

# Department Newsletter

## Department News

*"Don't count every hour in the day, make every hour in the day count." - Unknown*

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*How time flies!* Once again the school year is almost over and many of us are asking the age-old question, "where does the time go?"

Those of us who enjoyed this winter's snow and cold weather were afraid the time for winter activities would end too soon. Others thought the time spent waiting out the snow and frigid weather would never end!

Our students who recently graduated probably feel that the time spent doing homework and working on class projects over the years

seemed to drag by slowly. Now, for them time is quickly taking on another dimension as they begin a new chapter in their lives.

Our two longtime faculty who will be retiring at the end of the semester (see pg. 2) will soon look back on their years of teaching at NMU and wonder exactly where all the time went. Perhaps for them time will now slow down to an acceptable pace.

Our two new faculty (see pg. 2) who just spent their first year at NMU probably feel as though all their time was

spent in a whirlwind of new names, faces, schedules and classes.



Whether we feel our time passes slowly or quickly should not be as important as how we actually spend our time. And it's evident from everything that was accomplished this year that it was a year full of time well spent!

*(continued on pg. 5)*

## Students Take NMU Mathematics Education Global

Become a teacher and see the world! This has become the motto of several NMU mathematics education students who recently chose to student teach in international schools.

The most recent globe-trotting student was Jason Howes, a December 2007 graduate with a secondary mathematics education major and physics minor, who spent the fall semester student teaching at *Colegio Menor* in Quito, Ecuador. Jason was born in Lima, Peru, while his parents were themselves teaching at the American school there. After returning to Michigan for some of his pre-school years, the family moved to Buenos Aires, Argentina, when Jason was in the ele-

mentary grades. Having grown up in and traveled through much of South America, he returned to the U.S. fluent in Spanish and with an interest in teaching abroad in his blood. Thus, when the opportunity arose to apply to student teach in Ecuador, Jason eagerly seized the moment. Although his Spanish had become rusty from lack of daily use back home, he found that living with an Ecuadorian family was a wonderful aspect of the total experience. He reported that not only did family living force him to use his Spanish every day, but also "by living with a family, I really got to learn about their culture, their customs, and, best yet, I got to eat all of their awesome food."

One semester earlier, Mark Henrion, a May 2007 graduate who was also a secondary mathematics education major and physics minor, spent the winter term student teaching in a Department of Defense school in Bamberg, Germany. Mark's special interest in Germany stemmed from his high school days when his family hosted a German exchange student for a year. As the time for his student teaching approached, he weighed two options: to live at home and student teach at a high school nearby, or to go abroad and do something that, at the time, appeared "extremely exciting, scary, and unfamiliar." He chose the latter. Looking back, Mark recalls that, "During my first couple days in Bamberg, I had a lump in my throat. I

*(continued on pg. 3)*

The Mathematics and Computer Science Newsletter is published once a year for alumni and friends of the Mathematics and Computer Science Department.

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Sue LaForais  
Production Editor

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## New Faculty



Carol Bell

**Carol J. Bell** joined the NMU Mathematics and Computer Science Department faculty in fall 2007. Carol came to NMU from SUNY Cortland, New York.

She earned a Ph.D. in mathematics education from the University of Texas at Austin, an M.S. from the University of Illinois at Urbana-Champaign, and a B.S. in mathematics and computer science from Bemidji State University. Her research interests include teacher preparation, students' understand-

ing of mathematical proof, use of technological tools in teaching and learning mathematics, and the history of mathematics. She enjoys many outdoor activities such as hiking, fishing, cross-country skiing, and snowshoeing.



**Akhtar A. Khan** also joined the department in fall 2007. He received his Ph.D. in applied mathematics from Michigan Technological University in 2005 and his

M.S. in industrial mathematics from Technological University of Kaiserslautern, Germany. Akhtar worked as a researcher for three years in the Department of Applied Mathematics at the University of Erlangen-Nuremberg, Germany. He also taught at the University of Wisconsin-Barron County for two years. His areas of research interest include inverse problems, variational inequalities, set-valued optimization, and nonsmooth analysis.



