



Span

Keeping Us Connected

The Department of Mathematics
and Computer Science
Goucher College

Summer 2007

Welcome!

As the campus quiets down and moves into its slower summer rhythm, the time has come for the Department of Mathematics and Computer Science to launch its new initiative, a newsletter for our former majors and minors. We hope to use this publication to keep in closer touch with our alumni and alumnae, to let you know what the department is doing and to learn what you are doing. We hope that you enjoy reading our news and that you take the time to share your news with us.



Alumnae, students and faculty enjoying
Torrey Dinner 2007

Our Faculty

Some of our alumni/ae know our current departmental faculty very well, others have never met us, and most are somewhere in between. Thus, we take a moment to introduce ourselves. In future issues of this newsletter, we will tell you more about ourselves and what we do.

Mathematics

Gretchen Koch (2005)
Bob Lewand (1977)
Mark McKibben (chair) (1999)
Joan Morrison (1980)
Bernadette Tutinas (1981)

Computer Science

Tom Kelliher (1997)
Jill Zimmerman (1990)

Inside this issue:

<i>Torrey Dinner</i>	2
<i>More Social Events</i>	2
<i>Mathematics and the Environment</i>	3
<i>Study Abroad</i>	3
<i>Euler's birthday at the Swiss Embassy</i>	4
<i>Robots Invade Goucher College</i>	4
<i>An Active Year for Student Clubs</i>	4
<i>Seen on Campus</i>	5
<i>Homework</i>	5

Our Students

The graduating class of 2007 included five mathematics majors, four computer science majors, and one minor in each of the disciplines. Among the nine majors, seven had a second major or minor in art, dance, economics, music, political science or physics. The new graduates leave behind ten students with declared majors in mathematics and ten in computer science, plus a number of future majors who have yet to declare.

In this issue, we will begin to tell you a bit about our students, including our very active MaCS Club and our mathematics honorary society, Pi Mu Epsilon. Future editions should contain articles about summer research, study abroad and much, much more.

Torrey Dinner 2007

The 43rd Annual Torrey Dinner, held on Thursday, April 19, 2007, was a great success with more than 50 alumni, students, faculty and guests in attendance. We were particularly delighted that Professor Elaine Koppelman was able to take a break from her busy retirement schedule to come down from Martha's Vineyard.

The evening began with words of welcome from Brad Szelistowski, president of MaCS Club, and Mattie Whitmore, president of Pi Mu Epsilon, followed by a buffet dinner of various pasta dishes and salad.

After dinner and conversation, we moved to the formal part of the evening, beginning with Pi Mu Epsilon inductions. Four mathematics majors, George Ian Elder '07, Joseph Porembski '07, Sarah Smith '08 and Bradley Szelistowski '08, were inducted into the honorary society in accordance with the induction rituals prescribed by the society.

Inductions were followed by the awarding of annual departmental prizes. The Pearl Davis Leavitt Prize, honoring a mathematics major other than a graduating senior, was presented to Jordan Yoder, a sophomore from Nashville, Tennessee, whereas the Mary Katherine Boone Ekin Prize, celebrating the achievements of a graduating computer science major, was awarded to James Segedy of Gilford, New Hampshire, who, after an outstanding four years at Goucher College, will enter a doctoral program in artificial intelligence at Vanderbilt University.

Next in our program was our traditional alumni/ae speaker. This spring we were privileged to hear from Genevieve Monsees '02, who is currently working towards a Ph.D. in Epidemiology at Harvard University's School of Public Health. Jennie shared with us stories from her somewhat unorthodox route to graduate school and gave us an overview of her research with data on breast cancer patients. Having learned well during her

days at Goucher, Jennie involved the audience in her presentation and entertained a number of interesting questions at the end. Jennie's talk brought great satisfaction to the faculty members who taught her, as well as inspiration to our current students.

This year's Torrey Dinner ended in an unusual way, one not to be repeated soon, with a celebration of Euler's 300th birthday. Students, alumni and faculty donned party hats and gathered about a birthday cake to sing "Happy Birthday" to one of the greatest mathematicians of all time. So ended the formal part of the Torrey Dinner, but most guests lingered for quite a bit longer, laughing, talking and enjoying being together.

We look forward to seeing you at the 44th Torrey Dinner next April!



Alumna speaker, Genevieve Monsees '02

We were privileged to hear from Genevieve Monsees '02, who is currently working towards a Ph.D. in Epidemiology at Harvard University's School of Public Health.

More Social Events

For as long as any of us can recall, the Department of Mathematics and Computer Science has been quite accomplished socially. Of course, the Torrey Dinner has always been our main social event, but for some time now we have kicked off each academic year with the Pascal Pizza Party. Along with every student's favorite food, we are treated to student presentations

about summer research, internships and study abroad.

