# Shaheen Ahmed, PhD

Department of Electrical & Computer Engineering
University of Texas at Dallas
Richardson Tx, 75080
Email: sxa176730@utdallas.edu


## Education

**University of Memphis, Memphis, TN** **2006 - 2011**
- PhD, Department of Electrical and Computer Engineering

**Wright State University, Dayton, OH** **2004 -2006**
- MS, Department of Electrical and Computer Engineering

**Saurashtra University**, **India** **1999 – 2003**
- BE, Department of Electrical Engineering

## Teaching Experience

**Lecturer** **2019**
*University of Texas at Dallas, Richardson, TX*
*Department of Electrical & Computer Engineering*
- Linear Algebra for Engineers Spring 2019
- Communication Systems Spring 2019

**Adjunct Faculty** **2017 – Present**
*Richland College, Dallas, TX*
- Probability & Statistics (face to face, 46 - 75 students) Fall 2017, Fall 2018
- Discrete Mathematics (face to face, 20 - 40 students) Spring 2018
- Calculus (face to face, 32 - 80 students) Spring 2018, Summer 2018
- Introduction to Engineering (face to face, 20 - 30) Fall 2017
- Digital Circuits (face to face, 15 - 25 students) Spring 2017
- Computer Architecture (face to face, 20 – 35 students) Spring 2018

Class represented diverse racial and cultural backgrounds. Responsibility included – composing lectures and class notes, assignments, holding office hours, review session and assigning final grades. Excellent grasp of making administrative and procedural decisions based on sensitivity and judgment, hands on experience of employing a range of suitable strategies to foster student learning. Well versed in learning platforms such as WebCT, Blackboard for revising and updating course materials.

**Postdoctoral Research Fellow**
*University of Texas Southwestern Medical School, Dallas, TX*
*Dept. of Radiology* **2015 - 2016**
- Trained interns in collecting medical imaging data, analyzing data using imaging software tools – FSL, SPM, BrainNetViewer, AFNI.

**Teaching Assistant**

*University of Memphis, Memphis, TN*
*Dept. of Electrical & Computer Engineering* **2006 – 2011**

- Electrical Circuit Design (face to face, 15 - 25 students) Fall 2008
- Image processing (face to face, 10 – 20 students) Fall 2009, Fall 2010
- Computer vision (face to face, 10 – 12 students) Spring 2008, Spring 2009, Spring 2010

## Research Experience

**Research Associate**
*University of Texas at Dallas,*
*Dept. of Behavioral and Brain Sciences* **2017 - 2018**

- Understand mechanism of action for chronic pain being treated by neurostimulation devices via imaging modalities such as DTI, MRI.
- Publish and presenting work in journal papers and scientific meetings.

**Postdoctoral Research Fellow**
*University of Texas Southwestern Medical School,*
*Dept. of Radiology* **2013 – 2016**

- Develop methods to study brain development in neonates using Neurite Orientation Dispersion and Density Imaging (NODDI).
- Test Philips scanners annually, develop program patches on scanner software for executing stimulation.

**Research Staff**
*University of Texas at San Antonio,*
*Dept. of Electrical & Computer Engineering* **2012 – 2013**

- Develop automated brain – interface algorithms for interpreting brain states to improve task performance based on EEG recordings.

