

## Mary Baker

### Education:

Doctor of Philosophy, December 1988, Electrical Engineering, UT Arlington, Texas  
Master of Science, December 1985, Applied Physics, Texas Tech University, Texas  
Bachelor of Science, August 1983, Engineering Physics, Texas Tech University, Texas

### Academic experience:

Aug 2010 – present: Professor (tenured), Department of Electrical and Computer Engineering,  
Texas Tech University, Lubbock, TX  
Aug 1996 – July 2010: Associate Professor (tenured), Department of Electrical and Computer  
Engineering, Texas Tech University, Lubbock, TX  
Aug 1989 – July 1996: Assistant Professor, Department of Electrical and Computer Engineering,  
Texas Tech University, Lubbock, TX

### Non-academic experience:

Aug 1991 to Aug 2000 Senior Scientist and Co-owner, Integrated Technologies, Inc.  
June 1997 to Aug 1997 Visiting Scholar, Texas Instruments

### Certifications or professional registrations:

Licensed PE, State of TX

### Current membership in professional organizations:

IEEE

### Honors and awards:

IEEE Pulsed Power Student of the Year Award (National), 1989  
Texas Tech Ex-Students Association New Faculty of the Year Award (College), 1991  
Moms & Dads Association Hemphill Wells New Faculty Teaching Award (University), 1992  
Halliburton Award for Teaching and Research (College), 1992  
Butler Award for Excellence in Teaching (College), 2008-2011

### Service activities:

Graduate Studies Committee, Department of Electrical Engineering  
Undergraduate Curriculum Subcommittees (EE) on Engineering Science,  
Laboratories, Communications  
Undergraduate Curriculum Subcommittees (EE) on Circuits and Systems (chair)  
University Core Curriculum Committee – College of Engineering Representative  
Faculty Advisor to student organization of SWE, the Society of Women Engineers  
Faculty Advisor to student organization of AWEE, the Association of Women in  
Electrical and Computer Engineering  
University Faculty Senate, College of Engineering Representative  
College of Engineering First Year Experience Committee  
College of Engineering Diversity Task Force (chair)  
College of Engineering Bioengineering PhD Committee  
College of Engineering Representative to STEM center

University TTNI steering committee  
College of Engineering Faculty Awards Committee  
Reviewer for various journals (Nature Series, APS, ACS, AIP, etc.)

**The most important publications from the past five years:**

2. Baker, M., Kerr, A., Hames, E., Akrofi, K. (2012). *An SFFS Technique for Feature Classification to Identify Sub-Groups* (pp. 1-4). IEEE Proceedings of 2012 Computer Based Medical Systems.
3. Hames, E., Baker, M. *EEG-Based Comparisons of Performance on Mental Rotation Task Between Learning Styles and Gender*. Proceedings of FIE 2013.
4. Hames, E., Baker, M., “*A Study of the Relationship Between Learning Styles and Cognitive Abilities in Engineering Students*,” European Journal of Engineering Education, Vol. 40, Issue 2, 2015.
5. Hames, E., Rajmohan, R., Fang, D., Anderson, R., Baker, M., Richman, D., O’Boyle, M. (2016). *Attentional Networks in Adolescents with High-Functioning Autism: An fMRI Investigation*. The Open Neuroimaging Journal, 10, 3-11.
6. Elizabeth, H., Murphy, B., Rajmohan, R., Anderson, R., Baker, M., Zupancic, S., O’Boyle, M., Richman, D. (2016). *Visual, Auditory, and Cross Modal Sensory Processing in Adults with Autism: An EEG Power and BOLD fMRI Investigation*. Frontiers in Human Neuroscience, 10

**Professional Development:**

Continuing Education and Certificates

EO College Land in Focus Basics of Remote Sensing, Certificate Sept 2022  
EO College Beyond the Visible – Introduction to Hyperspectral Remote Sensing, Mar 2022  
Coursera The Data Scientist’s Toolbox, Sept 2020  
The Santa Fe Institute Introduction to Complexity Course, Sept 2018.