

# The Almagest

*The bi-weekly newsletter of the Department of Mathematics and Computer Science. Your trusted source for news.*

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Alma College  
Alma, MI 48801

## Senior Presentations

Please make an effort to attend the final two senior presentations of the term. The first presentation begins at 4:00 pm in SAC 113.

**Tuesday, March 31<sup>st</sup>**

**Ryan Malacina:** *The Benefits of Open Source Software Both Today & in the Future*

**Riley Kult:** *Computational Psephology*

## Seniors On The Move

In a few short weeks, our seniors will begin the next chapters of their lives, and we thought you'd like to know a little bit about their plans.

**Collin Lesko** will be working at IBM in East Lansing as an application developer.

**Katie Krauss** will pursue a high school teaching position in Michigan, where she hopes to teach math and/or German.

**Joonas Kotka** is headed to grad school to pursue a masters degree in engineering management. He'll attend Duke, George Washington University, or UC-Irvine.

**Riley Kult** will be pursuing a job in political consulting, so that he can put both of his majors to use building election models and honing election strategies.

**Tom (Kelly) Paron** will be attending dental school at the University of Michigan.

**Mallory Pruett** will be moving to Traverse City to work for Auto-Owners Insurance as a software developer.

**Emma Patmore** plans to attend graduate school to study physics.

**Phil Ryskamp** will be joining the Air Force, pursuing a career that allows him to work with computers.

**Justin Closs** will be jumping right into the work place looking for jobs. After finding one, he hopes to continue his education half time.

**Ryan Malacina** plans to search for a job in IT or as a software developer.

*The faculty in the Department of Mathematics and Computer Science wishes you well.*

## New Math Faculty

The Department of Math & C.S. has completed its search for two new math faculty, filling the huge holes resulting from the retirements of **Drs. Nyman** and **Putz**. Our new colleagues are: **Ms. Morgan Fonley**, an applied mathematician who's currently completing her Ph.D. at the University of Iowa, and **Dr. Brad Westgate**, a statistician currently teaching at Mt. Holyoke College.

## The Math Club

The Math Club met on **Tuesday (3-24-15)** and answered the burning question, *How can the digits 8,3,3,3 be combined using math symbols to make 24?* See the answer at the end of the newsletter.

The next meeting will be **Tuesday (3-31)** at 9pm in Dow 132 where the group will have a study party and watch the Big Bang Theory.



## Chicks Understand

Picture the numbers from one to ten. If you're like most people, you probably imagined the numbers ordered in a line with one on the left and ten on the right. The question is, why do we default to the mental representation of smaller numbers to the left and larger numbers to the right? Has the number line been ingrained upon our minds through its use in math classes throughout elementary and high school; is it the result of our reading from left to right; or is this structure something biologically inherent to our representation of numbers. A certain adorable, yellow, fluffy critter may hold insight into the answer.



The argument that the spatial representation of numbers with smaller numbers on the left and bigger ones to the right is hard-wired into our brains has been supported by Rosa Rugani's experiment with baby chicks. Rugani, of the University of Padova, trained chicks to locate a tasty treat of meal worms behind a panel placed in the center of their cage. These panels featured five red squares on them. When the single panel was replaced with two panels (one on the right and one on the left), where the chicks looked for their treat was determined by the number of red squares on the panels. If both panels had fewer than five squares, they consistently looked to the left; when more than five squares were present, they looked to the right. Rugani argues that these results support the notion that a linear representation of numbers is innate to all. After all, if chicks possess the basics for understanding the number line, what other core principles of mathematics are likely hardwired into our brains?

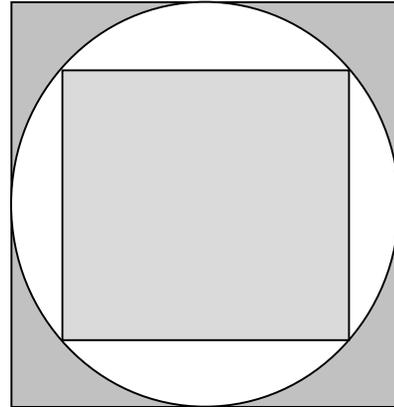
Interested? Read more about Rugani's chicks at <http://nyti.ms/1EaZgsS> . *Katie Krauss*

## Thank You Katie Krauss

We have been fortunate these past two years to have **Katie Krauss** serve as student assistant for the *Almagest*. She has done an extraordinary job of finding interesting topics to share with us in her bi-weekly column. We thank you for all of your hard work, and we wish you the best in your future career as a math teacher.

## Puzzle of the Bi-week: Just for Fun

A square is inscribed in a circle which is inscribed in a square. Find the *ratio of the areas* of the two squares.



A prize of **\$2.00** will be awarded to the **FIRST** student who submits a correct solution to Prof. Sipka.

## Look for the Almagest Next Fall

This is the final issue of our newsletter for the academic year. We hope you have enjoyed reading the *Almagest* and have found it to be your trusted source for departmental news.

Student assistant:	Katie Krauss
Faculty advisor:	Tim Sipka
Distribution:	Deb Smith

Answer to Math Club question:  $8/(3 - (8/3))$