Well, it’s been another successful year in the Mathematics and Computer Science Department. At least I think so. I’ve only been here a year. I suppose I could ask my supervisor but she hasn’t been here much longer than I have! You can learn more about us (the department’s new office staff) later.

I will say that in my short time here, I’ve met some great people. I’ve watched the faculty bustle around, getting their plans together, printing exams, grading and helping students both in the classroom and during office hours. And there’s coffee. Lots of it, and sometimes with a side order of chocolate! Whatever gets them through the day, I suppose. When the faculty aren’t in class, they’re doing other things like presenting and publishing papers, facilitating workshops, serving on committees or volunteering for various department events. More coffee, please!

I’ve watched students rush in and out of here in a cloud of homework, quizzes and projects. Many did an excellent job working as tutors and teaching assistants. Others volunteered for many of the events we held this year such as the U.P. High School Math Challenge and the NMU Invitational Programming Contest. Many are members of our various student organizations while some presented during our colloquium series. I came to know many by name and I think they’re great young adults.

All in all, I’m pretty impressed with this department and its students. Through ups and downs, there’s a lot to be proud of. Hopefully our graduates this year feel the same way. Take a few minutes to read about all of the cool things we’ve been up to this year!

We will be moving to the new Jamrich building at the beginning of August. The Sociology, Social Work and Anthropology, English and Criminal Justice Departments will also be making the move. We received four huge pallets of moving boxes earlier this semester and many faculty members have begun packing already! Wish us luck!

COME AND CHECK US OUT THIS FALL!
**GPM Workshops Provided to Local K-8 Teachers**

Dr. J.D. Phillips and Dr. Carol Bell facilitated workshops for K-8 teachers in both Marquette and Escanaba this year. It was the second year of the GPM professional learning program. The Greater Proficiency in Mathematics (GPM) professional learning program is designed to support a deeper understanding of mathematical concepts. GPM is a partnership between the five regional Mathematics and Science Centers in the Upper Peninsula, the Upper Peninsula Center for Educational Development, STEM faculty and mathematical educators, as well as 57 constituent school districts. It also includes a partnership with the Intel Math Program that evolved from the Vermont Mathematics Initiative and the Mathematics Learning Communities program in Massachusetts, a companion program to Intel Math.

**K.N.K. They’re Dy-No-Mite!**

**K.N.K. !**

**They’re New, That’s Right!**

We have two new office staff members. Both started at the beginning of the fall semester and both have the same first name spelled the same way. No kidding. One professor, who shall remain anonymous, likes to jokingly refer to them as “Mean Kristi” and “Nice Kristi”. Those titles switch on a daily basis, mind you. Luckily, they also share a good sense of humor.

Kristi Poupore is our new Administrative Professional and Assistant to the Department Head. Previously, she was a Customer Service Representative in Printing Services. She just graduated from NMU in May with a Bachelor Degree in Sociology.

Kristi McClure is our new Principal Secretary. Previously, she worked as a Senior Secretary in the Housing and Residence Life Department. She graduated from NMU in 2001 with an Associate Degree in Health Information Management.

**MAA U.P. Regional Fall Conference**

The dates for the 2014 Upper Peninsula Regional Mathematics Conference have been set for October 3-4, 2014. The program will be hosted by Northern Michigan University and will consist of several hour-long plenary talks and some 20-minute contributed talks.

It is expected that the plenary speakers will be Tim Pennings, Roger Nelsen and a representative of the Michigan Section-MAA. Pennings, formerly of Hope College and now of Davenport College in Grand Rapids, will speak on how dogs appear to know calculus based upon his experience with his late dog, Elvis. Nelsen, of Lewis and Clark College in Portland, Oregon, perhaps best know for his proofs without words in *Mathematics Magazine*, will speak on visual number theory. The representative of the Michigan Section is yet to be identified. If you want to give a contributed talk, send a title and abstract of at most 100 words by email to John Kiltinen at kiltinen@nmu.edu.

Kiltinen said, “If Mother Nature smiles on us, the fall colors will be spectacular then, so the long drive to Marquette will be half the fun!”

We thank everyone who made a donation to our department through the NMU Foundation. If you would like to see travel opportunities, activities, programs and organizations continue for our students, please mark your donations specifically for “Mathematics and Computer Science.”

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**Thank You**
LYDIA STUEF
2014
Outstanding Graduating Senior

The Mathematics and Computer Science Department is proud to name Lydia Stuef as its Outstanding Graduating Senior for 2014. Lydia graduated Magna Cum Laude with a major in secondary mathematics and a minor in chemistry.

