

∫ Integram

EMU Mathematical Sciences Department

Fall 2005

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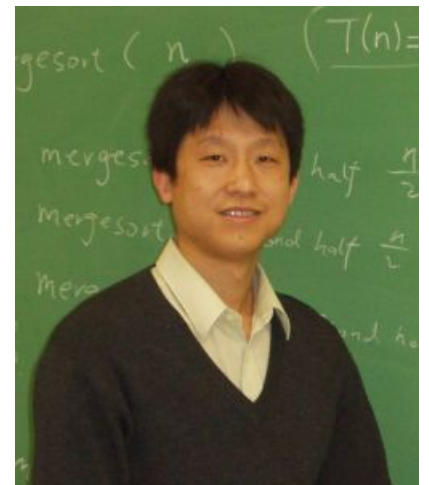
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Welcome to Dr. Yong Zhang

We are delighted to introduce our new computer science faculty member. Yong Zhang grew up in central China. His hometown of Zhengzhou is a mid-sized city by Chinese standards, with a population of “only” two million people! He prefers to be called by his given name, Yong, which means “brave” in Chinese.

Yong focused on the field of chemistry early in his career, earning a master’s degree in polymer (long chain molecules) chemistry in China. He came to the U.S. in 1996 and picked up another master’s degree in organic chemistry from Rutgers University. Following this, Yong worked briefly in the pharmaceutical industry, but soon discovered that he just didn’t enjoy working in the laboratory setting. His real interests and talents lay in more theoretical areas.

In the spring of 2000, prompted by a discovery that he enjoyed the computer science material that his wife was studying in a course she was taking, Yong began a doctoral program in computer science at the University of South Carolina. He completed his PhD this past spring. His research centered on the question of how one might go about programming a “quantum” computer. If such a computer could ever be built, it would have far more efficient computing power than today’s classical computers. Stop by Yong’s office sometime and he will be happy to tell you more about this!



Yong lives right on the edge of campus, next to Park Woods, with his wife, Lei Li, and their three-year-old son, Jerry. Yong met Lei, who was a medical doctor, in China. They were introduced through their mothers, who taught at the same high school.

In 2000, Yong and Lei both accepted Christ under the witness of members of a Chinese Bible study group at the University of South Carolina. Last year, as Yong neared completion of his Ph.D. program, he sent out applications for 80 different positions! EMU was the first to respond and offer an interview. At his interview for the EMU position, Yong found that he liked the university and felt God calling him to teach here. Yong and Lei are now growing in their appreciation of Mennonite values, especially in the area of living peaceably with others. For the fall semester, Yong has taught the Visual Basic, Software Engineering and Discrete Mathematics courses. He will continue with a challenging four-course load in the spring semester. Once Yong has gotten accustomed to the

teaching profession, he hopes to have more time to continue his research in quantum computing.

— John Horst

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Department News

Electronics Class

Physics professor Leah Boyer offered a newly-designed electronics class this fall. The class provided an introduction to basic analog and digital circuits, combining lectures and hands-on experiments. The four students in this first class built a record/playback module, robots, and a power supply. Their final projects included a PAiA FatMan analog synthesizer, Midi Controller Keyboard (using a real piano keyboard), a music light show kit, and an analog sampler/looper.

Faculty Sabbaticals

After seven years of teaching math at EMU, Owen Byer enjoyed a well-deserved sabbatical this Fall. Owen and his family spent the semester in China in the city of Nanchong. Owen and his wife, Barbara, taught classes to English majors at the North Sichuan Medical College through the China Educational Exchange program. Owen is also working on a geometry textbook with Deirdre Smeltzer and Felix Lazebnik of the University of Delaware. For the spring semester, Owen and Deirdre are trading places! Owen returns to EMU to teach and Deirdre and her family are taking the Byers' place in Nanchong. Watch for more about these sabbatical adventures in a future edition of Integram.

With the two professors on sabbaticals, Sarah Loyer is taking on most of the extra courses in addition to her duties as a residence director. And John Horst has come out of retirement for this year to teach part time and serve as interim director of the M.T. Brackbill Planetarium.

Homecoming Reception and Panel Discussion

On Saturday, October 15, during EMU's Homecoming weekend, the Mathematical Sciences Department sponsored a reception for departmental alumni, accompanied by a panel discussion by three alumni. The panelists, Stephanie Horst (C '99), Jonathan Schinhofen (C '90) and John Swartzentruber (C '85), answered questions about their sense of calling, the types of jobs they've held since graduating from EMU, and about the way that their faith intersects with their vocation. With post-college jobs ranging from computer software development to teaching math to working as an actuarial assistant, the panelists' comments were especially helpful to the current EMU students who attended the discussion.

Mathematics Scholarship

Contributions to the Brenneman-Longacher Mathematics Endowed Scholarship have exceeded our expectations and we thank you. With your help, this year the department was able to award both Ben Ruth of Harleysville, Pa. and Nathan Swartzentruber of Marion, Pa. a two-year \$1000 scholarship. As of December 2005 the endowment is \$94,805 and so next year we will be able to award one student a \$1000 scholarship renewable for four years.

Upcoming CS Curriculum Revision

We are starting a revision of the computer science curriculum and would like your input, especially if you are

currently working in a computing field. What are you doing with your CS degree? What skills or knowledge do you think CS graduates will need in the coming years? Send your comments and suggestions to Charles Cooley at cooleycd@emu.edu.

National enrollment in computer science programs is at a 30 year low and enrollments in other science and technical fields are also low, but the number of jobs in those fields is still increasing. Good news for CS majors.

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Problem Corner

No one submitted a correct solution to last semester's **number game problem**. Can you show why four is the correct choice to start a game?

New Problem:

Two math students, Nate and Ben, each have a number on their foreheads. Each can see the number on the other person's forehead, but not the number on his own. They know the two numbers are integers n and $n+1$, where n is at least 100. But they don't know who has n and who has $n+1$. So they started this conversation. Nate first says, "I cannot figure out my number, yet." Ben thinks for a moment and replies, "I cannot figure out my number, yet." They repeat this exact same conversation 53 times. And at this very point, Nate exclaims, "I figure out what my number is!" Ben immediately follows, "Me too!" What is Nate's number?

Submit solutions to Owen Byer: byer@emu.edu.

Alumni, what have you been doing since leaving EMU?

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

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