

## Brian Nutter

### Education:

Degree	Discipline	Institution	Year
Ph D	Electrical Engineering	Texas Tech University	1990
BS	Electrical Engineering	Texas Tech University	1987

### Academic Experience:

Institution	Rank/Title	Dates Held
ECE Dept, TTU	Interim Chair	August 2022 – Present; March 2021 - August 2021
ECE Dept TTU	Associate Chair UG	August 2008 - Present
ECE Dept TTU	Associate Professor	August 2002 - Present

### Non-academic Experience:

Institution	Rank/Title	Duties	Dates Held
ESI	Contract Engineer	Manufacturer of satellite test equipment	November 2001 - July 2002
WillowBrook Technologies	Vice President, Engineering	Internet telephony manufacturer	March 1998 - November 2001
Soligen	Chief Program Mgr / Production Mgr / Software / Electronics Mgr	Rapid prototyping manufacturer and service bureau for metal castings	June 1992 - March 1998
3-D Systems	Senior Electronics / Software Engineer	Rapid prototyping stereolithography manufacturer for mechanical design	February 1990 - May 1992

### Certifications or Professional Registrations:

- a. Professional Engineer, Texas Board of Professional Engineers. (2005 - Present).

### Professional Memberships:

- a. Member, National Academy of Inventors.
- b. Senior Member, Institute of Electrical and Electronics Engineers.

### Service Activities:

- a. Committee Member, IEEE SSIAM. (2008 - Present).
- b. Committee Member, IEEE CBMS Steering Committee. (2003 - 2019).
- c. Committee Member, SPIE Medical Imaging. (2013 - 2018).
- d. Officer, Treasurer, IEEE CBMS. (2014).
- e. Officer, Treasurer, IEEE South Plains Section. (2010 - 2011).
- f. Committee Member, West Texas BEST. (2003 - 2010).
- g. General Chair, IEEE CBMS Conference. (2009).
- h. General Co-Chair, IEEE Green Tech Conference. (2009).
- i. Section Chair, IEEE South Plains Section. (2008 - 2009).
- j. Section Vice Chair, IEEE South Plains Section. (2006 - 2007).
- k. General Co-Chair, IEEE CBMS Conference. (2006).
- l. Technical Co-chair, IEEE CBMS Conference. (2004).
- m. Treasurer, IEEE CBMS Conference. (2003).

**Awards and Honors:**

- a. ECE Faculty Member of the Year. (2019; 2015; 2012; 2010; 2008; 2005).
- b. TTU Teaching Academy. (September 2010).
- c. TTU President's Excellence in Teaching. (May 2009).
- d. Abell-Hanger Teaching Award, Abell-Hanger Foundation. (May 2005).

**Publications and Presentations from Past Five Years:**

- a. Tarter, D., Nutter, B. (2022). *Fast Coding of Haar Wavelet Trees*. Proceedings of IEEE Data Compression Conference.
- b. Parmar, H. S., Nutter, B., Long, R., Antani, S., Mitra, S. (2022). Functional Parcellation of fMRI data using multistage k-means clustering. *arXiv*, 1 - 46.
- c. Parmar, H., Nutter, B., Long, R., Antani, S., Mitra, S. (2021). Visualizing Temporal Brain State Changes for fMRI Using t-SNE. *Journal of Medical Imaging*, 8(4).
- d. Bazgir, O., Walden, E., Nutter, B., Mitra, S. (2020). A Novel Data-driven Magnetic Resonance Spectroscopy Signal Analysis Framework to Quantify Metabolite Concentration. *Algorithms*.
- e. Parmar, H., Nutter, B., Long, R., Antani, S., Mitra, S. (2020). Spatiotemporal Feature Extraction and Classification of Alzheimer's Disease using Deep Learning 3D-CNN for fMRI Data. *Journal of Medical Imaging*.
- f. Nutter, C., Nutter, B. (2020). Success in a Competitive-Admissions Major. *Proc of National Symposium on Student Retention*. Consortium for Student Retention and Data Exchange.
- g. Johnston, D., Nutter, B., Gale, R. (2020). *IC Discrimination via Novel S-Parameter Measurement Technique*. Proceedings of IEEE International Instrumentation and Measurement Conference.
- h. Parmar, H., Mitra, S., Nutter, B., Long, R., Antani, S. (2020). *Visualization and Detection of Changes in Brain States Using t-SNE*. Proceedings of IEEE SSIAl.
- i. Parmar, H., Nutter, B., Mitra, S., Long, R., Antani, S. (2020). *Deep Learning of Volumetric 3D CNN for fMRI in Alzheimer's Disease Classification*. Proceedings of SPIE Medical Imaging.
- j. Rizkalla, M., Patnala, M., Yadav, A., Williams, J., Gopinath, A., Nutter, B., Ytterdal, T. (2020). Low Power-High Speed Performance of 8T Static RAM Cell within GaN TFET, FinFET, and GNR-FET Technologies -- A Review. *Solid State Electronics*, 163.
- k. Parmar, H., Nutter, B., Long, R., Antani, S., Mitra, S. (2019). Automated signal drift and global fluctuation removal from 4D fMRI data based on principal component analysis as a major preprocessing step for fMRI data analysis. *Proceedings of SPIE Medical Imaging*.

**Patents:**

- a. McGlone, J., Nutter, B., Mitra, S., Pal, R. "Livestock identification and monitoring," Patent Number: 9,521,829. (Approved: December 2016).
- b. McLane, D., Kang, C., Nutter, B., Li, B. "Low complexity and memory efficient image CODEC," Patent Number: 9,232,225. (Approved: January 2016).
- c. McGlone, J., Nutter, B., Pal, R., Mitra, S. "Livestock Identification System and Method," Patent Number: 9,084,411. (Approved: July 2015).

**Recent Professional Development Activities:**

- a. TTU Chairs' Academy (2022 - 2023).
- b. TTU WCOE Chair's Retreat (2023).
- c. SWECEDHA Meeting (2016, 2019).
- d. SSIAl Conference (2018, 2020).