Math & C.S. Colloquium

We are at the dawn of a robotics revolution where the visions of interconnected heterogeneous robots in wide-spread use will become a reality. Similar to "app stores" for modern computing, people at varying levels of technical background will contribute to "robot app stores" as designers and developers. However, current paradigms to program robots beyond simple cases remain inaccessible to all but the most sophisticated of developers and researchers. In order for people to fluently program autonomous robots, a robot must be able to interpret commands that accord with a human's model of the world. In his talk, **Dr. Chad Jenkins** will present his research on making robot programming more accessible and general. Specifically, he will present his work on improving perception of people and scenes to enable robot learning from human demonstration.

"Robotics to Reach Out and Change the World"

Presenter: Dr. Chad Jenkins
Date: **Thursday, December 1st**
Time: 4:00
Place: SAC 113
Refreshments at 3:50.

Dr. Chad Jenkins is an Associate Professor of Computer Science and Engineering at the University of Michigan. He received his B.S. in Computer Science and Mathematics from **Alma College** (1996), M.S. in Computer Science from Georgia Tech (1998), and Ph.D. in Computer Science from the University of Southern California (2003).

Eight New Members of PME

Alma College's chapter of Pi Mu Epsilon, a national mathematics honorary, re-cently added eight new members to its ranks. The new members are **Ethan Akins**, **Kevin Essenmacher**, **Eric Ferrara**, **Naria Ford-Thompson**, **Nicholas Fuller**, **Kelly LaPorte**, **Cameron Spitzfaden**, and **Chase Schultz**. Existing members are: **Luke Bent**, **Jessica Drife**, **Nikki Green**, and **Laura Kelly**.
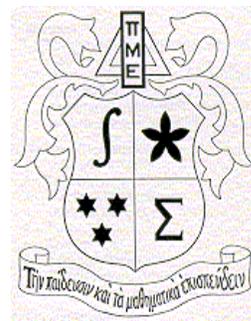
What is the Fields Medal?

Often called "The Nobel Prize of Mathematics," the Fields Medal is one of the most prestigious awards in mathematics.

Unlike the Nobel Prize, the Fields Medal is only awarded every four years. The organization sponsoring it is the International Congress of Mathematicians (ICM). Each year that it is handed out, ICM recognizes between two and four mathematicians. In order to be eligible for the

award, a mathematician must be under forty years of age.

It was in 1924 that the award was first proposed. The secretary of the 1924 ICM, Canadian mathematician Professor J.C. Fields, donated the funds to establish the awards that were named in his honor.

Lars Valerian Ahlfors and Jesse Douglas were the first recipients of the award in 1936. Ahlfors was awarded the medal for his research on surfaces related to Riemann surfaces of inverse functions of entire and meromorphic functions. Douglas received the award for his work in regards to the Plateau problem which is concerned with finding minimal surfaces for some fixed boundary.

The Fields Medal is supposed to be awarded next in 2018. Along with the prestige of being awarded a Fields Medal, winners now receive the equivalent of $15,000 Canadian dollars. *Cheyenne Kalfsbeek*

The Math Club

The Math Club meets **EVERY TUESDAY** at 9:00 pm in Dow 132. At one of its next meetings, either November 29 or December 6, the group will meet at Prof. Sipka's house for a time of **food** and **fun**.

Everyone is welcome!

Need Help in Precalc, Calc 1 or Calc 2?

Tutors are available to students in Precalc, Calc 1, and Calc 2 on the following days and times.

Precalc: Mon & Thur, 7:30 – 9 pm in SAC 213.

Calc 1: Mon, Tue, & Thur, 7–9 pm in SAC 216.

Calc 2: Tue & Thur, 7–8:30 pm in math bay area.

Solution to Previous Puzzle

The distance between two goalposts on a football field is 360 feet (120 yards). A rope of length 360 feet is about to be tied tightly between the bottom of the two goalposts, when an extra foot of rope is added. How high can the rope be lifted in the middle of the field?

Gannon Clifford was the first student to submit a correct answer of 13.43 feet, followed closely by **Eva Hengeler's** correct submission.
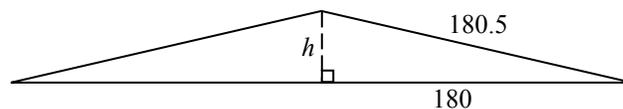
$$h = \sqrt{(180.5)^2 - (180)^2}$$
$$= \sqrt{180.25}$$
$$\approx 13.43 \text{ feet}$$

A Martin Gardner Puzzle - Just for Fun

Five toothpicks form the giraffe shown to the right. Change the position of *just one* toothpick and leave the giraffe in exactly the same form as before. The reformed animal may alter its orientation or be mirror reversed but must have its pattern unchanged.
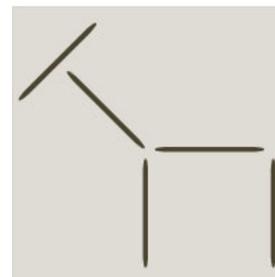
Almagest on Sabbatical in Winter Term

This is the last issue of the *Almagest* for the rest of the school year. The newsletter and I will be on sabbatical during the winter term. So, the next won't appear until September 2017. *T.S.*