

2014

## The Wright Message, 2014-2015

University of Northern Iowa. Department of Mathematics.

*Let us know how access to this document benefits you*

Copyright ©2014 Department of Mathematics, University of Northern Iowa

Follow this and additional works at: <https://scholarworks.uni.edu/matnews>



Part of the [Higher Education Commons](#), and the [Mathematics Commons](#)

---

### Recommended Citation

University of Northern Iowa. Department of Mathematics., "The Wright Message, 2014-2015" (2014). *The Wright Message*. 4.

<https://scholarworks.uni.edu/matnews/4>

This Newsletter is brought to you for free and open access by the Newsletters at UNI ScholarWorks. It has been accepted for inclusion in The Wright Message by an authorized administrator of UNI ScholarWorks. For more information, please contact [scholarworks@uni.edu](mailto:scholarworks@uni.edu).

**Offensive Materials Statement:** Materials located in UNI ScholarWorks come from a broad range of sources and time periods. Some of these materials may contain offensive stereotypes, ideas, visuals, or language.

# THE WRIGHT MESSAGE

## DEPARTMENT of MATHEMATICS

2014–2015

### Dear Department Alumni and Friends,

Summer is winding down. The new school year is well under way. The quiet and slow pace of campus life in the summer months has given way to the hustle and bustle which comes with the return of students to campus. With the excitement and promise of the new school year as a backdrop, we are delighted to once again bring to you, our alumni and friends, the 2014 edition of the department's newsletter, the Wright Message. Our goal in this edition, as it was in previous editions, is to highlight what we believe were the most important events in the department in the 2013-2014 academic year. We hope you will find the newsletter interesting and fun to read. And as always, we welcome your comments.

Roughly speaking, we have divided the contents of this edition into several highlighted segments that feature students, alumni, donors, faculty, guests, and current news from the department. In addition, we are pleased to have included an article by Emeritus Professor Glenn Nelson about his farewell tour of classrooms of former students who are currently teaching.

The student spotlight honors went to

the duo of Caryn Knight and Emily Stumpff, both of whom graduated in May 2014. The alumni spotlight went to Allysen Lovstuen and Jodi Osthus, the winners of the 2013 Yager Exemplary Teaching Recognition Award; and to Ben Wadsley, who was just promoted from Chief Actuary to Head of Product Management of the Investments & Retirement Division of Transamerica. The donor spotlight went to Robert Minch and Mary Borthwick; the faculty spotlight honor went to Professor Russell Campbell. The individuals we spotlighted have distinguished themselves in ways that we can all draw inspiration from. Kudos to them all.

In the 2013-2014 academic year, our students once again demonstrated that they had earned their chops in and out of the classroom. At the undergraduate level, 38 mathematics majors, 15 mathematics minors, and 45 elementary education majors with a mathematics minor (K-8) graduated with a BA degree. At the graduate level, 16 students received the MA in Mathematics degree and 5 students completed the Professional Science Master's degree. Outside the classroom, our students excelled

in a number of activities. The team of Benjamin Castle and Mark Ronnenberg placed a strong second in the 2014 Iowa Collegiate Mathematics Competition (ICMC). A number of our undergraduate and graduate students participated in research and presented the results of their work at professional conferences. Through these activities, the students are helping to showcase what many of us have long known, which is that when it comes to undergraduate and master's level education in mathematics, UNI should be the destination of choice for prospective students. More details on these students are contained inside the newsletter.

The faculty, for their part, continued to excel in the academic year 2013-2014. Dr. Elizabeth Hughes received tenure and promotion to associate professor. Dr. TJ Hitchman won the 2013 MAA Iowa Section Award for Distinguished College or University Teaching of Mathematics. Dr. Shangzhen Luo, Dr. Jihwa Noh, Dr. Michael Prophet, and Dr. Suzanne Riehl received summer fellowships. Dr. Olly Steinhorsdottir received a pre-tenure summer fellowship. Dr. Vicki Oleson secured another Title II grant to support her work

with teachers. You will find more details in the newsletter.

As has been the case for many years now, the high water mark in the department's efforts to promote mathematics in the greater Cedar Valley area came on April 8, 2014, in the form of the Hari Shankar Memorial Lecture. The speaker this year was Dr. Henry Segerman, an assistant professor in the Department of Mathematics at Oklahoma State University. Dr. Segerman spoke about one aspect of his work which combines mathematics and art. The lecture, titled "How to Make Sculptures of 4-Dimensional Things", was a real treat. Details of the lecture are inside the newsletter.

We round out the newsletter with an interview with Dr. TJ Hitchman, conference presentations by the faculty, and a segment we call "Around Wright Hall." We conclude with a remembrance of a colleague, George Immerzeel, who, we recently learned, passed on in March 2012. We are grateful to Mrs. Immerzeel for helping us bring to the pages of this newsletter a piece in memory of George.

In the last several years, the US economy has experienced some very serious challenges. Yet, through it all, you, our alumni and friends, have continued to stand with us and provide much needed support to us and to the students we serve. On behalf of the department, I wish to extend a heartfelt thanks to those of you who made contributions to our UNI Foundation accounts in the past year. In all, we received \$304,883 between July 1, 2013, and June 30, 2014. Most of the money goes to fund scholarships, but some goes to accounts that cover other expenses

(equipment, faculty and student travel to conferences). The department awarded \$113,751 in scholarships to undergraduate and graduate students in the last academic year, an increase of 98% over the previous year. (The amount stated in last year's newsletter - \$51,778 - did not include graduate scholarships in the amount of \$5,800.) Given the significant debt load that many students carry at graduation, an average of over \$25,000, the need for scholarship support can't be overstated. We are appealing for your help again this year. If you are able to, please use the enclosed form to direct your contribution to the account of your choice. Again, thank you for your support. I hope this past year was good to you and that the current year will be even better.



Douglas Mupasiri,  
Professor and Head.



Editorial Team: Betty Bagenstos,  
Douglas Muspasiri and Marius Somodi

## Table of Contents

- 3 Around Wright Hall
- 6 2014 Hari Shankar Lecture
- 7 New Faculty
- 8 Faculty Spotlight
- 10 Farewell Tour
- 11 CTLM News
- 12 Donor Spotlight
- 13 An Interview with T.J Hitchman
- 14 Alumni Spotlight
- 16 Addresses by Faculty
- 18 Students Spotlight
- 20 Contributions to an Account – Recognition
- 21 In Memoriam
- 22 Department Funds
- 24 Alumni Updates

# Around Wright Hall

## Student Awards

UNI Mathematics majors Benjamin Castle and Mark Ronnenberg placed second at the 2014 Iowa Collegiate Mathematics Competition (ICMC). This annual contest is a three-hour mathematics problem solving competition designed for teams of three students. The ICMC is sponsored by the Iowa Section of the Mathematical Association of America (MAA). This year the contest was to be held at UNI, but weather forced all to stay home and take the exam on their own campuses. Ben and Mark scored an impressive 89 out of 100 possible points. (The first place team had three members and scored 97/100, and the third highest score was 58/100.) There were 18 teams from 10 participating Iowa colleges and universities. Congratulations, Ben and Mark, on your impressive performance in this competition.

