi, "An Aperture Intensity Ratio Fiber Optic Displacement Sensor", *Rev. Sci. Instrum.* 58, 15431544 (1987).
10. Y. Trisno and D. Wobschall, "Optimization of an Optically Pulse Powered Photocell Array as a Sensor Power Source", *IEEE Trans. Instrum. Meas.*, Vol. IM37 (1988), 142-145.

11. Y. Trisno, P. Hsieh, and D. Wobschall, "Optically Powered Sensor Signal Telemetry System", IEEE IM Vol. 39 (1989).
12. S. Hejazi, D. Wobschall, R. Spangler, and M. Anbar, "Scope and Limitation of Thermal Imaging Using Multi-wavelength Detection," *Journal of Optical Engineering* 31(11), 1992.
13. E. Haussman, M. Kutlubay, D. Odrabina, K. Allen, L. Ortman, and D. Wobschall, "Studies on the Angular Reproducibility of Positioning Patients Adjacent to an X-ray Tube 2. A New Electronically Guided, Force-sensitive Sensor-based Alignment System." *J. Periodont Res* 1995; 30: 294-297.
14. S. Smith, H. Kim, V. Swarnakar, M. Jeong, and D. C. Wobschall, *Parallel Hardware Architecture for CCD-Mosaic Digital Mammography*, SPIE Medical Imaging, vol. 3335, 1998.
15. V. Swarnakar, M. Jeong, S. Smith, H. Kim, and D. C. Wobschall, *Effect of the Reconstruction Technique on the Quality of Digital Mosaic Mammograms*, SPIE Medical Imaging, vol. 3340, 1998.

### **Book**

1. D. Wobschall "Circuit Design for Electronic Instrumentation", McGraw Hill, Second Edition, (1989).

### **Recent Presentations**

1. J.C. Dempsey, D. Wobschall, P. Kotrappa, Proceedings of the 25<sup>th</sup> DOE/NRC Nuclear Air Cleaning and Treatment Conference, (Minneapolis, MN), p. 287, 1998
2. D. Odrobina, D. Wobschall, D. Fish, "Functional Neuromuscular Stimulation of Hand Muscles for Telerobotic Position Feedback," May 1999
3. D. Wobschall, S. Smith, H. Kim, M. Jeong, S. Ruding, D. Bednarek, "High Resolution Digital X-ray Imager for Mammography," Era of Hope Meeting, Atlanta (June, 2000)
4. D. Wobschall, "Capacitive and Electric Field Sensors" (short course). Given at Sensors Expo.
5. D. Wobschall, "Websensors With an Internet Address," Sensors Expo Proceedings, Oct. 2001.

### **Scientific, professional and honor societies of which you are member**

- IEEE
- ISA
- SPIE
- Listed in "American Men and Women in Science" and "Who's Who in the East"