Lydia was selected to fill a newly created position as an undergraduate teaching assistant for MA 090 Beginning Algebra during the 2012-2013 academic year. She also worked with high school students as a tutor-counselor in the NMU Upward Bound Summer Academy, as a camp counselor and English instructor for high school girls in China, as a camp counselor for 6th-10th grade girls in Michigan and as a counselor for special needs students at Bay Cliff Health Camp.

During her time at NMU, Lydia was a member of the Student Leader Fellowship Program and volunteered service to projects including Make a Difference Day, Special Olympics and Science Olympiad.

Each year, in addition to its outstanding graduating senior, the department recognizes the outstanding students in each of its disciplines as well. This year we were fortunate to have a number of talented students to choose from.

In choosing an outstanding student, faculty must consider the student’s GPA as one possible credential, but other factors such as department and campus activities, community service, and membership in math-related organizations are also considered.

Megan Kelley
2014
Outstanding Computer Science Student

Megan graduated in December with a major in computer science and a minor in mathematics with an overall GPA of 3.90. She also had the opportunity to complete an internship with Intel in Oregon.

Niall Belton
2014
Outstanding Mathematics Student

Niall graduated in May with a major in secondary education mathematics and a double-minor in human biology and chemistry. His overall GPA was a 3.76.

Benjamin St. Aubin
2014
Outstanding Mathematics Education Student

Ben graduated in May with a major in secondary education mathematics and a minor in secondary education physics. His overall GPA was a 3.78. Ben spent his last semester student teaching in Wisconsin.

Congratulations, Students!

SEMINAR AND COLLOQUIUM SERIES
2013-2014

Fall Semester 2013

9/24/13  So What is an Actuary Anyway?
-Christopher M. Place

10/1/13  NP-Completeness and the Coevolution of Exact Set Covers
-Jeffrey Horn

10/10/13  Goodstein’s Theorem and Incompleteness
-Harold W. Martin

10/15/13  Computer Science Internship Experience Part I
-NMU Intel and Allstate Interns

10/22/13  Computer Science Internship Experience Part II
-NMU Intel and Disney Interns

10/29/13  2.5D Visual Effects
-Josh Thomlinson

11/5/13  Intel-NMU App Programming Competition Award Ceremony
-NMU & Intel Corporation

11/19/13  Everything That You Wanted to Know About NMU Students
-Pat Jennings

Winter Semester 2014

2/25/14  Interactive Technologies at NMU
-Eric Smith and Matthew Smock

3/11/14  Cross-Disciplinary Between Computer Science and Psychology
-Mounia Ziat

3/18/14  Why Pi?
-David Arnold

3/25/14  Evolving Javascript
-Allen Wiers Scott

4/1/14  Modtalk
-Josh NKurt

4/8/14  Towers of Hanoi
-Andrew Poe

4/15/14  Mathematics from Oreo Cookies
-John Kiltinen

4/22/14  Analysis of Lake Superior Water Temperatures-A Differential Equations Approach
-Elijah Meert

4/25/14  Your Programming Language Sucks
-Travis Clark

4/29/14  Implementing Active Learning in Math Classes
-Qinghong Zhang
Mathematics Problem of the Month 2013-2014 Winners

<table>
<thead>
<tr>
<th>Month</th>
<th>Winner</th>
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<tbody>
<tr>
<td>November</td>
<td>Matthew Holliday</td>
</tr>
<tr>
<td>December</td>
<td>Adam Martin</td>
</tr>
<tr>
<td>February</td>
<td>Lashawna Wagner</td>
</tr>
<tr>
<td>April</td>
<td>Drake Olejniczak</td>
</tr>
</tbody>
</table>

Drake submitted and solved a total of three problems throughout the year making him our grand winner. He will compete in the U.S. National Collegiate Mathematics Championship, the final of The Problem Solving Competition to be held in Portland, Oregon during MathFest 2014 (August 7-9, 2014). Awesome!

Twenty-two mathematics and computer science students attended the 23rd Annual Argonne Symposium for Undergraduates in Science, Engineering, and Mathematics at the Argonne National Laboratory in Argonne, Ill. Computer science majors Josh Fridstrom and Kurt Kilpela presented their research project, "Modtalk, A Compiled Smalltalk Variant" at the symposium! Great job, guys!

Vanessa Vencato and Lydia Stuef were selected as “Teachers of Promise” by The NMU School of Education, Leadership and Public Service. They were honored at the Network of Michigan Education 2013 recognition banquet and annual conference in East Lansing. Way to go, ladies!

Pat Brewster, a computer science major, along with Dr. Michael Kowalczyk started the NMU Chess Club during the 2013 fall semester. It's a student organization with Pat as the president and Kowalczyk serving as the faculty adviser. The club meets on Thursday evenings from 6-8 pm in West Science 3802.