## Midwest Undergraduate Mathematics Symposium (MUMS) 2014

The eleventh annual Midwest Undergraduate Mathematics Symposium (MUMS) was held on April 11-12, 2014 at Simpson College. Every year, the symposium attracts a large number of undergraduate students from Iowa universities and colleges who present their research to an audience consisting of students and faculty. This year, four undergraduate students from our department gave talks at MUMS:

Benjamin Castle, *Curve Shortening Flow for Polygons*; Jonathan Krein and Jesse Moeller, *Computing Curve; Shortening Flows for Polygons*; and Mark Ronnenberg, *Discrete Modeling of Orbits on the Complex Unit Disk*.

The students were mentored by Dr. TJ Hitchman and Dr. Olena Ostapyuk.

## Faculty Tenure and Promotion

Congratulations to Dr. Elizabeth Hughes on being awarded tenure and promoted to Associate Professor. Dr. Hughes joined our department in 2008. Her research interests include designing practice-based learning experiences for teachers and examining the development of teachers' mathematical knowledge for teaching.

## Faculty Awards

Congratulations to Dr. Theron Hitchman on winning the 2013 MAA Iowa Section Award for Distinguished College or

University Teaching of Mathematics. Dr. Hitchman joins a select group of awardees which also includes Dr. Michael Millar (1999) and Dr. Catherine Miller (2006).

Congratulations to Dr. Douglas Mupasiri on being awarded the "Helping Students Succeed" Commendation from UNI. Terry Hogan, Vice-president for Student Affairs, presented the award on January 9, 2014 "in recognition of exceptional commitment and service to the students of the University of Northern Iowa and in acknowledgment of effective collaboration with the Division of Student Affairs."

Congratulations to Dr. Suzanne Riehl on being awarded a Professional Development Assignment during the 2014-2015 academic year. Dr. Riehl's research project is entitled *Analysis of Data in Routes to Reason: Proportion*.



Left to right: Ben Castle, Jesse Moeller, Jonathan Krein and Mark Ronnenberg

# Around Wright Hall

Congratulation to Dr. Olof Steinhorsdottir on being awarded a 2014 pre-tenure summer research fellowship from the UNI Provost's Office.

Four faculty members in our department received summer research fellowships in 2014: Dr. Shangzhen Luo (4 weeks), Dr. Jihwa Noh (8 weeks), Dr. Michael Prophet (8 weeks), and Dr. Suzanne Riehl (4 weeks). Congratulations to them all!

## Student Projects

Three undergraduate students majoring in mathematics participated in summer-long research projects sponsored by the College of Humanities, Arts, and Sciences, and by the Department of Mathematics. Those students were: Benjamin Castle, mentored by Dr. Adrienne Stanley, project title: *Meta-Lindelof Scattered Spaces and D-spaces*; Mark Ronnenberg, mentored by Dr. Bill Wood, project title: *Constructions and Properties of Cube Tilings with Applications to Discrete Extremal Length*; and Jacqueline Rowland, mentored by Dr. Suzanne Riehl and Dr. Olof Steinhorsdottir, project title: *Routes to Proportional Reasoning: Exploring Student Strategies*.

The students presented their results, in poster format, at the 2014 UNI Summer Undergraduate Research Symposium held on August 1 on the UNI campus.



Abbie Parker presenting at BYU

Daniel Waterbury, a graduate student in our Professional Science Masters Program in Industrial Mathematics, presented his project at the 2013 Annual Meeting of the Central States Actuarial Forum, Omaha, NE, September 26-27, 2013. The title of the talk was "Some issues in fitting compound Poisson distributions" (joint work with Dr. Syed Kirmani).

Mark Ronnenberg has been working on a research project on discretization of complex dynamics in the disc, under the supervision of Dr. Olena Ostapyuk. The project started in the spring of 2014 and continued in the fall. Mark presented his results at the Midwest Undergraduate Mathematics Symposium at Simpson College on April 12, 2014.

Jesse Moeller, Benjamin Castle, Jonathan Krein, and Abbie Parker worked on Menger Curvature Flow

for Polygons under Dr. TJ Hitchman's supervision. This work was funded by the Center for Undergraduate Research in Mathematics (CURM), an NSF sponsored project through Brigham Young University (BYU). Additional support was provided by the UNI Department of Mathematics and the UNI College of Humanities, Arts, and Sciences. As part of the program, the students paired up and gave two presentations at the CURM spring research conference held at BYU in March 2014 and at the Midwest Undergraduate Mathematics Symposium in April 2014.

## Faculty lectures and workshops

On October 1, 2013, Dr. Elizabeth Hughes was invited to provide a one-day Professional Development Workshop in Des Moines, IA for the Iowa Department of Education's Cognitively

Guided Instruction Leadership Team on "Five Practices for Orchestrating Productive Mathematical Discussions".

AMTE (Association of Mathematics Teacher Educators) and NCSM (National Council of Supervisors of Mathematics) have collaboratively invited a team of 20 Mathematics Educators to participate in a working group for "Connecting Formative Assessment to Instructional Frameworks, Tools and Approaches." Dr. Elizabeth Hughes has been invited to participate as an expert with the Mathematical Tasks Framework. The working group met in October, 2014, in Ann Arbor, MI.

Dr. Syed Kirmani offered a course in Applied Statistics at Shanghai Dian Ji University, Shanghai, China, June 16, 2014 – July 11, 2014.

Between June 22 – July 4, 2014, Dr. Douglas Shaw offered a graph theory class for the Michigan Math and Science Scholars (MMSS) program. MMSS is a summer enrichment program hosted by the University of Michigan. The program is designed to introduce high school students to current developments and research in the sciences and to encourage the next generation of researchers to develop and retain a love of mathematics and science.

Dr. Theron Hitchman and Dr. Angie Hodge from University of Nebraska - Omaha co-organized the program for the 2014 Legacy of RL Moore meeting which took place on June

19-21, 2014 in Denver, CO. This is an annual conference for the Inquiry-Based Learning community. This year, the meeting's theme was Engaging with Inquiry-Based Learning. There were approximately 220 attendees and over 60 talks given.

In July 2014, Dr. Theron Hitchman gave a day and a half workshop (together with Dr. Dana Ernst from Northern Arizona University) on Inquiry-Based Learning during the Innovations in Higher Education Workshop at Cardiff University in Cardiff, Wales. There were over 40 attendees, mostly from the UK, but even two from the US. According to Dr. Hitchman, "It felt like a long trip to meet someone from Nebraska."

Society of Actuaries' Outreach team visited the UNI Actuarial Science Club on November 19, 2013. The team had a lively interactive session with the club members. The five-member outreach team included Justin Knight, BA (UNI 2003), FSA, who is a Senior Actuary at Wellmark Blue Cross Blue Shield, Des Moines, IA.

