

MANY CHEERFUL FACTS

presents

The Square-Peg Problem. Well, The Rectangular-Peg One At Least.

a talk by Jeffrey Doker

12:10 - 1:00pm on Wednesday, January 24, in room 1015.

The question at hand is one that is easy to ask: given a Jordan curve in the plane, are there four points on it that form the vertices of a square? However, as with many simply-worded math questions, the answer to this one is pretty hard. In fact, nobody knows the answer. This talk will attempt to explain how the problem can be solved outright if we relax the hypothesis to allow rectangles. Time permitting, I will also wave my hand while describing some very creative techniques employed by Dr. John McCleary to solve the square-peg problem restricted to Jordan curves which are smooth.

This talk is based on a talk that was given by John McCleary at the San Francisco State University Algebra-Geometry-Combinatorics Seminar last September.

*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/~slofstra/mcf>