Topology Seminar at Texas State

<u>When</u>: Tuesday, 2019, September 17, 12:30-1:50 p.m.

<u>Where</u>: ENC 230

<u>Speaker</u>: Dr. Hiro Lee Tanaka

Topic: Chain Complexes, Categories,
Categories of Modules

<u>ABSTRACT</u>

We'll motivate this lecture series by citing the homological mirror symmetry conjecture and claiming that the Fukaya category is an interesting object. Then we'll review the background for understanding what kind of object a Fukaya category is (it's an A_∞-category). We'll begin with chain complexes, modules, categories, dg-categories (motivating them by Ext and Tor), and then A_∞-categories (motivating via the based loop space).