## Tenure Stream Faculty 2014 – 2015

Russell Campbell  
Mark Ecker  
Adam Feldhaus  
Heather Gallivan  
Joel Haack  
Theron Hitchman  
Elizabeth Hughes  
Syed Kirmani  
Min Lee  
Bin Liu



Maureen Stoss, who has been an adjunct instructor in our department since 2007, left UNI at the end of the Fall 2013 semester. Maureen and her family relocated to the Quad Cities area. We will miss Maureen, her husband Ken, and their children.

Shangzhen Luo  
Catherine Miller  
Douglas Mupasiri  
Jihwa Noh  
Vicki Oleson  
Olena Ostapyuk  
Michael Prophet  
Edward Rathmell  
Suzanne Riehl  
Karen Sabey  
Douglas Shaw  
Marius Somodi  
Adrienne Stanley  
Olof Steinhorsdottir  
Brian Townsend  
Matthew Webb  
Bill Wood

## The 2014 Hari Shankar Lecture



Dr. Henry Segerman and Dr. Douglas Muparsiri

The Hari Shankar Mathematics Lecture Series is an annual event hosted by the Department of Mathematics which features a lecture intended for general audiences given by a distinguished personality in the Mathematical Sciences. This year's guest speaker was Dr. Henry Segerman of Oklahoma State University.

Dr. Segerman grew up in Manchester, UK. He earned his MSc in Mathematics from Oxford University (2001) and PhD in Mathematics from Stanford University (2007). He held two postdoctoral positions, one at the University of Texas in Austin (2007-2010) and the other at the University of Melbourne (2010-2013), before moving into an Assistant Professor position at Oklahoma State University.

Though a young mathematician at the beginning of his career, Dr.

Segerman is already widely known in the scientific community both for his cutting edge mathematical research in topology and three-dimensional geometry and for his strong interest in mathematical art and recreational mathematics, including 3D printing. "I was in graduate school (at Stanford) when it became clear that, within the specializations of mathematics, the thing that I could do better than all the geniuses around me was the visual stuff" says Dr. Segerman. Around the time he picked topology as his main research area, Dr. Segerman got involved with the pioneering online virtual world "Second Life." He used this virtual world to design and create various 3D objects. However, after a while he exhausted the possibilities of what he could do within that medium and encountered physical limitations when showcasing his work: "If you build something in a virtual space and someone wants to see it, their computer has to download all the data of the object, which could be a very large file. There are also constraints on the objects you could do" says Dr. Segerman. For these reasons, his attention turned from virtual worlds to 3D printing because, as Dr. Segerman says, "the bandwidth of the real world is very good. If I want to make this part of my professional life, then [a 3D print-out] is something that I can show somebody immediately."

Dr. Segerman's attraction to art traces back to his childhood: "I was always into art. When I was in high school I thought I wanted to be an architect." Often his artistic vocation meets mathematics and is expressed in the form of various 3D printed sculptures, autologlyphs, or a variety of non-3D creations like book covers, posters, or

T-shirt designs. We reproduce a couple of them here. More can be found on Dr. Segerman's personal website: [www.segerman.org](http://www.segerman.org). However, Dr. Segerman says: "I think of myself as more of a mathematical illustrator than an artist. One of the things I am trying to do is to take a mathematical idea, express it in its cleanest possible way, and bring it out of the abstract world into the physical realm so that people can get some sense of what it is."

Dr. Segerman is actively showcasing his mathematical art work. He has given numerous invited talks at conferences and meetings. Most recently, the Simons Center for Geometry and Physics at Stony Brook University hosted, between June 19 and August 1, 2014, an exhibition entitled "Illustrating Geometry Art Exhibition", featuring 26 pieces and various posters designed and created by Dr. Segerman and one of his collaborators, Dr. Saul Schleimer, of the Mathematics Institute at the University of Warwick. In addition, Dr. Segerman maintains a very popular Youtube channel <http://www.youtube.com/user/henryseg> that features, among other things, videos about his 3D printed sculptures. One of these



Sphere autologlyph (the word sphere appears 20 times!)

videos, called "Sphere Autologlyph", counts over 500,000 views!

The Hari Shankar lecture given by Dr. Segerman was entitled "How to make sculptures of 4-dimensional things." In the spirit of this lecture series, Dr. Segerman's talk was accessible to a wide audience. After reviewing briefly several types of projections (orthogonal, stereographic, perspective), Dr. Segerman discussed how to 3D print a regular polytope called the 120-cell. An article about the 120-cell may be found at <http://arxiv.org/abs/1310.3549>. In addition, he engaged the audience in hands-on activities designed to illustrate some of the challenges encountered when building a sculpture with quaternion symmetry group called "As much fun as a hypercube of monkeys." An article about this sculpture is available at <http://archive.bridgesmathart.org/2014/bridges2014-143.html>. The interested reader may watch the entire lecture online at <https://www.youtube.com/watch?v=NT0u-EINURc>. The Hari Shankar lecture series is made possible through a donation from the late Hari Shankar, with additional support provided by the UNI Department of Mathematics and the College of Humanities, Arts and Sciences.



As much fun as a hypercube of monkeys

## New Faculty: Heather Gallivan



Heather earned her B.S. in Mathematics Education 7-12 from SUNY College at Buffalo, M.S.E. in Applied Mathematics and Statistics from Johns Hopkins University, and Ph.D. in Mathematics Education from the University of Delaware.

Her research interests focus on culture and race in mathematics teaching and learning. In particular, she is interested in the preparation of prospective teachers in learning to teach mathematics using pedagogies that integrate teaching mathematics for conceptual understanding with students' home/community and cultural knowledge and experiences.

Heather's Ph.D. dissertation focused on (1) determining the progress prospective teachers can make in their conceptions of teaching mathematics to socio-culturally diverse students and students in urban, high-needs schools; (2) the progress prospective teachers can make in their performance

revising a high-level mathematics task to be culturally relevant for one socio-culturally different middle school student; and (3) the relationship between their conceptions and their performance.

Heather's goals include continually improving her own teaching of prospective mathematics teachers and contributing to research on mathematics teacher education for diverse student populations. She is passionate about preparing prospective teachers to teach mathematics for conceptual understanding to all students, particularly historically underrepresented and minority students. Her research is closely tied to her practice as a mathematics teacher educator. Heather believes that UNI will provide her with an opportunity to become a better mathematics teacher educator and researcher by being able to work closely with undergraduate prospective teachers as well as other UNI faculty through teaching and research.

In her spare time, Heather likes to crochet and read. She is also a big fan of watching Buffalo's football and hockey teams since Buffalo is her hometown.

# Faculty Spotlight



## Russell Campbell

Ever since elementary school, Russell has enjoyed mathematics and has been very good at it. His interest in mathematics is, to a good extent, inherited from and fostered by his father, whose career was also related to mathematics: he started off as an actuary but, after World War II, switched to personnel where he continued to work in employee benefits (which is closely related to the actuarial field). After graduating from high school, Russell went to Brown University to pursue a bachelor degree in applied mathematics. In college, his passion for mathematics intensified. He did so well

in the applied mathematics program that graduate study was a natural next step for him. He went on to pursue a PhD in mathematics at Stanford University.