Akhtar Khan

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## Longtime Faculty Retire

**Meredith Kulisheck** is retiring in August after having taught mathematics and computer science at Northern for more than 30 years. She is looking forward to having more time for volunteer work as well as for reading, knitting, gardening and learning more about photography. Since 2004, she and her husband Bob have been teaching only in the fall semesters, so they have been practicing being retired! They are looking forward to traveling to other parts of the United States and beyond. They began traveling in February when they attended an Elderhostel at the southern tip of Baja California, Mexico, where they saw and studied whales, sea lions, and the local culture. They are also looking forward



Meredith Kulisheck

to more visits with their daughter and her fiancé in Cleveland, and their son and daughter-in-law and grandsons in Fort Collins, Colo.

## GOOD-BYE

After 39 years of harassing students and colleagues, **Bob Myers** is finally retiring. He has no immediate plans other than to nap regularly in his favorite living room chair instead of catching up on his sleep during seminars and department meetings. His wife, Carolyn, who retired from the NMU library three years ago, says that she will keep him busy working in the garden and spiffing up their farm which has become a bit rundown after innumerable rowdy department parties over the years.

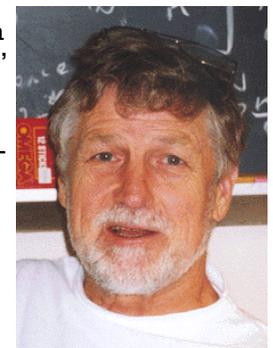
Bob says that he will miss his students, his classroom audience who sometimes learned mathematics because of his meticulous planning but more often in spite of it; he'll miss his colleagues, es-

*"...that sums it up -- old teachers never die; they just lose their points." - Bob Myers*

pecially those willing to match their emotional arguments about teaching against his coolly logical defense of his methods; and he'll miss his special friends, the secretaries, for their unflagging good humor in the face of his last-minute requests for duplicating help -- and for keeping the candy dish full.

What does he plan to do after this year? "It will be strange," he says, "to face an autumn not having to prepare classes for the coming school year, not visiting the bookstore to lay in supplies, not sharpening a semester's worth of (red) pencils." "Perhaps," he says, "that sums it up -- old teachers never die; they just lose their points."

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Bob Myers

# Outstanding Graduating Senior

## Outstanding Graduating Senior 2008 Brian D. Lowis

Brian Lowis is a December 2007 summa cum laude graduate whose hard work and dedication to the mathematics discipline earned him this department's *Outstanding Graduating Senior* award for 2008. He has always been a devotee of mathematics, always open to wonder and debate on every level and any topic. It was his active learning and non-complacency that he believes allowed him to excel in the math department.

While an undergraduate at Northern, Brian presented his research at the Argonne National Laboratory Symposium, where he discussed elements

of Dr. John Kiltinen's Random Transpose Puzzle Scramble. He also presented research at NMU involving the Nash Equilibrium.

Although Brian loved to gain technical and philosophical knowledge from his classes at NMU, that was not his only concern. He also wanted to help others realize their potential. He worked as a tutor in the department's math tutoring lab where he employed his ability to help other students in all levels of mathematics, and at the Sylvan Learning Center where he served as an upper level math tutor.

Brian majored in math and minored in physics, but he did not ignore other disciplines. "The Tomato Revolution," his short story written for an NMU creative writing class, was published in *Sirr*

magazine and in *Alphelion*, a science fiction e-zine.

Brian currently resides in the Madison area and works for Epic, a highly rated software company that provides an integrated suite of ambulatory and inpatient applications to health care organizations.



Brian D. Lowis

## Students Take NMU Mathematics Education Global *cont. from pg 1*

missed my family, friends, Marquette, and the college life in general, but, as the days went by, I began to realize how blessed I was for getting to see and experience so many new and different things. Within a month, Germany felt like home."

Germany also became home to Sara Weiss, a December, 2006, graduate with a double major in secondary mathematics and history education. Sara spent fall semester 2006 student teaching at Hanau American Middle/High School, also a Department of Defense school. Because the school was very small and she, like many of the teachers and students, lived on the base, Sara experienced a strong, supportive community, a high level of involvement, and immediate acceptance as a colleague.

