

# ∫ Integram

## EMU Mathematical Sciences Department

### Spring 2009

In this issue:

- [Congratulations Graduates](#)
- [Department Brunch and Alumni Panel](#)
- [International Mathematical Contest in Modeling](#)
- [Department News](#)
- [Problem Corner](#)

[Back to top](#)

## Congratulations Graduates

We have six graduates this spring (although a few have some remaining requirements to fulfill this summer or fall).

Jevon Coleman and Nathan Swartzentruber are CS majors. Briana Gascho, Sarah Kalichman, and Annette Lolchoki are math majors and Michelle Swartley is a math education major.

Sarah Kalichman is also one of the ten recipient of EMU's "Cords of Distinction" this year.

[Back to top](#)

## Department Brunch and Alumni Panel

On Saturday, March 21, at 11:30 a.m., seventeen EMU mathematical sciences students and faculty joined five recent departmental alumni (and one spouse) for a brunch in the West Dining Hall. Following the brunch, the five alumni shared about their life since EMU.

In addition to describing the path taken since graduation, the panelists talked about the ways in which they see faith being integrated into vocation. Faculty enjoyed hearing updates from these five former students, and current students expressed appreciation for the opportunity to learn more about the career options for graduates with a degree in the mathematical sciences. As first-year student Karla Mumaw said, "I always like to hear stories from other people, and it was an added bonus to hear how they are using their math skills."

### Our Alumni Panelists

**Rachel Sims**, a 2007 Mathematics Education graduate, taught for one year at Turner Ashby High School. In the

summer of 2008, Rachel began volunteering about 30 hours per week at Our Community Place in Harrisonburg, doing various bookkeeping and secretarial duties. Currently, Rachel is transitioning into a paid role as Volunteer Coordinator and Assistant to the Director at OCP.

**Trevor Bare** graduated in December of 2006 with a major in Mathematics and a minor in Business Administration. Following graduation, Trevor moved to Harrisburg, Pennsylvania, married classmate Jenee High, and began working as an actuary at Conrad Siegel Actuaries, where Trevor had previously done an internship.

After graduating from EMU in 2005 with a major in Mathematics and a minor in Economics, **Zachary Kurtz** entered a graduate program in Mathematics at the University of Delaware. Upon completion of a Masters degree, Zachary began work for the Federal Reserve. Beginning in the fall semester of 2009, Zachary plans to enter a PhD program in Statistics at Carnegie Mellon University.

**Michael Swartley** graduated from EMU in 2004 with a major in Computer Science and minors in Business Administration and Computer Information Systems. Since then, Michael has worked in Harrisonburg at Rosetta Stone, first as a QA (Quality Assurance) Analyst and more recently as a Business Analyst in the IS department. His work is primarily project based and involves supporting current processes as well as implementing new functionality with Rosetta Stone's business systems.

After completing two years in EMU's Pre-engineering program, **Erik Frankenfield** transferred to Drexel University in the fall of 2003, where he majored in Mechanical Engineering. Upon completion of his engineering degree, Erik started a job at GlaxoSmithKline. Currently, Erik is employed as a process engineer at the CRB Consulting Engineers, Inc., at their office in Plymouth Meeting, Pennsylvania.

[Back to top](#)

## International Mathematical Contest in Modeling

Congratulations to **Kendall Garber**, **Briana Gascho**, **Dustin Good**, **Sarah Kalichman**, **Annette Lolchoki**, and **Steven Rittenhouse**! These six students from the EMU Applied Math class participated in the MCM this year for five days in early February.

One EMU team won the "Meritorious" award and the other was a "Successful Participant" this year. As the number of participants in the contest grows each year, we are pleased that EMU teams continue to do well.

Both EMU teams worked on the problem **Energy and the Cell Phone** dealing with the increased energy use as people transition from use of landline telephones to cell phones. Specific points considered included models of population growth and increased usage, inefficiencies of current methods of recharging of batteries, shorter lifespan of cell phones and components than traditional phones, and the social impact of the two types of communication systems.

This year there were 9 Outstanding Winners, 294 Meritorious Winners, 298 Honorable Mentions and 1074 Successful Participants out of approximately 2500 registered teams from the US, Australia, Canada, China, Finland, Germany, Hungary, Indonesia, Ireland, Mexico, Singapore, South Africa, and the United Kingdom.

We've put the paper written by our Meritorious team titled **You Could Cut that Energy with a RAZR** on the web at <http://www.emu.edu/math/mcm/2009solutionpaper.pdf> and any formatting errors can be blamed on the imperfect conversion from the original .docx format rather than on the team members Briana Gascho, Dustin Good, and Annette Lolchoki.

You may also want to visit the main contest web site at <http://www.comap.com/undergraduate/contests/mcm> where you can find the original problem specification and other results including general commentary from the judges.

## Department News



### We're on YouTube!

The EMU Marketing Department has helped us create a YouTube video, describing mathematical sciences at EMU. It's now featured on our department webpage.

### Faculty Updates

**Dr. Diek Wheeler**, who taught two courses for our department during the 2008-09 academic year, has accepted a full-time research position at George Mason University. We thank Diek for his contributions to our department and wish him the best at GMU. Adjunct instructors will teach several courses in 2009-10 while we continue the search for a computer science faculty member to join the department. We also express our appreciation to **John Horst**, faculty emeritus, for his willing assistance as a departmental volunteer.

Three of the four full-time Mathematical Sciences faculty members marked milestone years of service this spring: **Leah Boyer** has completed five years of teaching at EMU; **Charles Cooley** and **Deirdre Smeltzer** have each completed ten years of service. (**Owen Byer** is the department veteran, with eleven years of EMU teaching under his belt!)

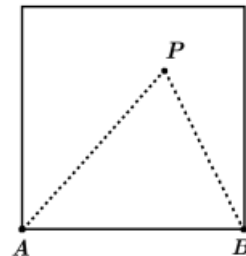
## Problem Corner

Denton Yoder, Craig West, and Jarad Buckmaster each submitted solutions to our last Integram problem, which asked you to find the area of the quasi-triangular region bounded by three congruent circles. Ellis Detwiler went beyond the call of duty and solved the problem for the general case where the circles have different radii.

## New Problem:

Given a randomly selected point  $P$  within a square with a side  $AB$ , what is the probability that triangle  $ABP$  is obtuse?

Submit solutions to Owen Byer at [byer@emu.edu](mailto:byer@emu.edu).



### *What have you been doing since leaving EMU?*

Do you have a PhD in Computer Science or closely related field? Does joining the EMU faculty sound appealing to you? If not, do you know of someone else you would recommend? We would love to hear from you.

And as usual, even if you can't help with our job search, you can send your personal and professional updates to Deirdre Smeltzer at [smeltzed@emu.edu](mailto:smeltzed@emu.edu).

[Back to top](#)

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