When: **Wednesday 15:00 – 16:00 (Note that this is a joint ISS-Seminar)**
Where: **ETB 1035**

Speaker: **Prof. Xiaoning Qian**

Assistant Professor
Department of Electrical & Computer Engineering
Texas A&M University

Title: **Computational Network Biology: Modeling, Analysis, and Control**

Date: **1-31-2018**

Abstract: The advances in high-throughput profiling techniques have shifted the paradigm of biomedical research with the unprecedented capability in data collection. With diverse types of omics data, the critical question is how to translate such data into reproducible biological knowledge to better understand biological processes for effective intervention of life systems to benefit human society. I will share the recent and ongoing projects with my students on learning complex life systems from modern biomedical data. Specifically, I will focus on our research of developing computational methods for functional module identification using biological network data and robust mutant design for metabolic engineering. Our computational research can be meaningful only when we have the collaboration from experimental biology to validate and explore the derived new hypotheses, for which I will share my current understanding of theoretical, modeling, and analytic challenges.

Biography: Xiaoning Qian is an Assistant Professor with the Department of Electrical & Computer Engineering, Texas A&M University, College Station, TX, USA. He is affiliated with the Center for Bioinformatics and Genomic Systems Engineering and the Center for Translational Environmental Health Research at Texas A&M. He received the Ph.D. degree in electrical engineering from Yale University, New Haven, CT, USA and B.S. degrees in electronic engineering from Shanghai Jiao-Tong University, China. He works on computational network biology, genomic signal processing, and biomedical signal and image analysis.