**ELECTRICAL & COMPUTER ENGINEERING BIO-SEMINAR Fall 2016**

Dwight Look College of ENGINEERING TEXAS A&M UNIVERSITY

**When:** **Friday 15:00 – 16:00**
**Where:** **ETB 1003**
**Coordinator:** **Xiaoning Qian** (xqian@ece.tamu.edu)

**Speaker:** **Prof. Junjie Zhang**

Assistant Professor
Department of Biochemistry & Biophysics
Texas A&M University

**Title:** **Cryo-EM and Molecular Modeling of Structure and Dynamics for RNA Molecules**

**Date:** **09-16-2016**

**Abstract:** Cryo-electron microscopy (Cryo-EM) has recently gained its popularity to determine three-dimensional (3D) structures of macromolecular machines to atomic resolution. In this talk, I will present two applications of cryo-EM to study the structures and dynamics of large RNA molecules inside the cell: the mycobacterial ribosomal RNA and the virus genomic RNA.

**Biography:** Zhang received his B.S. in Physics from Fudan University and his Ph.D. degree in Structural Biology from Baylor College of Medicine. He is currently an Assistant Professor in the Department of Biochemistry & Biophysics at Texas A&M University. His group uses cryo-EM to image macromolecular machines from the cell, and then develops image processing and modeling techniques to visualize their 3D structures and dynamics, answering questions such as how they assemble and how they interact with each other.