Russell became interested in mathematical population genetics as an undergraduate student at Brown. "Brown was definitely a center of mathematical population genetics for the period of time I was there." At Stanford, he continued his work in that area of mathematics. He wrote his PhD dissertation under the direction of the renowned mathematician

Samuel Karlin. Over the years, Russell's research interests have expanded to include mathematical evolution theory. His research has resulted in 33 articles published in some of the most prestigious mathematical and biological journals.

In 1983, after spending four years at Purdue University as a faculty member, Russell came to UNI in a tenure-track Assistant Professor position. His impact on our academic programs was felt shortly after his arrival. The structure of the mathematics curriculum was such that the linear algebra class had modern algebra as a prerequisite (today it is the other way around). Moreover, the old linear algebra was not a required course for mathematics secondary teaching majors, who could graduate without learning how to multiply two matrices. Russell was a pioneer in advocating for a curricular change that eventually brought linear algebra in the mathematics core curriculum. During his first years with the department, Russell was in the avant-garde of teaching using technology. He was the first faculty member in our department who used a computer connected to a TV in the classroom to construct graphical images of numerical integration for his students. Russell also taught his students how to find numerical solutions of differential equations using a pen plotter.

Russell was elected to Sigma Xi (the scientific research society) as an undergraduate and, shortly after joining UNI, he became president of the UNI Sigma Xi club which had been established just before he came to UNI. While president of the UNI Sigma Xi club, Russell oversaw upgrading the organization from a club to a chapter.

Among the things Russell likes most at UNI are the collegiality and the size of our university. He appreciates the high level of faculty interaction with students which is possible in a school like UNI. In addition, Russell finds Cedar Falls a great place to live: "The cost of living is a lot lower here than in many other places" says Russell. "There is also very strong support for the community from the community."

Over the years, Russell has taught a variety of courses, ranging from lower level mathematics and statistics courses, to upper division courses like advanced calculus, complex analysis, and introduction to probability. He has also contributed in the area of curriculum development and has introduced a few experimental courses, including an advanced mathematical modeling class. While he enjoys teaching many courses, he is particularly fond of teaching the linear algebra and differential equations courses.

Along the years, Russell served on countless university committees on which he has always made a significant impact. He also served on the executive board of the UNI United Faculty. Everyone who works with Russell quickly recognizes how immensely knowledgeable he is about the rules and regulations governing our university. He is one of the go-to persons whenever anyone in the department has questions about the latest curricular changes, academic regulations, and pretty much everything in between. It is certainly true that such a wealth of knowledge can only be acquired over years of experience. It is also true that experience alone is not enough. In Russell's case, a keen eye for details and a deep interest in departmental and university governance overlaid on

a long tenure of service at UNI paint the full picture.

What is truly remarkable is that, despite his absolute dedication to his profession, Russell still finds the time to enjoy things that are not work related. Russell is both an admirer and a supporter of the arts. He routinely attends various performances at the Gallagher-Bluedorn Performing Arts Center (GBPAC), the UNI School of Music, or the Cedar Falls Community Theater. He is a seat sponsor at each of these venues and serves as a volunteer usher at the GBPAC. Over the years, he has served on the board of the community support groups of the GBPAC and Theatre UNI. For many years, he was an active member of the UNI Folk Dance group.

On Russell's office door there is a picture of him by a statue of al-Khwarizmi (from whose book the word algebra is derived) in Kiva (a town situated in Uzbekistan). Russell enjoys travelling

and has visited every continent except for Antarctica. His extensive list of trip destinations includes: the Egyptian and Mayan pyramids, Machu Picchu, Tibet, Mount Kilimanjaro, and the Galapagos Islands. This past summer he traveled to Mongolia for two weeks. Russell says, with a smile, that his trips are about two weeks long because "My father once remarked: if you take a vacation, you have to go for at least one week. If you go for less than a week, things will pile up on your desk; if you go for more than a week, other people will have to cover for a number of the things you do."

While he owns a car (he purchased his first car when he was 50), Russell prefers to ride his bike around town. If you are a UNI student, chances are you will see Dr. Campbell on campus (with or without his bike). If not, chances are you will meet someone who knows him. That is part of Dr. Campbell's legacy after three decades of teaching, mentoring, and serving students.

## UNI on the March

### Offering a top-flight private college education in a public university

Following its admission in 2008 into a national higher education project known as "Foundations of Excellence® (FoE) in the First Year of College", UNI conducted a rigorous self-study which formed the basis for the development and implementation of a number of initiatives to increase student engagement in the first year of college. Among these initiatives are:

- **First-year only courses**
- **A year-long cornerstone course** (<http://uni.edu/first-year/first-year-cornerstone>) featuring a common read (<http://www.library.uni.edu/blog/american-way-eating-common-read-uni>), (<http://www.library.uni.edu/blog/warmth-other-suns-common-read-uni>)
- **Living and learning communities**

See how the Academic Affairs division (Department of Communication Studies, Department of Theatre, the Library) and the Student Affairs Division (Department of Residence) are all working together to increase student success by visiting <http://uni.edu/first-year/>.

## Farewell Tour Glenn Nelson

**Teachers should be paid a million dollars a year!** That is my major conclusion after watching many UNI graduates teaching students mathematics.

When I retired from the University of Northern Iowa and the Department of Mathematics last year, I undertook a "Farewell Tour", going to classrooms of former students who are currently teaching. It has been a most enjoyable experience.

Observing Kindergarten to College math classes led by former UNI students, I have been impressed by the high-quality mathematics instruction they all have displayed, in every type of challenging setting. Even more impressive than the delivery of well-designed instructional tasks - focused on investigation, discussion and understanding - has been the teachers' knowledge of each student's abilities and needs, and their utilization of the former to meet the latter.

Effective teaching is comprised of a very complex set of skills. From content knowledge, to pedagogical knowledge, to awareness of each student's needs, to employment of multiple interpersonal skills, to classroom management - of time, space, students, and instructional flow - good teaching is a very complicated undertaking. Like superstar athletes who make

difficult plays on the field look routine, the UNI trained teachers I observed make great teaching look easy. We all realize that it is not.

All of these teachers shared fond memories of their time at UNI and professors who inspired and impacted them. We professors try to model good teaching for our preservice teachers in an attempt to help them develop a solid foundation upon which they can build as in-service teachers. However, I believe we don't do much more than launch these soon-to-be great teachers on their way. Good teaching is something that great teachers achieved over a far longer period of time than the four years they spent in college - they have a work ethic that is not forced but rather an integral part of their being, they have resourcefulness, they have a sense of professional responsibility - that is, they display a profound "sense of duty", and it shows. For example, those teachers who graduated a decade or two ago are now employing newly-identified and highly-effective teaching strategies that I know were not explicitly presented to them. They have learned these largely through their own efforts.