Other NMU mathematics education students with recent international experiences include Michael Plourde and Josh Cross, both 2005 graduates who did their student teaching in New Zealand. Charlene Bendick, a current student in the department's mathematics educa-

tion master's degree program, has made international teaching her career. After graduating from the undergraduate mathematics education program in 1999, Charlene chalked up two years of teaching experience in Wisconsin before venturing abroad. Eager to broaden her horizons, she taught in Torreon, Mexico, and Asuncion, Paraguay, before moving last summer to her current teaching post at the American International School of Cairo in Egypt.

All of the NMU student teachers took advantage of the opportunities to travel and broaden their understanding of other cultures that accompany the international experiences. Both Sara and Mark found it easy and affordable to travel throughout Europe, often taking weekend excursions to various locations. Jason discovered that from Quito, located at about 9,000 feet in the Andes Mountains, one could drive down the mountains to tropical jungles, beautiful beaches with great surfing, and white-water rafting, or up the mountain range to huge snow-capped volcanoes, great hiking, and spectacular views. "Every day was an adventure," Jason

reports. "I learned so much about teaching - as much or more than I would have by staying in the States. By going abroad I also learned Spanish, another culture, met people from all over the world, and it is an experience I will NEVER forget."

What advice would they give to other NMU students who might be considering an international experience?

"My advice to anyone who is considering going overseas to study or student teach is to go, even if you are scared or uneasy about doing something that seems crazy to many people," says Mark. "The time I spent in Germany and traveling throughout Europe is one of the best things I have ever done in my life. It has also served me well in my first year of teaching in Buckeye, Arizona, because I can tell kids how things are done in a different culture on a whole other continent. They find it fascinating that a solid education can allow someone to travel, learn and see different places."

Jason put it even more succinctly: "GO FOR IT!! You won't regret it!"

-Peggy House

# Mathematics and CS Student Groups

## Association for Computing Machinery (ACM)

ACM is an organization for Computer Science and Network Computing majors. NMU's student chapter was founded in 2000 as a way for student programmers to interact socially and professionally. The activities are chosen by the members and generally include such things as LAN gaming, LINUX Installfests, and movie nights.

The ACM involves itself in two programming contests each year; one in the fall and one in the spring. The fall contest usually involves traveling to another university to participate. The spring contest is organized and hosted each year by the members of Northern's ACM organization. This year the spring contest was held on March 29, and was the 9th annual programming contest held at NMU.

The ACM also involves itself in various road trips throughout the year; in particular, ACM members participate each year in the Argonne Symposium for Undergraduates observing student research projects or presenting their own work.

## Unix User Group

The NMU Unix User Group (NMUUUG) was formed to develop and promote interest in alternative operating systems (non-Windows). Primarily this includes, but is not limited to, UNIX derivatives. Additionally, the NMUUUG will help bring together students and non-students in the Marquette area and allow them to socialize and learn in a group atmosphere.

Although many such groups exist around the world, affiliations among groups are very informal. NMUUUG actively promotes communication among these groups, but is not directly affiliated with any one organization.

Some of the most recent meetings include presentations on: using WINE to run popular games in Linux, implementing the GNU Privacy Guard, and recompiling the Linux kernel. The group

meets weekly on Friday evenings at 6 p.m. in New Science Facility 1209, with a casual Friday (a more social meeting where they discuss current events, watch/listen to open source media and mainly just have fun together) occurring every other week.

NMUUG is open to anyone who wishes to come and learn a little (or a lot!) more about Unix and its derivatives. They currently have members of diverse experience levels and find that they have been able to learn something new from each member.

A webpage is currently available at <http://csc.nmu.edu/uug>. A mailing list setup is used to keep the members informed about upcoming meetings.

NMUUG is also interested in having campus-wide events, the most recent of which was the Linux Installfest. For the Installfest the group tailored a distribution (version) of Linux to be better suited for the TLC laptops. This new distribution of Linux is called NMU-BUNTU. A workshop was then held to introduce users to NMUBUNTU, offering to help them install the distribution to their laptops, or helping them with configuring or installing what they already had on their computers. Approximately 25 students attended the event.

