Kennesaw State University

College of Science and Mathematics

Department of Mathematics

# Infinite Horizions Lecture Series 2014-2015

**Thursday, April 23, 2015**

- Speaker: **Dr. Fumiko Futamura**, Southwestern University
- Title: How to Mathematically Immerse Yourself in a Work of Art
- Time/Location: 4:30-5:30 pm CL 1009, reception to follow
- Abstract: A perspective drawing is a 2D drawing that gives the illusion of looking out of a window at a 3D world. At times, the illusion seems to fall flat... but perhaps this is because we're looking at it all wrong. We'll discuss the simple mathematics that will help you magically enter the world of a perspective drawing, including a new technique developed by a student. We will also see how problem solving in art can lead to some very interesting mathematical ideas.

**Monday, February 2, 2015**

- Speaker: **Dr. Erica Flapan**, Pomona College
- Title: Mirror image symmetry from different viewpoints
- Time/Location: 3:00-4:00 pm HS 1105, reception to follow in HS 1001
- Abstract: In this lecture, I will give examples of mirror image symmetry in life, in mathematics, and in chemistry. I will explain why it is important to determine whether a molecule has mirror image symmetry, and discuss the differences between a geometric, chemical, and topological approach to understanding mirror image symmetry. Then I'll present examples of molecules that are symmetric or asymmetric from different viewpoints including some of my own results about topologically asymmetric molecules. No background is necessary to understand the lecture.

**Monday, December 1, 2014**

- Speaker: **Dr. Jacqueline Jensen-Vallin**, Lamar University
- Title: Is it Art or is it Knot?
- Time/Location: 2:00-3:00 pm in HS 1105 (Prillaman Hall), followed by a reception in HS 1001
- Abstract: You know how to tie your shoes, but you may not know that the knots we tie are actually mathematical objects to be studied. This talk will introduce knots and many knice properties of knots, with a concentration on mathematically celtic knots. Not only (or is it knot only?) is this talk accessible to all students, but it will spotlight work done by a student. We will also discuss lessons that can be learned just by being a math major, even if you don't study knot theory (but why wouldn't you?). Here are some of the knice properties of knots:
    - The definitions are clear.
    - There are lots of cool pictures.
    - There are even cool (and easy to ask) questions.
    - Knot theory has applications in many fields, including biology (DNA), chemistry (chirality), and physics (the shape of space).