Pressures on today's teachers are enormous. The requirements, obligations, commandments, directives, mandates - so many of which are imposed by well-meaning but relatively uninformed external entities - are staggering. Any teacher today can rattle off more than a dozen acronyms for different initiatives, all of which contain multiple ideas that are required to be integrated into their



Glenn Nelson and Kathy Wilkerson, eighth grade math teacher, South Tama Middle School

teaching and whose effects are to be documented with innumerable assessment instruments and conveyed to a vast array of stakeholders. I continue to marvel at the fact that so many bright, capable people choose education as a profession, despite all that gets foisted upon them. Every teacher could earn twice the money, with half the headaches, in another career, but instead has chosen to help our young people become all they can be. I have the greatest respect for each and every one of them.

I feel fortunate to have taught for thirty-nine years in the Department of Mathematics at the University of Northern Iowa with knowledgeable colleagues and to have met so many bright, hard-working, wonderful students. My Farewell Tour has convinced me that our Iowa students are fortunate to have such great teachers.

## The Center for Teaching and Learning Mathematics

by Julie Creeden and Vicki Oleson

The Center for Teaching and Learning Mathematics (CTLM) continues to invest heavily in the research and development of our Making Sense Professional Development courses. These courses deepen teachers' understanding of mathematical content and increase their ability to implement research-based best practices. Thanks to support from UNI's Center for Educational Transformation (CET) Brian Townsend, UNI math faculty member, will study data collected by the CTLM through both the Math Science Partnership (MSP) Title II-supported courses and our math coaching contract with Waterloo Community School District (WCSD). This important work will help us to analyze and report on the results of our efforts here at the CTLM. Townsend will be part of an evaluation team led by CTLM director, Vicki Oleson.

In addition, this year marks an exciting expansion of the CTLM courses. A recently acquired MSP Grant for Special Education Math Professional Development (SPED Math PD), submitted by Oleson, will enable CTLM to address the achievement gap between students with an Individualized Education Plan (IEP)

and students without an IEP. The first course, Teaching Mathematics to Struggling Learners: Building Your Confidence, is in current development and will be delivered to twenty WCSD special educators beginning January 2015. The oversight of these courses is an immense undertaking and is handled by CTLM assistant director, Karis Townsend; her student assistant, Kaylee Tritle; and UNI's Continuing and Distance Education.

To assist in the training of new facilitators, the CTLM team continues to develop eBook Facilitator Guides. Writing Coordinator, Julie Creeden, writes the content for these guides based on videotaped sessions facilitated by Connie Terry, math consultant at Green Hills AEA, and Lynn Selking, math consultant at Great Prairie AEA. In an attempt to model best practice for new facilitator training, Creeden also chooses video clips from these sessions, which are embedded in the eBooks by Jon Chamberlain, multi-media producer at the center. Dana Lechtenberg, CTLM art director, takes this content and creates very appealing, CTLM-branded eBooks, with the assistance of Amy Frohardt-Schafer, CTLM editor.

Moving forward, the CTLM remains committed to high-quality professional development, which has a positive impact upon elementary teachers and their students. As a result, elementary teachers are empowering students for lifelong learning by helping them make sense of, and develop an appreciation for mathematics. Stephanie Kane, 3rd grade teacher in Waterloo, says our courses "have given me the opportunity to strengthen my math instruction. Having the opportunities to sharpen my mathematical knowledge, I am also able to collaborate with other teachers around Iowa to talk about best teacher practices." Deb Marchesani, 1st grade teacher in Cedar Falls, agrees. "I am a more confident math teacher because of these courses," she states. Dennis Rokusek, WCSD math coach, sums it up, "The Making Sense courses do as the title suggests. These hands-on courses have increased my content understanding and allowed me to be more effective as a coach for the Waterloo School District." CTLM is very proud to continue this rich tradition of making powerful learning a reality for each person we serve.

## Student Organizations

### Actuarial Science Club

The UNI Actuarial Science Club plays an important role in the Actuarial Science program. Its main goal is to foster interaction among students, participating actuaries and other representatives of actuarial companies in order to facilitate summer internships and full-time positions.

### KME

Kappa Mu Epsilon (KME) is a specialized

honor society in mathematics. KME was founded in 1931 to promote the interest of mathematics among undergraduate students.

### MATH Club

The UNI Math Club is a student organization for mathematics majors and lovers. The purpose is to provide UNI students opportunities to learn and pursue mathematics outside of class and gather

to celebrate their love of mathematics.

### TEAM

TEAM (Teaching Educators About Mathematics) is a student group which meets monthly to discuss topics of interest to preservice elementary and middle school education majors.

# Donor Spotlight: Robert Minch & Mary Bothwick

Mr. Robert Minch grew up and went to school in California. He attended California Polytechnic State University (Cal Poly) in San Luis Obispo, where he earned a degree in architectural engineering. In 1968, shortly after his graduation, Mr. Minch moved to Alaska where his first job was with the Department of Public Works, Division of Buildings.

Ms. Borthwick came to the University of Northern Iowa (State College of Iowa at that time) in 1962 and graduated with a BA in mathematics education in 1966. The next two years after graduating from UNI found Ms. Borthwick teaching mathematics in Knoxville, IA. In 1968 she moved to Juneau, AK where she met Mr. Minch, her future husband.

After working for a few years for the Department of Public Works, Mr. Minch went to work for a private firm, which he eventually purchased. He worked on a variety of architectural projects involving schools, libraries, and other public buildings. Ms. Borthwick taught junior high and middle school mathematics her entire career. When she graduated from college, she thought she wanted to teach high school algebra, but her first job opportunity was teaching in a junior high school. When she wanted to move to Alaska, the job offered to her was teaching 7th grade mathematics. She came to realize that she really enjoyed both teaching pre-algebra and teaching middle school students.

Ms. Borthwick has been a MathCounts coach since the program started in 1983. She retired in 2005 but her passion for teaching kept her around students: she continues to coach gifted students for the MathCounts competition well into her retirement.

Memories from her UNI days have followed Ms. Borthwick for over 50 years. The stairways of Wright Hall were as notorious then as they are today for their energy draining steepness. Even today, Ms. Borthwick remembers the days when she was climbing the stairs, every morning, to the top floor of a no-elevator Wright Hall to attend an 8:00 mathematics class. She was taking a Physical Education class that was working her so hard that she was climbing the stairs in Wright Hall with sore leg muscles, sometimes pulling herself up by the hand rail. But Ms. Borthwick always found the energy to go to her early morning class. Thankfully for us, Wright Hall now has an elevator at the South end.

Ms. Borthwick's comments about how UNI helped her to establish her teaching career are: "The mathematics I learned probably helped me the most, but I also thought the off-campus student teaching experience was very good for me. I was in Mason City, rented a room in town, and had an experienced teacher who showed me the ropes (though he was reluctant to turn over his best class to me). The conversations with teachers in the staff

room were also very interesting."

Mr. Minch and Ms. Borthwick have been donating money to our department for 33 years. Over the years, their contributions have supported several scholarships, including the E.W. Hamilton Quasi-Endowed Scholarship and the Mathematics Education Leadership Endowed Fund for Excellence. "I grew up watching my parents donate to organizations they thought were worth supporting, mostly church and civic groups, so it seemed natural to contribute to education" says Ms. Borthwick. "We choose to support the Mathematics Department because we know that good mathematics teachers are worth their weight in whatever the most precious substance currently is."

