∫ Integram

EMU Mathematical Sciences Department
Spring 2003

In this issue:

Back to top

Department Graduates Eleven Students

The Mathematical Sciences Department had eleven majors graduate on April 27, 2003. Nine of the eleven students graduated with honors and five graduated Summa Cum Laude. Two of the graduates, David Brubaker and Christopher Noll, received the coveted Cords of Distinction honor awarded to ten students in the graduating class of 2003. The graduates were:

Jesse Blosser (Mathematics, Secondary Education Licensure): Jesse will student teach this fall and is interested in graduate studies.

Benjamin Browand (Mathematics; Minors: Camping, Recreation & Outdoor Ministry and Physics): Ben plans to travel the US/Canada/Mexico by motorcycle this summer with his grandfather.

David Brubaker (Computer Science & Mathematics — Honors Program): David is planning to spend a year with the voluntary service program of the Mennonite Church before pursuing graduate studies.

Kevin Burnett (Computer Science & Spanish, Minor: Mathematics — Honors Program): Kevin is planning to spend a year in Africa with MCC.

Welby Lehman (Mathematics; Minor: Art): Welby will be in VS short term and is interested in being involved in some aspect of environmentally friendly housing.

Christopher Noll (Mathematics, Secondary Education Licensure; Minor: Theater — Honors Program): Christopher will be teaching Mathematics locally at Turner Ashby High School.

Adam Nolley (Computer Science — Honors Program): Adam has been working in the Information Systems Department at EMU since graduating in December.

Drew Roynon (Mathematics & History): Drew will be back at EMU in the fall completing his double major.

Timothy Shoemaker (Computer Science; Minors: Mathematics & Psychology): Tim will be staying at home in Harrisonburg and is job hunting.

Gregory Sachs (Computer Science & Mathematics — Honors Program): Greg is getting married and then spending about 6 months traveling in Europe; his long range goal is to work in the area of hardware design.

Kristy Janae Waltner (Mathematics): Kristy is working at a camp this summer and then perhaps voluntary service in the fall and eventually maybe teach in middle school.

Three EMU Mathematics Teams Participate in the 19th Annual International Mathematical Contest in Modeling

The 2003 MCM began at 8:01 PM. on Thursday, February 6, and officially ended at 8:00 PM. on Monday, February 10, 2003. During this extended weekend the following teams spent long intensive hours on an open-ended problem. Each team reserved a room in the Suter Science Center for their headquarters. Pizza, music and even sleeping bags carried them through the long hours. A total of 638 teams from institutions worldwide participated.

Team #603: Jesse Blosser (Mathematics Education), Erik Frankenfield (Pre-engineering), and Weldon Miller (Mathematics); and Team #608: Zachary Kurtz (Mathematics), Lydia Ramer (Mathematics Education), and Gregory Sachs (Mathematics and Computer Science) worked on a discrete mathematics problem. The problem dealt with the use of a Gamma Knife in the treatment of tumor cells in brain tissue. Teams were asked to design a model to provide the fewest and most direct doses in order to treat the tumor without going outside the target tumor itself.

Team #605 consisted of Laura Hershberger (Mathematics), Joshua Leland (Pre-engineering), and Clinton Miller (Pre-engineering). They worked on a continuous mathematics problem in which teams were asked to determine the size, location, and number of cardboard boxes needed to cushion a stunt person's fall using different combined weight's (stunt person and motorcycle) and different jump heights.

All three of the teams received the rating of Successful Participant.

EMU has had a total of twelve teams that have participated in the MCM beginning in 1994. Stop by and visit the display on our departmental bulletin board outside the physics lab.

— John L. Horst and Charles Cooley, advisors

Department News

"Clinical Trial Design Issues in Cancer Research" was the topic discussed by Dr. Sally Hunsburger from the National Cancer Institute on February 7. The talk focused on the role of mathematics is research design.

Jesse Blosser created a very nice bulletin board display featuring the departmental faculty and student majors.

Major Field Exams:

In April, EMU had eleven seniors take the Major Field Exam in either Computer Science or Mathematics. Overall, the seven students taking the math exam averaged 167 out of 200, which placed them in the 91st percentile of all

colleges and universities taking the exam. Jesse Blosser scored a 191, which placed him in the 97th percentile of all students taking the math exam. The four EMU students who took the Computer Science exam averaged 158 out of 200, which placed EMU in the 83rd percentile. Adam Nolley received the highest EMU score (169 points, 85th individual percentile). Congratulations to all students!

Problem Corner

The Fall problem elicited many correct responses. Ellis Detwiler, Françoise Marchat, Jesse Blosser, Jeb Swartzendruber, Roy Heatwole, Blake Tanon, Aaron Trimble, Jon Byler, and Kevin Nafziger all correctly determined that 480 husbands were both taller and heavier than their wives. Congratulations to all!

New Problem:

A mouse has three rooms to go into. If it goes into Room 1 it will find the cheese in 3 minutes. If it goes into Room 2 it will look for cheese for 4 minutes, won't find it, and then will go out. If it goes into Room 3 it will look for cheese for 5 minutes, won't find it, and will go out. The mouse will not remember that it was in rooms 2 and 3 after it goes out of them, and it will continue going in and out until it finds the cheese. (It can go into the same room again and again.) What is the average time for the mouse to find cheese?

Submit solutions to Owen Byer: byer@emu.edu