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.