# An Interview with Dr. Theron Hitchman

**Winner of the 2013 MAA Iowa Section Award for Distinguished College or University Teaching of Mathematics**

*What qualities do you think a good teacher has?*

Teaching is mostly about building relationships with students. I found that the most important parts of my relationships with students are these: sympathy for the student experience; trust in the abilities and motivations of students to reach the goals I set for them; and patience to give them time to develop as people and as mathematicians.

*What do you enjoy most about teaching?*

I enjoy writing educational materials and generally making things that will help students learn. But clearly the most fun part of teaching is a class discussion full of engaged students getting confused about something challenging. I don't want that to sound like I take perverse glee in student confusion. I mean, I DO, but that is because it is wonderful to see students ask deep questions about mathematics. In that way they join the ranks of mathematicians and take ownership of the subject.

*What is the biggest challenge you experience as a teacher?*

My biggest challenge remains finding

a way to connect with the difficulties each class is facing. After all of the advanced training and years spent thinking about mathematics, it is easy to forget what the subject looks like to a newcomer. When I struggle in the classroom, it is usually because I have not understood my students needs, and so I have asked too much of them, or supported them too little. I fight this all the time.

*What are your favorite courses to teach and why?*

Easily my favorite course to teach is Euclidean Geometry. I have taught that course so many times now that I understand clearly how I want it to work. This allows me to go to class and focus on developing students as much as possible.

*You are a very successful mentor of undergraduate research. How do you explain it?*

I wouldn't call myself successful at mentoring undergraduate research. But I like doing it, and I will continue to try it. Any visible success here is due to the students.

*What advice do you have for our students who will soon start their teaching careers?*

Remember that teaching is a profession. As a professional you are responsible for your own continued

development. Find some way to connect with a group of peers, and work with them at improving your practice. You have to push yourself to improve, and if you are really trying new things, you will need a network of peers for support and feedback.



Photograph taken for the RL Moore Project



# Alumna Spotlight

Allysen Lovstuen ('06)



By Jihwa Noh

My first meeting with Allysen was not a typical face-to-face meeting. Instead, I met her through a huge television set, in an ICN room. She was a student in a graduate class that I taught once a week during the fall of 2004. There were 14 in-service teachers in that class, spread over seven remote sites, in addition to the two students who were in the room I was in. Allysen was at one of those remote locations. The challenge of teaching a graduate course to older students, using unfamiliar technology, barely 25 days after receiving a doctoral degree and 25 days after settling in Iowa was, to put it mildly, daunting. My colleague, Ed Rathmell, came in to the ICN room a couple of times to help me with the technology and class discussions. His visits were very helpful and greatly appreciated but the feeling of terror stayed with me the whole semester. Although I hope Allysen and her classmates don't remember much of that particular class, I distinctly

**Education:** BA in Mathematics (UNI, 2001), MA in Mathematics (UNI, 2006)

**Current school:** Decorah High School (since 2001)

**Courses taught:** Geometry, Algebra 1B, Cognitive Tutor Algebra 1, AP Calculus AB, and AP Calculus AB/Physics

**Awards received:**

– 2013 Dr. Robert E. and Phyllis M. Yager Exemplary Teaching Recognition Award  
– State of Iowa Finalist for 2013 Presidential Awards for Excellence in Mathematics and Science Teaching

**Husband:** Nick – **Children:** Anya (10), Anders (8), Lyla (6)

**Hobbies:** Reading – mostly fiction, enjoying the outdoors with my family, playing volleyball

remember how much she impressed me as a student. She was a thoughtful and engaged student, who particularly excelled at delving deeper to find out why and how things were the way they were. Fast-forward a couple of years, when I had the privilege to serve as the major advisor for her master's degree paper. Her paper was about using test journaling to help broaden students' view of assessment as another opportunity to learn, not as an end. For her study, Allysen conducted an action research project in her Algebra II and Geometry classes over two semesters. She presented the results of her project and the findings of an extended version of the project in her school district and at various state conferences.

Allysen was not only a good student; she has inspired me as a teacher. She constantly strives to teach through problem solving and promote mastery of skills with understanding. She uses inquiry learning and encourages students to take responsibility for their own learning. Allysen pushes herself hard, often too hard, to focus on both the reason behind teaching the material she is teaching and the methods that she uses to teach it. For her excellence in the classroom and ability to inspire her students, last year Allysen was one of the two recipients of the Robert E. Yager Exemplary Teaching

Recognition Award. As evident in the teaching video she had submitted as part of her application for the Yager award, the selection committee commended her for being excellent in terms of guiding students through their own discoveries and the interpretation of their results.

Allysen always has the goal of extending her students' understanding and involvement with mathematical concepts outside of class, as well as during class, in any way she can. She talks to her students. She talks to their parents, her colleagues, and the administrative staff. She led Robotics and Math Club activities in her school with her colleagues. Allysen encouraged and helped prepare a group of students to participate in the High School Mathematical Contest in Modeling. This is an international competition where a team of up to four students has a block of 36 hours to use mathematical modeling to solve real world problems. The first year, one of her teams earned the classification of "Meritorious." That was the highest classification achieved by any team in Iowa that year. Last year, her team earned the classification of "Finalist" (which is one step higher than Meritorious). Once again, that was the highest classification achieved by any team in Iowa and they were the sole

Iowa recipients. Allysen has been very active in district-wide Leadership Team activities, curriculum development, and grant writing. She has gone above and beyond the call of duty to take the mathematics program in her district to a higher level. In addition to winning the Yager award, Allysen was one of three Iowa finalists for the 2013 Presidential Award for Excellence in Mathematics and Science Teaching.

Allysen is a shining example of someone who is not only a teacher, but also a true leader in the community, working to promote effective instruction and student learning. It truly has been a pleasure to know and work with her over the past several years and I appreciate the opportunities that have allowed us to learn from each other. I look forward to what our collegueship can offer in the coming years.

# Alumna Spotlight

Jodi Osthus ('97)



By Edward Rathmell

**Education:** AA (DMACC, 1991), BA in Elementary Education (UNI, 1992), MA in Middle School Mathematics (UNI, 1997)

**Current school:** Meredith Middle School, Des Moines (since 1994)

**Currently teaching:** Sixth grade mathematics and accelerated 1

**Awards received:**

– 2013 Dr. Robert E. and Phyllis M. Yager Exemplary Teaching Recognition Award  
– Finalist for the 1998 Mathematics Presidential Award

**Husband:** Larry

**Children:** Rebecca

**Hobbies:** Photography and traveling

Jodi Osthus was one of the most organized, most reliable, most persistent, and most driven undergraduate students that I have ever had in class. If I assigned a task with a deadline two weeks later, she almost always had the assignment completed the next day.

