

# MANY CHEERFUL FACTS

presents

## Ruler, compass, paper, and beyond – Trisecting the angle.

a talk by Gregory Igusa

12:10 - 1:00pm on Wednesday, November 1st, in room 1015.

In this talk, we start by going over traditional straight-edge and compass constructions, and fairly quickly prove more or less everything there is to prove about constructible points. We will then proceed to define and then consider origami-constructible points, and, time permitting, other forms of constructibility.

Before the talk is done, I will trisect the angle at least once, and I will draw at least one dotted line on the blackboard. I will also use at least one actual cheerful fact about the square of the hypotenuse. I will not sing.

*I am the very model of a modern Major General,  
I've information vegetable, animal, and mineral,  
I know the kings of England, and I quote the fights historical  
From Marathon to Waterloo, in order categorical;  
I'm very well acquainted, too, with matters mathematical,  
I understand equations, both the simple and quadratical,  
About binomial theorem I'm teeming with a lot o' news,  
With many cheerful facts about the square of the hypotenuse!*

- Gilbert & Sullivan  $P \circ P$

The website for Many Cheerful Facts is  
<http://www.math.berkeley.edu/~siveson/cheerful/>