SEMINAR IN PHYSICS

Friday, February 10, 2017
3:30-4:25 – Ross 0220

~ Refreshments! ~

Pedagogy Strategy to Evolve the Novicelike Student into an Expert

Joe Maletta
UNC Physics Major

The focus of this presentation is to study the most popular pedagogical way of teaching the sciences, Pure Lecture, and compare it to a style known as Peer Instruction. In this presentation we study four groups, all in an introductory Physics course, that were taught with Peer Instruction or Pure Lecture based lessons at Beijing Normal University. We analyze how the different styles of teaching affected the students' overall growth in how they feel about learning Physics using the Colorado Learning Attitude about Science Survey. In the end, we look at how the students who were in the Peer Instruction classes experienced more positive levels of growth than their peers who were taught in a Pure Lecture based class. We also take a look at how the Peer Instruction classes helped bridge the gender gap and some of the limitations of using a Peer Instruction based class.

Mechanics of Origami Bellows

Renato Rubio
UNC Physics Major

The purpose of this presentation is to gain an understanding of the mechanics of origami folded cylinders, more commonly known as origami bellows. The two main types of origami bellows highlighted in the article are the Miura-Ori and Kresling tessellations. The research consisted of developing a design which allows for easy deployment while retaining the structural integrity of the bellows. Within the presentation there will be information of the methods used to determine the designs for the bellows. Moreover, I will discuss areas where the bellows have already been implemented, and where they could be heading with a few tuning modifications.