Twelve members of the Secondary Math Education Club including Brianna Bliese, the club's president (left), got together on Pi Day for a scavenger hunt around town. Afterwards, they enjoyed soup and PIE at Dr. David Buhl’s home. Buhl is the club’s faculty representative.

In November, five NMU teams competed in the North Central North America Regional Programming Contest at Michigan Technological University. The top team from NMU was JoshNKurt (Josh Fridstrom, Kurt Kilpela and Stephen Newby). Out of 23 teams at the site and 60 teams in the entire region, they placed 3rd at the site and 20th in the region. Fantastic!

The NMU student chapter of the Association of Computing Machinery (ACM) hosted the 15th Annual NMU Invitational Programming Contest in March. A total of 69 students on 24 teams representing 4 universities participated which included nine NMU teams. The top team from NMU was JoshNKurt (Josh Fridstrom and Kurt Kilpela).

The 5th Annual U.P. High School Math Challenge was held in March. High school students from across the U.P. were invited to participate in a day of various mathematical challenges. This year 108 students on 28 teams from 7 high schools participated. NMU students from the department’s student organizations, shown above, as well as several faculty members helped organize and run the math challenge. Thanks, everyone, for your time and effort!
While our students were busy with clubs, contests, research and classes, faculty were busy attending conferences, presenting their research and recruiting.

**Presentations**

Dr. Randy Appleton along with student, Matt Menze, presented “Evaluating Several Different Web Predication Algorithms” at the 29th International Conference on Computers and Their Applications (CATA) 2014 in Las Vegas, NV.

Dr. Carol Bell presented “Hands-On Activities to Develop Students’ Reasoning Skills” at the Michigan Council of Teachers of Mathematics annual conference in Traverse City, MI.

Dr. David Buhl presented “Cold Fractal Ice: STEM Education and Polar Vortex” at the Sanford Underground Research Laboratory located at the former Goldstake Gold Mine in Lead, SD.

Mr. Ken Culp presented skill builders on campus during both the fall and winter semesters on time management and attitude.

Dr. J.D. Phillips presented “Core Mathematics Texts-Active (heck, Vigorous) Learning” at the annual meeting of the Association for Core Texts and Courses in Los Angeles.

Dr. Bao Truong made several presentations this year:

“Necessary Optimality Conditions in Multiobjective Optimization with Order Structures” at the 8th National Mathematical Conference at the University of Information Officers in Nha Trang, Vietnam.

“Necessary Nondomination Conditions in Multiobjective Optimization with Variable Ordering Structures” at the U.P. MAA Mathematics Meeting at Michigan Technological University in Houghton, MI.

“Necessary Conditions in Vector and Optimization with Variable Ordering Structures” at the AMS National Mathematics Meeting in Baltimore, MD.

“Variational Analysis in Psychological Modeling” at the SIAM Conference on Optimization in San Diego, CA.

Dr. Qinghong Zhang presented the following:

“The Rogalski-Cornet-Type Surjectivity Theorem Without Continuity Assumptions” at the Joint Mathematics Meeting in Baltimore, MD.

“Simplifying Linear Semi-Infinite Programming Primal-Dual Pair” at the Euro Mini-Conference on Optimization in the Natural Sciences in Aveiro, Portugal.

**Publications**

Dr. Bao Truong published the following:


In other department news:

Dr. Carol Bell received a $3,000 Instructional Improvement Grant through NMU titled “Enhancing Student Understanding of Developmental Mathematics.” As part of the project, she developed supplemental course materials for MA 100 Intermediate Algebra that focused on helping students in the course gain a better understanding of mathematics concepts taught in the course.

The Mobile and Web Application Development major was developed last fall and will replace the network computing major beginning in the 2014 fall semester.

Dr. Carol Bell facilitated workshops for area middle and high school teachers as part of the Project PRIME Plus - “Promoting Reform in Mathematics Education” Statewide Initiative. This past academic year was the third year that Bell has been involved with Project Prime. This year’s initiative focused on school teams of mathematics teachers collaborating together in their professional learning.

During the past year (May 2013-May 2014), our recruiting efforts included hosting 53 prospective students and their families as part of the Campus Visit program. We also hosted 9 prospective students and their families during the fall and winter Wildcat Weekend sessions. A big thank you to our faculty who volunteered their time to meet with these students. It’s been a great year to be a Math and Computer Science Wildcat!
ALUMNI EVENT . . .

8th Annual

NMU Night at Comerica Park

Wednesday, August 27, 2014

NMU alumni and friends are invited to gather at 5 p.m. at Bookies (2208 Cass Avenue, Detroit) for a pre-game party, featuring appetizers and a cash bar, before heading to Comerica to watch the Tigers take on the Yankees.

Find the details on this and other events at:

www.nmu.edu/alumni