# ∫Integram

## EMU Mathematical Sciences Department
## Winter 2007

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# China Sabbaticals

Owen Byer and Deirdre Smeltzer each spent a sabbatical semester in China during the 2005-06 academic year. Owen and his family lived in Nanchong, Sichuan province, from August through December of 2005; Deirdre and her family took their place for February through July of 2006. The purpose of these sabbaticals was three-fold:

1. to experience the Chinese culture;
2. to gain new perspective by teaching English to Chinese college students under the China Educational Exchange program;
3. to make progress on a geometry textbook currently being written by Owen, Deirdre, and a colleague at the University of Delaware, Dr. Felix Lazebnik.

The following two stories provide glimpses into the daily life of the Byer and Smeltzer families in China. This first relates Owen Byer's minor adventure while trying to get a simple haircut. The second is a description by Claire Smeltzer, age 9, of the wedding of one of Deirdre's Chinese colleagues at North Sichuan Medical College. For even more stories, **and photos**, visit the department web page at **http://www.emu.edu/math/integram/china**.

## The Haircut

I went in for a hair cut yesterday. I was motioned over to the wash basin, where I tried to explain that I had already washed my hair, but then I remembered that in many shops they find it easier to cut the hair when it is wet, so I obliged. Barber #1 lay me down and gave me a lathery shampoo along with a scalp rub. Then I was ushered over to the chair for the haircut by Barber #2. He did a fine job, although it took quite awhile. I even succeeded in explaining how short I wanted it cut and that I did not want the sideburns he tried to leave me with. So, despite the fact that I had already been there for 40 minutes (rather than the 15 minutes I can get at the Hair Corral back in Harrisonburg), I was ready to leave happy.

But, no. Barber #1 again indicated that I should go back to the wash basin! What on earth? But I complied. I guess they wanted to wash out all of the little hairs that invariably get left on the top of my head after a haircut. The water was warm and it didn't take too long, so I was still happy as I jumped up ready to go do something important, like catch wasps with chopsticks.

But, no again! Barber #3 motioned me back over to the chair again, waving a hair dryer. I don't think my hair has ever been touched by a hair dryer; I wondered if maybe something akin to Samson losing his strength when his hair was cut would happen to me if went through with their plan. However, since I couldn't think of any personal characteristic that seemed so important that I couldn't lose it for this experience, I obliged again. But, I must have been fresh meat for Barber #3, because he didn't just dry my hair. After his obvious initial disappointment that I said "bu yao" (meaning "I don't want that") when he offered to use gel in my hair, he proceeded to fuss over it with a comb, teasing it this way and that. It was sometime during this second turn in the chair that I realized that I wasn't getting a haircut—I was having my hair styled! Of course, many of you probably do this regularly, but it was a new experience for me. Well, once my hour was up, they must have thought they earned their money, so they let me go. I must admit that other than being a bit poofy on top, I thought it looked pretty good. So, what did I pay for this entire experience? Five Chinese RMB, which is the equivalent of about 62 cents in the USA. And to think that I paid $7 for a haircut right before we came to China so that I wouldn't have to get it cut for a while once we got here!

— Owen Byer

## A Chinese Wedding

Most of a Chinese wedding is eating. Most of an American wedding is the actual getting married part. When we walked in the door there were some people at the door, and they gave two pieces of candy per person. Then we went inside and sat down at a table (there were a lot of round tables that people sat at). There was a smallish plate in the middle of a table, with peanuts, sunflower seeds, and many assorted candies and snacks on it (as sort of an appetizer). Everybody talked and ate from the little plate. It was very noisy. Then, after a long time there was a small ceremony in which the bride and the groom went up an aisle to a platform while some confetti was flying into the air. (There was no flower girl or ring bearer or bridesmaids.) After that there was LOOOOOOOOTTSSS of food. It filled the whole table and there were three layers of plates of food!!!! We ate until we were bloated and then left. It was quite an adventure!!

— Claire Smeltzer

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# Department News

## Wedding Bells

Sarah Loyer, who taught in our department for the 2001-02, 2004-05, and 2005-06 academic years, married Jason Baxter on Saturday, November 4. Sarah and Jason were acquaintances as undergraduates at Messiah College, and began dating in January of 2006 after they reconnected. The couple now lives in New Jersey, where Jason has lived since his graduation from Messiah. Sarah is commuting to Delaware to continue the Math Education graduate program she began this semester.

## Promotions and Contracts

Owen Byer and Deirdre Smeltzer both applied for and received promotion to the rank of Professor, effective August, 2006. Charles Cooley applied for and received a five-year contract, beginning in August, 2006. Being awarded a five-year contract is EMU's equivalent of being awarded tenure at universities with a tenure system.

## Faculty Research

Yong Zhang began teaching Computer Science at EMU in the fall of 2005. Already, Yong is establishing an impressive record of research. Yong received an EMU Summer Research Grant in order to work on the Hidden

Subgroup Problem, a problem in the area of quantum computation. Yong studied this problem from a structural complexity point of view. A draft of the resulting paper, "The central nature of the Hidden Subgroup problem", can be found on Yong's professional homepage.

## December Graduates

Three students graduated from our department this December. Trevor Bare married Jenee' High in January and works with Conrad Siegel Actuaries located in Harrisburg, PA. Tim Harder plans on beginning graduate school in Computer Engineering in Fall 2007. Aaron Trimble is spending the spring semester studying mathematics as part of the Budapest Abroad program in Hungary, and then he will begin medical school at the University of Virginia in the fall.

# Problem Corner

Congratulations go to sophomore Ben Ruth and alums Stephanie Horst and Brent Siegrist for correctly solving the problem in the Spring 2005 Integram.

## New Problem:

A game begins with n matches. Two players take turns removing matches. The first player can remove any number of matches except n. After the first turn, each player removes one or more matches, but not more than twice as many matches as the preceding player has taken. The player who takes the last match wins. Starting with n=1000, design a winning strategy for the first player.

Submit solutions to Deirdre Smeltzer: smeltzed@emu.edu.

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### *Alumni, what have you been doing since leaving EMU?*

Send your personal and professional updates to Deirdre Smeltzer at smeltzed@emu.edu.

Hearing from departmental alumni is interesting for us and helpful in providing specific answers for students who ask, "What can I do with a Math/CS major?"

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