

When: Friday 13:50 – 14:50

Where: ETB 1020

Speaker: Md Tauhidul Islam

Department of Electrical & Computer Engineering
Texas A&M University



Title: Estimation of mechanopathological parameters using ultrasound
poroelastography

Date: 10-26-2018

Abstract: Mechanical microenvironment of solid tumors plays an important role in the growth, metastasis and treatment of the tumors. Elevated interstitial fluid pressure (IFP) is an important component of the mechanical microenvironment of the tumor and a mechanopathological parameter of great clinical significance. Interstitial and vascular permeabilities are two other mechanopathological parameters of soft tissues that are clinically relevant and can provide useful information for cancer diagnosis and prognosis. There are a few invasive techniques that can measure IFP and the interstitial and vascular permeabilities in tissues but no non-invasive imaging techniques that can assess or quantify them. In this talk, I discuss novel, non-invasive techniques based on ultrasound poroelastography, which can image these mechanopathological parameters in cancers *in vivo*.

Bio: Md Tauhidul Islam is a PhD candidate in the department of Electrical and Computer Engineering. His research focus is ultrasound poroelastography, which is a branch of ultrasound elastography imaging technique. In his PhD study, Tauhidul is working on estimation of the mechanical and mechanopathological parameters of cancers. He has earned his Bachelor and Master's degrees from Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.