This past year, we found yet another way to get together with periodic lunches for majors, minors, faculty and friends. On randomly selected Tuesdays, we gathered in our departmental lounge to share whatever accidental assortment of delicacies

had found their way to our table. While the food has always been good, the company has been even better, and everyone seems to have enjoyed taking a break for a few minutes or a couple of hours to relax, talk, laugh, catch up. We look forward to continuing these lunches in the coming academic year.



Mattie Whitmore, Jordan Yoder and Professor Gretchen Koch congratulate new Pi Mu Epsilon member Brad Szelistowski.

New Initiatives

Through general alumni publications, you may have heard about the college's international initiatives and the new general education requirements. We invite you to read Professor Mark McKibben's thoughts on a new general education requirement and Professor Joan Morrison's synopsis of a visit to a British University.

Mathematics and the Environment

In the summer of 2006, I had the pleasure of cruising from Vancouver, Canada to Fairbanks, Alaska. What sights and experiences to behold!! From a train ride following the Yukon Trail, to dog-sledding on Lemon Glacier, to experiencing first-hand the caving of glaciers in Collee Fjord... it was an amazing experience. The naturist onboard was an absolute asset, describing everything we were seeing (and *not* seeing), and spotting every bit of wildlife imaginable. But, despite her enthusiasm and upbeat nature, she emitted a sense of despair as she spoke about the wildlife and the environment: "And to your right, you'll see a family of lion seals. (Sigh...) There used to be more." and "A few years ago, the ship couldn't have gotten this far into the fjord because the glaciers were *right here*." It was both exhilarating and depressing. As a society, there must be something we could do to help rectify this

situation.

The transformation of the college's general education requirements paved the way to re-thinking what a liberal arts and science education means in today's world. This resulted in eleven general education objectives, many of which embody the traditional aspects of a liberal arts and science education, with one especially notable addition – an environmental awareness requirement. Indeed, in today's society one is exposed daily to a multitude of environmental problems. Did you apply enough sunscreen before you set foot out the door? Is the pollution level Red or Orange? Just how far have the glaciers retreated *today*, and do the polar bears still exist? The list goes on and on...

Starting in Fall 2007, the Department of Mathematics and Com-

puter Science will begin to offer three new courses which will satisfy both the mathematics/logic general education requirement and the environmental awareness requirement. Two of the courses will be for non-majors and will discuss elementary models of environmental situations, one using a functional approach and the other, statistical. The third course, for majors and other students with at least a year of calculus in their background, will explore more advanced models of the environment (air pollution, hazardous waste transportation, ground water flow and population ecology).

We hope that these courses will give our students some rudimentary mathematical tools for understanding environmental problems, and perhaps bring us all a little closer to solving them.



Jodi and Mark McKibben with their Alaska tour guide and many new friends in the background.

The transformation of the college's general education requirements paved the way to re-thinking what a liberal arts and science education means in today's world.

Study Abroad

In October 2007, Dr. Tutinas and I visited the University of Sussex in England to explore the possibility of our students spending a semester there. The University is a short train ride from Brighton on the southern coast of England and approximately 60 kilometers from London.

We visited mathematics classes and met with committees from both the Mathematics and Computer Science Departments. While our visit was positive and productive, we anticipate some difficulties for Goucher students pursuing course work at Sussex. As is the case in many European

universities, students are accepted into a department, not the university in general. Students are then expected to take most of their courses within the program they have entered, conceivably four major courses during one semester, quite unlike our liberal arts approach. Sussex students work far more independently than ours and visiting students need to be self-motivated. Much of the course work is presented in the form of tutorials which expand upon formal, traditional lectures.

The Computer Science Depart-

ment follows the ACM and IEEE (professional associations) curricular standards and is quite closely aligned with Goucher's offerings. The Mathematics Department at Sussex is not nearly as compatible with our departmental curriculum so that choosing courses would be quite problematic.

We appreciated the opportunity to visit Sussex and to get a more accurate sense of the challenges that will have to be met as our students begin to satisfy the requirement to study abroad.



Academic buildings at University of Sussex

Euler's birthday at the Swiss Embassy

2007 marks the tercentary of the birth of the great Swiss mathematician, Leonhard Euler. As a part of the year-long, world wide celebration, the Mathematical Association of America, in co-operation with the Swiss Embassy, sponsored a lecture and reception at the Embassy in Washington D.C.

On March 5, four Goucher students (Ben Lawrence, Sarah Smith, Brad Szelistowski, and Mattie Whitmore) and three faculty members (Gretchen Koch, Robert Lewand and Joan Morrison) made the trip to D.C. for the festivities. We were treated to a wonderfully animated and informative lecture

on the life and work of Euler by William Dunham (who happens to be the author of the book being used in the History of Mathematics course this semester), and afterward enjoyed a *vin d'honneur* with various dignitaries and other attendees.



Students and faculty at the Swiss Embassy

Robots Invade Goucher College!