As one of our top students, she was invited to work in our mathematics education laboratory where she helped keep us organized and tutored other students in need of assistance. That also gave her opportunities to get better acquainted with the mathematics education faculty, their research efforts, and the new standard's-based materials that were just becoming available.

Jodi was able to turn that professional growth into other opportunities. She became a leader in our student organization TEAM. She became the first student representative on the Iowa Council of Teachers of Mathematics Executive Board. In that role she organized the first two student pre-conferences and successfully encouraged other undergraduates to participate. These conferences have grown into very successful annual events. As a precocious undergraduate, she even presented at teacher's conferences.

When Jodi became a new teacher and a graduate student in our Mathematics for the Middle Grades MA program, she continued to grow professionally. She began using a problem-solving approach to help her students learn all mathematics topics. She also explored the effects of using a distributed instruction approach to teach percent with great results. About ten years later, the Iowa Department of Education included both of these ideas as part of its research-based practices that are now an integral part of the Iowa Core.

I had the pleasure of visiting her mathematics classroom a few years ago. She expected her students to solve complex problems and they did. Shortly after that I visited again to observe how she and a co-teacher had their students learn about scale drawings. A member of the National Guard actually brought a real Humvee to the school and the students used it to measure and make the decisions necessary to create their own scale drawings. It was not easy for them to "get it to fit" on their paper. The students were quite excited about this event and their scale drawings.

Jodi has always taken on assignments enthusiastically. She has never shied

away from a project because it was going to take “too much time” or be “too much work.” Recently, when the Des Moines School District needed an expanded pool of problem-based instructional tasks (another research-based practice suggested by the Iowa Department of Education), she willingly joined a few other teachers to write those tasks and create related benchmark tests that are now used in the district. She continues to write units that have real world connections for use in her school as they transition into

an International Baccalaureate school.

Throughout her teaching career, Jodi has not given up on any student. She regularly “checks” with students in the hallway, invites them for extra help, and calls their parents to make sure that all of her students succeed. In 2013 Jodi was recognized with the Yager Exemplary Teaching Recognition Award for her innovative teaching and excellence in the classroom.

Her “let’s-do-it” attitude carries over

to her life outside of school, such as hiking the Grand Canyon. Apparently she didn’t see it all the first time, so she went back and did it two more times. She has also toured large portions of the United States by motorcycle, and led a 4-H group that her daughter, Rebecca, is in.

Everyday, Jodi demonstrates what I hope each of my students will become. My dream is for each of my grandchildren to have mathematics teachers as effective as Jodi.

## Addresses by Mathematics Faculty

**Many faculty members in our department have participated and made presentations at various meetings and conferences. Among them are:**

**Dr. Russell Campbell**  
International Conference for the Exchange of Mathematical Ideas, UNI (2013)

**Dr. Adam Feldhaus**  
Iowa EPSCoR STEM Conference, Cedar Falls, IA; Colloquium Talk, Marquette University, Milwaukee, WI (2014)

**Dr. Theron Hitchman**  
Michigan Section of the MAA; The Legacy of RL Moore; MAA MathFest; MAA Project NExT Program (2013)

**Dr. Elizabeth Hughes**  
Iowa EPSCoR STEM Conference, Cedar Falls, IA; Colloquium Talk, Marquette University, Milwaukee, WI (2014)

**Dr. Syed Kirmani**  
Annual Meeting of the ICTM, Ames, IA; Annual Meeting of the CA Mathematics Council South, Palm Springs, CA (2013)

**Dr. Catherine Miller**  
Annual Meeting of the ICTM, Ames, IA; Annual Meeting of the CA Mathematics Council South, Palm Springs, CA (2013)

**Dr. Douglas Mupasiri**  
Annual Meeting of the NCTM, New Orleans, LA (2014)

**Dr. Olof Steinhorsdottir**  
Annual Meeting of the NCTM, New Orleans, LA (2014)

**Dr. William Wood**  
The 2nd International Conference for the Exchange of Mathematical Ideas, UNI (2013)

**Dr. Jihwa Noh**  
NCTM Research Conference, New Orleans, LA (2014)

**Dr. Edward Rathmell**  
ICTM-ISTA Math-Science Conference (2013)

**Dr. Karen Sabey**  
ICTM & IAS-ISTA, Ames, IA (2013)

**Dr. Olof Steinhorsdottir**  
Annual Meeting of the ICTM, Ames, IA; Annual Meeting of the CA Mathematics Council South, Palm Springs, CA (2013)

**Dr. William Wood**  
The 2nd International Conference for the Exchange of Mathematical Ideas, UNI (2013)

**Dr. Jihwa Noh**  
NCTM Research Conference, New Orleans, LA (2014)

**Dr. Edward Rathmell**  
ICTM-ISTA Math-Science Conference (2013)

## Alumnus Spotlight

**Benjamin Wadsley ('04)**



Professor and Head Douglas Mupasiri and Ben Wadsley

A quick glance at Ben’s resume shows that his career so far has been a great success story, a story that would have been difficult to anticipate fifteen years ago, when Ben was a high school senior. Ben was always talented in mathematics and he knew he would embrace a profession where he would use mathematics. What Ben did not know fifteen years ago, when applying for college admission, was what that profession would be.

Ben was born and raised in Iowa and he wanted to complete his education in the state. In the spring of 2000, while still in high school, he came to UNI to participate in the College of Natural Science’s Science Symposium. He liked our campus, particularly its size, where buildings were only minutes away from each other, and the variety of degree programs that UNI offered to its students. All these elements combined tipped the balance in favor of UNI,

where Ben came in the fall of 2000 to earn his college degree.

While Ben liked mathematics, he came to UNI undecided about his major. It was during the orientation when Ben learned about his options. According to Ben, picking his major was essentially a coin flip between mathematics and computer science. He first picked a pure mathematics major, reasoning that he might change it later, if necessary. And he did, only a few weeks later, when he learned more about the profession of actuary, which he knew nothing about when he came to UNI. “I was told that I would have to pass actuarial exams, but that wasn’t too intimidating because I was in school and I had to take exams all the time” says Ben.

Ben took most of the actuarial classes in his sophomore and junior years. He passed a couple of actuarial exams during those years and that was a good thing: “You have to have those actuarial exams to get a job, especially nowadays” says Ben. “The [UNI actuarial] classes are geared towards that. They are about understanding the concepts but also the professors would always point out the important stuff for [actuarial] exams.”

And four years after starting at UNI, Ben earned his BA in Mathematics (Actuarial Track) with a minor in economics. Before graduation, he had a couple of internships with Transamerica (formerly AEGON). Those internships played a key role when applying for a full time position. Ben got job offers from several insurance companies including Transamerica, the company whose offer he enthusiastically accepted.

At Transamerica, Ben continued to grow professionally and made time to study

for and successfully take additional actuarial exams and, in 2008, achieved the Fellow of the Society of Actuary (FSA) designation. Since 2014 he is the Head of Product Management for the Investments & Retirement Division of Transamerica, focusing on Retirement Plans and Annuities. Along the way, he has held various leadership positions within the company, including, more recently, Chief Actuary of the Employer Solutions & Pensions Division.