For more information visit their webpage, or contact [cwells@nmu.edu](mailto:cwells@nmu.edu).

## First Lego League (FLL)

FLL is a result of an exciting alliance between FIRST and the LEGO Company. Guided by adult mentors and their own imaginations, children solve real-world engineering challenges, develop important life skills, and learn to make positive contributions to society. Through Lego Robotics competitions, FLL introduces these children to the fun and experience of solving real-world problems by applying mathematics, science, and technology.

In conjunction with the NMU Seaborg Center, Northern Michigan University hosts the annual Upper Peninsula First Lego League Regional Competition.

Top teams from the regional tournament earn the right to compete at state FLL tournament in Detroit.

Each year mathematics and CS students have the opportunity to coach a team sponsored by our department. In addition, many schools in our region have had our students serve as assistant coaches for their respective teams.

Coaching an FLL team is an excellent hands-on opportunity for our students to engage with middle school students using mathematics, science and technology.

## MATHCOUNTS Group

MATHCOUNTS is a national math enrichment, coaching and competition program that promotes middle school mathematics achievement and is one of the most successful education partnerships involving volunteers, educators, industry sponsors, and students. MATHCOUNTS challenges students' math skills, develops their self-confidence, and rewards them for their achievements.

The MATHCOUNTS program in this area has been run by volunteers from NMU for the past four years. This year, nine volunteers from the secondary education mathematics program coached students from Negaunee Middle School, Bothwell Middle School, and Father Marquette Middle School.

Although no one qualified for the state competition this year, middle school students took 6th place and 8th place in the Regional/U.P. Competition held in February.

The MATHCOUNTS program continues to build the relationship between NMU and local schools. Mathematics Education students involved in this program have stated that they would continue to be involved with MATHCOUNTS anywhere they taught in the future.

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*These student organizations and their activities are supported by your generous donations to the NMU Foundation. Designate your donation to the "Mathematics and Computer Science Dept." Thank you!*

# Department News continued from pg. 1

This year faculty and adjuncts spent a great amount of time during the 2007-2008 school year teaching 3082 students in 138 mathematics, computer science and mathematics education classes as well as advising approximately 200 mathematics, computer science, and undeclared students.

In addition to teaching and advising, some faculty found time to accompany students to conferences and contests, oversee student research, plan and host student contests, advise clubs and teach at summer camps.

- **Andy Poe** is the academic adviser for the student chapter of the Association for Computing Machinery (ACM). *See pg. 4*
- **Randy Appleton** is the academic adviser for the newly organized Unix Users Group. *See pg. 4*
- **Dave Buhl** served as adviser to a group of secondary education mathematics students who are involved in MATHCOUNTS®, a national math enrichment, coaching and competition program that promotes middle school mathematics achievement.
- **Carol Bell** and **Steve Smith** accompanied seven of their math education students to the Minnesota Council of Teachers of Mathematics Spring Conference in Duluth, Minn., where they presented their work.
- **Jeff Horn** and **Randy Appleton** accompanied 23 math and CS students to the Argonne Symposium for Undergraduates in Science, Engineering and Mathematics in Argonne, Ill. Five of our students presented their research projects at the symposium.
- **Andy Poe** accompanied six computer science students to Ann Arbor, Mich., where they participated in the ACM East Central North America Regional Programming Contest.
- **Jeff Horn** and several CS students taught a session at the Summer Youth Technology Camp for U.P. high school students which was sponsored by the Seaborg Center.

Some of our faculty spent time attending and presenting their work at conferences during the school year while others will spend time presenting their work this summer.

- **Qinghong Zhang** attended conferences in Ontario, Canada; Kobe, Japan; and Shanghai, China.
- **Carol Bell** presented at conferences in San Antonio, Texas, and Duluth, Minn.
- **Steve Smith** traveled to conferences in Bay City, Mich.; Duluth, Minn.; and Salt Lake City, Utah.
- **Randy Appleton** presented papers in Birmingham, UK, and Detroit, Mich.
- **Akhtar Khan** will travel to Orlando, Fla; Boston, Mass.; and Montreal, Canada, this summer.
- **Hal Martin** will travel to Valencia, Spain, and Mexico City, Mexico, this summer.
- **Don Faust** will present his research in Seoul, Korea, in August.