During the past academic year, our department had the good fortune to acquire two robots. The first one to arrive is an A255 robotic arm, nicknamed Armand. This is an articulated arm with five degrees of freedom. Armand has a gripper which can hold several different tools, including a writing tool, and a simple sensor. This has

allowed Armand to write door signs with names for all the members of the department as well as fortunate visitors.

In addition to the arm, we have an iRobot Create, nicknamed Otto, with a gumstix computer (the size of a pack of gum) running Linux as its control-

ler. Otto can be outfitted with various sensors and be programmed for autonomous tasks, hence its nickname.

Both robots will be used in a new robotics course in the Fall 2007, taught by Jill Zimmerman.



Tic Tac Toe anyone?

An Active Year for Student Clubs

This has been an exciting year for both Pi Mu Epsilon and the MaCS Club. We started the year off with a bang – mathematics major Jordan Yoder won fifth place in the United States National Collegiate Mathematics Contest, held in conjunction with the Mathematical Association of America's summer meeting in Knoxville, Tennessee. Jordan qualified to participate in the contest by being the top problem solver for the Pi Mu Epsilon Problem of the Month contest held at Goucher.

Our first group event during fall semester was the Pascal Pizza Party. Students who had participated in summer internships or research, as well as those who

had spent a semester abroad during the past year, gave presentations about their experiences. Throughout the fall, we continued the tradition of the Pi Mu Epsilon Problem of the Month.

The spring brought more activities for both groups. In honor of Pi Day, on March 14, MaCS and PME held a Pizza, Poker and Puzzles night for all members of the campus community. We had quite the turnout, and several faculty members joined in the poker fun! Of course, the Torrey Dinner took place in April. Shortly after that, the MaCS Club hosted Jelena Karanovic '99, currently completing her doctoral work at New York

University. Jelena spoke about how French culture has influenced their laws on digitization of copyrighted materials. It was a fascinating and enlightening talk about the interplay between computer science and anthropology.

This summer, two students, Matthew Spitznagel and Jordan Yoder, will be representing Goucher College in the United States National Collegiate Mathematics Contest. We wish them both the best of luck! We hope to have many more activities next year, including bringing speakers to campus. If you would like to be involved, please let us know!

In honor of Pi Day, on March 14, MaCS and PME held a Pizza, Poker and Puzzles night for all members of the campus community.

Seen on Campus

A great source of pleasure for faculty members is knowing how our graduates are doing. We enjoy having you visit with us, whether it is in person or by any kind of mail. Following is an embarrassingly incomplete list of alumni/ae with whom we have made contact this past year. Our sincere apologies go to those who were omitted from this list, with a promise to keep better records in the future.

Guests at the Torrey Dinner:

Andrew Bober '05
Katy Cordes '06
Mariya (Shkolnikova) Genzel '97
Lev Iwashko '03
Shana Lieberman '06
Ben Liyanage '03
Alison (Goldman) Marcus '06
Genevieve Monsees '02
Beth (Shew) Pelletier '97
Andy Shankman '03
Ed Shmookler '03
Max Weselcouch '05

Dropped by campus at other times during the year:

Adam Badik '99
Sanda Budinsky '06
Lisa (Bloomer) Green '94
Colin Davis '06
Jelena Karanovic '99
Phong Le '03
Brad Sappington '06
John Sergeant '06
Joel Tenenbaum '06
Ben Texeira '06

Visited via email:

Taylor Raines '97



Katy Cordes '06 and Amy Baker '07 at the Torrey Dinner

Homework

Could we possibly leave you without an assignment? Fortunately, it is a simple one. Please let us know how we can make this newsletter more successful. What did you enjoy in this inaugural issue? What would you like to see in future issues?

We would like to use this newsletter as a forum for disseminating information about alumni/ae, as well as faculty and current students. Would you send us some biographic information about yourself? When you do write, please include your name, year, major/minor, address and

email address. If you have contact information for departmental alumni/ae who might not be on our distribution list, we would appreciate receiving that. In short, please let us hear from you, and we will do our best to let you hear from us!

Would you send us some biographic information about yourself?

Contact Information

Please send general newsletter email to Professor Bernadette Tutinas at btutinas@goucher.edu.

For individual faculty:

Tom Kelliher	410-337-6189	kelliher@goucher.edu
Gretchen Koch	410-337-6541	gretchen.koch@goucher.edu
Bob Lewand	410-337-6239	blewand@goucher.edu
Mark McKibben	410-337-6281	mmckibben@goucher.edu
Joan Morrison	410-337-6317	jmorriso@goucher.edu
Bernadette Tutinas	410-337-6241	btutinas@goucher.edu
Jill Zimmerman	410-337-6227	jzimmerm@goucher.edu

We also invite you to subscribe to the department's weblog at: <http://blogs.goucher.edu/matrix>