## Journal papers

- **S. Ahmed**, K.M. Iftekharuddin and A. Vossough, "Efficacy of texture, shape and intensity feature fusion for posterior-fossa tumor segmentation in MRI", *IEEE transaction for Information Technology in Medicine and Biology Society,* Vol. 15, Issue 2. pp. 206-213, March 2011.
- K.M. Iftekharuddin, **S. Ahmed** and J. Hossen, "Information Theoretic Multiclass Feature Selection Improved Pediatric Brain Tumor segmentation", *IEEE EMBS* 2011.
- Zhiyue J. Wang, Jonathan Cia, **S. Ahmed** and Nancy K. Rollins, "Signal to noise assessment for Diffusion Tensor Imaging with Single Data Set and Validation using a difference image method with data from a multicentre study", *Journal of Medical Physics*, Vol. 41, Issue 9, 2014.
- **S. Ahmed**, Thomas Yearwood, Dirk De Ridder and S. Vanneste, "Burst and High Frequency Stimulation: Underlying Mechanism", *Expert in medical Devices*, Vol. 15, Issue 1, 2017.
- Sarah Keller, Avneesh Chabra, **S. Ahmed**, Z.J. Wang, "Improvement of Reliability of DTI in Thigh Skeletal metrics", *European Journal of Radiology,* Vol.102, May 2018.
- **S.Ahmed**, "An information theoretic framework for MRI preprocessing, multiclass feature selection, segmentation of brain tumors", *Current Trends in Clinical & Medical Imaging*, Vol. 2,

Issue 4, 2018 In press.

## Conference papers

- **S. Ahmed**, and K.M. Iftekharuddin, "Efficacy of level set based shape feature for pediatric brain tumor segmentation", *Memphis BioImaging Symposium*, Memphis, USA, November 2007
- **S. Ahmed** and K.M Iftekharuddin, "Discrimination of Medulloblastoma and low grade Astrocytoma PF tumors using selected MR images features", *Memphis BioImaging Symposium*, Memphis, USA, November 2008
- **S. Ahmed** and K.M. Iftekharuddin, "Efficacy of texture features and segmentation of recurrent tumors", *Memphis BioImaging Symposium*, Memphis, TN, November 2009
- **S. Ahmed**, K.M Iftekharuddin, R.J. Ogg and F. Laningham, "Efficacy of texture, shape, and intensity features for robust posterior-fossa tumor segmentation in MRI", *Medical Imaging, Computer Aided Diagnosis*, SPIE 2009
- **S. Ahmed** and K.M. Iftekharuddin, "Multiclass Feature Selection for Improved Pediatric Brain Tumor segmentation", *Medical Imaging, Computer Aided Diagnosis*, SPIE 2012
- **S. Ahmed** and K.M. Iftekharuddin, "An Information Theoretic framework for preprocessing, multiclass feature selection and segmentation of PF tumor", *Invited paper to ASILOMAR*, Pacific Grove, 2012
- K. Gopinath, S. Lacey, **S. Ahmed**, R. Stilla and K.Sathian, "Resting state functional connectivity of specialized occipitotemporal cortical regions" *Society of Neuroscience*, 2012
- K. Gopinath, S. Lacey, **S. Ahmed**, R. Stilla and K.Sathian, "Increased Functional Connectivity between Occipitotemporal Cortex and Frontoparietal Attenstion network during visual processing", *ISMRM*, Vol.21, 2013
- **S. Ahmed,** L. Merino, J. Meng, K. Robbins and Y. Huang, "A Deep learning method for classification of images RSVP events with EEG data", *GlobalSIP* 2013.
- **S. Ahmed,** Zhiyue J. Wang, Jonathan Cia and Nancy K. Rollins, "Correlation between diffusion kurtosis and NODDI metrics in neonates and young children", *Medical Imaging, Biomedical Applications in Molecular, Structural and Functional Imaging, SPIE* 2016.
- **S. Ahmed** and Sven Vanneste, "The underlying effect of Burst Stimulation on chronic pain using multimodal neuroimaging-EEG, fMRI and PET", *CNS* 2017.
- **S. Ahmed** and Sven Vanneste, "An investigational study on effect of burst stimulation on chronic pain in PET, fMRI and EEG", *NANS* 2018.

## Reviewer

- IEEE transaction on Signal Processing
- IEEE transaction on Image Processing
- Journal of Medical Imaging & Radiation Sciences
- Neuroimage
- European journal of Radiology
- Clinical journal of Radiology.

## Professional Affiliation

- Member of International Society for Optics and Photonics (SPIE)
- Member, Institute of Electrical and Electronics Engineer (IEEE)
- Member, Intl. Society for magnetic Resonance in Medicine (ISMRM)