*The bad news is time flies.  
The good news is you're the pilot.  
- Michael Altshuler*

Accepting awards and scholarships were two very pleasant ways to spend time for faculty and students this year.

- **David Buhl** received the TLC Faculty Award in the Teaching Improvement category. Dave used technology to enhance the educational experience at NMU by podcasting his classes. He was also commended for the use of a variety of hardware and software applications.
- **Brian Lewis** (mathematics major) was chosen by mathematics and CS faculty as the department's Outstanding Graduating Senior for 2008 (*see pg. 3*).
- **Jeff Horn's** paper entitled "Optimal Nesting of Species for Exact Cover of Resources" was nominated for the

Best Paper Award at the GECCO-2007 Conference which was held in London, England, in July 2007.

- **Brian Lewis** (mathematics major) received the Dr. Holmes Boynton Scholarship in the amount of \$500.
- **Jason Gregersen** (secondary education mathematics major) won the TLC Student Award in the Learning Improvement category.

Speaking of time, a *good* time was had by all at the following activities this year :

- The MAA Regional Fall Meeting in October was a success due to the time spent by the members of the **Colloquium and Seminar Committee** who, along with professor emeritus **John Kiltinen**, planned and hosted this year's event. Featured speakers included Dr. Randall Pruim, Calvin College, and Dr. Donald Saari, University of California-Irvine. Speakers from MTU, NMU and LSSU contributed fourteen talks to round out the two-day program.
  - The Colloquium Committee, chaired by **Akhtar Khan**, hosted a weekly colloquium and seminar series during the school year with eight outside speakers, six department faculty speakers and seven student speakers participating.
  - The 9th Annual NMU/ACM Programming Contest was held on March 29, 2008. Student members of the ACM, along with club adviser **Andy Poe**, worked hard to make the contest another great success! NMU's NULLZILLA was the first place team while Northern finished as the second place school. Fifty-four students on 20 teams representing five universities participated.
- And, of course, an extraordinary amount of time was spent on research. Thirty-two faculty research papers were published in the form of journal articles, conference proceedings and in on-line journals. **Jailan Zalmi** led the group with eight of his papers published while collaborating on another ten with **Qinghong Zhang**. **Akhtar Khan** also co-authored nine published or soon-to-be published papers.

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*"The essence of mathematics is not to make simple things complicated, but to make complicated things simple."*  
~S. Gudder

## *Did you know...*

John Kiltinen, who retired in 2007 after teaching mathematics at Northern for 36 years, got into writing math parody songs to familiar melodies a few years ago. He did some of these songs at a departmental colloquium on January 31, 2008.

A few weeks later, some friends of the Kiltinens from Minneapolis were in Marquette, got some of the materials from this colloquium, and proposed the idea of a repeat at an eclectic neighborhood drug store in southeast Minneapolis which stages small concerts from time to time. The result was two performances of a small drug store concert on April 18, that involved Dr. Sisu, a name coined by Math and CS Secretary Susan LaForais, which Kiltinen now uses for such gigs, two musicians from Minneapolis, and Kiltinen's wife, Pauline on electronic piano.

Dr. Sisu's January departmental colloquium made it onto the local TV news. That was the one and only time during Kiltinen's 36 years at Northern that the news media took enough interest in the Math and CS Colloquium to cover it as news.

Dr. Sisu says that music, songs, and rhymes can help one learn and retain mathematics, among other things. To illustrate, he points out that it is a rare person among us who does not recite the rhyme "Thirty days hath September ..." when having to retrieve the number of days in a given month, or recite "i before e, ..." as he just did, when he or she has to spell words such as "retrieve."

While teaching at Northern, Kiltinen often celebrated International Fundamental Theorem of Calculus Day with songs in his calculus classes. He has also been a member of the Marquette Choral Society for 35 years and sings in his church choir.

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