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EMU Mathematical Sciences Department

Summer 2014

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Solar Powered Greenhouse



Congratulations to **Jordan Leaman, Jonathan Nisly, Ryan Swartzentruber, Alec Thibodeaux, Matt Zook**, and their advisor **Esther Tian** for winning second place in the first- and second-year Engineering Design Team Division poster competition at a regional conference of the American Society for Engineering Education, held in Georgia at Mercer University this spring.

Their solar powered greenhouse was the first project of EMU's chapter of Engineers for a Sustainable World (the first chapter in Virginia) and was funded by Earthkeepers. More information, including the winning poster, are in

the news story linked at emu.edu/engineering.

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EMU ACM/Computer Club Thanks VistaShare for a Successful Year

The EMU ACM/Computer Club, a student group that meets monthly to discuss topics of interest within CS and promote educational activities had a very successful year! Part of our success was the pizza made available to our meetings by a generous donation from VistaShare, a local company employing many EMU alumni. Highlights of our year included participation in “One Hour of Code” in December, a visit from alumni **Aaron Springer** and **Sam Kauffman** giving advice to current students, and a talk by alumna **Rochelle Yoder**, entitled My post college career journey from “I don’t know what I’m doing.” to “Hey, I can do this.”

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Congratulations

Competition Winners

Ten EMU students participated in our **fourth-annual mathematics competition**, and first-year student **Aron Harder** captured the top prize.

Congratulations to senior **Stephen Quenzer** who won first place in Harrisonburg’s Immerge Technologies’ **Express Yourself web design contest**. His winning project is at: thequenzerden.com/imaginationunlimited.

Two EMU teams competed in **Kryptos**, a national **cryptanalysis competition** hosted by Central Washington University. Each team had four days to break three challenging cyphers (secret messages) to discover the original English plaintext message. A team of CS majors, **Josiah Driver**, **Stephen Quenzer**, and **Aron Harder**, was the only team out of 49 competing teams to solve all three of the problems, earning them first place. A second team, consisting of **Mark Harder** (double major in math and CS) and EMHS freshman **Cameron Byer** solved two of the problems and took third place. More information, is the news story linked at emu.edu/cs.

Senior **Mark Harder** was also awarded the **Outstanding Computer Science student award** for his contributions in starting the ACM/Computer club and his significant contributions tutoring other CS majors. Thank you Mark!

Graduates

We cheered on six Mathematical Sciences graduates at EMU’s 96th annual commencement ceremony on April 27: **Mark Harder** (CS & Math), **Stephen Quenzer** (CS), **Derek Sauder** (Math & Psychology), **RJ Sims** (CS), **Isaac Tice** (CS), and **David Waybill** (CS).

Congratulations – **and stay in touch!**

Brenneman-Longacher Scholarship

The 2013-2014 scholarship recipients are **Jordan Leaman** of Harrisonburg, VA who has intentions of going to graduate school for engineering after completing a math major at EMU and **Aron Harder** of Mountain Lake, MN who is double-majoring in math and CS.

Faculty Updates

Congratulations to **Dee Weikle** on her promotion to associate professor of computer science.

Owen Byer continues in his role as department chair and taught a Bridge course for the Honors colloquia this year.

We greatly miss **Deirdre Smeltzer** in the department, but her presence is still be felt on campus in her role as Undergraduate Dean. She hopes to be able to teach one course per year, which students will appreciate.

John Wallbaum will be in the department for one more year while **Charles Cooley** is on sabbatical next year.

Dr. Esther Tian



We are pleased to welcome **Dr. Esther Tian**. She received her B.S. and M.S. degrees in Mechanical Engineering from Changsha Institute of Technology in China and a Ph.D. in Mechanical Engineering from the University of Virginia. Esther joins EMU as an Assistant Professor of Engineering, teaching engineering, statistics, and mathematics courses. Her research interests include neuronal control mechanism of animal locomotion and robotics, as well as engineering design education. Esther's hobbies are reading and hiking. When hiking she enjoys striking new routes, although there is one trail she is especially fond of. It happens to be called Old Trail.

Dr. Daniel King



We are pleased to welcome **Dr. Daniel King**. He graduated with a bachelor's degree from Goshen College, where he majored in Physics and Music. He received his M.S. and Ph.D. degrees in Theoretical and Applied Mechanics from the University of Illinois, where his research focused on the dynamic interactions between ultrasound and contrast agent microbubbles. Daniel joins EMU as an Assistant Professor of Physics and teaches physics, chemistry, and mathematics courses. In addition to bubbles, his broader research interests include acoustics and fluid mechanics. In his spare time he enjoys playing Ultimate and writing quirky little pop songs.

Problem Corner

Congratulations go to Jesse Blosser, Larry Lehman, David George, Brent Siegrist, and John Snyder for correctly determining that the answer to the Summer 2013 Integram problem was 44287/177147.

New Problem:

This time we have another probability problem. A regular die is one in which all the sides are equally likely to come up. Find a set of 3 regular dice (not necessarily six-sided and not all the same) that give you the same probabilities for rolling any sum as a standard pair of six-sided dice do. A number can appear on more than one side of each die, but we require that at least two different numbers appear on each die (to rule out some trivial solutions like adding a third die with all zeros).

Send your solution to Owen Byer at byer@emu.edu.

Are you (or do you know) a prospective student who is interested in studying math at EMU?

Contact Owen Byer at byer@emu.edu for information about applying for the Brenneman-Longacher Endowed Math Scholarship.

Recipients receive \$625 per year for four academic years, as long as they continue in the math major.

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