Ben has recently become interested in genetic algorithms. “While other professions have been successful in using genetic algorithms, the same cannot be said of the actuarial field, so far. Taking such algorithms and applying them to different business challenges is one of the most exciting things to do” says Ben.

Ben’s advice to current actuarial science majors is: “Be engaged. Get involved and attend all the meetings of the Actuarial Club – that is where I learned about my company. Seek out things like job shadows to get a sense of what the profession involves before getting too far into it.”

Ben is married and has two children. He and his family live in Cedar Rapids, IA.

# Student Spotlight



Caryn Knight

Every university has students with outstanding academic achievements. Most universities have a number of great student athletes. It is much less common to find students who excel both academically and in athletics. Winner of the Purple and Old Gold award and UNI swimming record breaker, Caryn Knight is the perfect example from the latter category.

Caryn was a high school senior when she visited UNI for the first time, on a swimming recruiting trip. She was impressed with our girls swimming team and loved our campus. That visit made a lasting impression on Caryn and eventually convinced her to come to UNI to pursue a BA in actuarial science and, of course, to be on the swimming team.

Despite her initial excitement about being a college student, it took her a little while to truly enjoy being at UNI. While she made friends with her teammates right away, Caryn feels that she fully enjoyed college mostly in her final two years at UNI, when she developed strong connections with our faculty members.

In addition to the actuarial science major, Caryn declared a second major in applied economics analysis and a minor in finance. An important measure of success in the actuarial profession is the number of actuarial exams passed. Caryn passed three exams as an undergraduate student. She spent the summer of 2013 as an actuarial intern at Assurant Health. She was on the Dean's list every semester since she came to UNI. In 2014, Caryn was awarded the Purple and Old Gold Award for Meritorious Academic Achievement in Economics. Since 2011, she was the UNI chapter president of the National Society of Collegiate Scholars, as well as co-vice president of the UNI Student Athlete Advisory Committee.

***"I think the UNI actuarial classes are great. They really help you pass exams, which puts you ahead when applying for internships and jobs."***

During her sophomore year (2012), Caryn spent the spring semester in Australia, at the University of Newcastle. "I met some amazing people and a few friends I still keep in touch with from all over the world" says Caryn.

Caryn has been a competitive swimmer since she was 6. Swimming for many years, she developed work routines that helped her to balance her academic and athletic activities. She learned quickly that managing her time carefully and being organized were key ingredients for success. During the

swimming season, Caryn spent 20 hours a week in the swimming pool practicing (every morning and every afternoon). That was in addition to the countless hours she spent in the weight room, dome, or running stairs. She worked hard and quickly had the results to show for it: in her freshman year, Caryn broke the 200 individual medley and the 400 medley relay school records at the Missouri Valley Conference (MVC) Championship. In recognition of her outstanding achievements, Caryn received an Honorable Mention at the conference level and was also named on the MVC scholar athlete team for three years (2012, 2013, 2014). In addition, in each of the last two years she received the UNI Swimming and Diving Student Athlete of the Year distinction for having the highest GPA on her team. This year Caryn also received the MVC President's Academic Excellence award.

Caryn says: "The awards don't mean as much to me as the people I've met through the sport and the lessons I've learned. Some of my teammates will be my friends for the rest of my life and the coaches I've had have influenced me so much. I'm always thankful to have had the opportunity to do what I loved in college."

Caryn graduated from UNI in May 2014. In July 2014 she started in a full-time position at Transamerica, in the Actuarial Student Development Program.

In her free time, Caryn likes to scrapbook and do other crafts, play with her dog, and spend time with her family and friends.

# Student Spotlight



Emily Stumpff

Emily Stumpff is the recipient of the 2014 Purple and Old Gold Award, recognizing meritorious scholarship or conspicuous achievement in Mathematics. She earned her Bachelor of Arts in Mathematics Teaching in May 2014. Days before her graduation, we asked Emily a few questions about her UNI experience:

***When did you decide to become a mathematics teaching major and what made you pick this major?***

I wanted to be a teacher since the third grade because I loved school and I thought that helping people learn was the best possible thing that someone could do with their life. I decided to become a mathematics teaching major in my junior year of high school, encouraged by my math teacher, Mrs. Muhly.

***Why did you decide to come to UNI?***

I applied to UNI because of the amazing teacher education program, but I chose UNI because it felt like home as soon as I walked on campus. Along with this homey feeling, I found people that were welcoming and friendly. I realized this when, on my first time visiting the campus, my father and I got lost trying to find Begeman Hall. A student realized that we were lost and asked us if she could help. She actually did not know where that building was either, but she proceeded to ask three other students.

This exchange made me feel that going to UNI would not be scary and that I would always be amongst friends.

***What were your first impressions about UNI?***

My first impressions of UNI were that it was a place filled with nice people and that I could be happy there. My impressions were exactly right. I have found that my time at UNI was AMAZING. I loved my professors and all the attention and guidance they gave me. I never felt alone when I was at UNI, and I could always find someone to help me when I was in need. I think that I was given the opportunity to experience a first rate education. I learned so much all these years and I interacted with amazing people who enhanced my learning experience.

***How did the Mathematics Department help you to attain your professional goals?***

The Mathematics Department helped me in multiple ways. The mathematics faculty members were amazing in their ability to set aside time for me as a student to get help. I never felt as though I was over my head in anything because I was always just one short walk to Wright Hall away from getting the help I needed. The courses I have taken throughout the program were useful, interesting, and they opened my eyes to what was out there in mathematics. I don't think I could have developed into the teacher I am now without the experiences I had attained in this department and at UNI in general.

***Are there any particular experiences in our department (or at UNI) that you will remember after graduation?***

I think that I will remember three experiences very distinctly. First, I will remember the mathematics problem solving classes with Dr. Mupasiri because

I got so much one-on-one attention and we always had funny, interesting conversations about mathematics. These classes enhanced my excitement about mathematics and showed me that passion is something that I want to share with my future students, just like Dr. Mupasiri shared it with us.

Secondly, I will remember Dr. Hitchman's Euclidean Geometry course. It was the course that made me feel like I could actually write proofs and be a true mathematician. I felt connected to the course's content and I also felt that the perseverance required to succeed was well worth it.

I distinctly remember shedding tears of joy when I got the final problem done on a take home assignment, after struggling with it for days. Experiences like that made me feel like the effort and sometimes frustration involved in mathematics are well worth it when the high of success is so great.

Finally, I will remember Dr. Miller saying the phrase "serve them well." It seemed like she said it a lot in my classes with her and it always made me think. This phrase alone always made me sit and think about what a student really needs. This phrase is one that I hope will continue to guide my teaching because, after all, the students' development as mathematicians is the most important part of any mathematics teacher's job.

***What do you enjoy doing in your free time?***

In my free time, I love to read as many books as I can get my hands on, watch television and movies, hang out with family and friends, and play and coach softball.

***What are your career plans after graduation?***

After graduation, I will be teaching at Solon high school. I will teach pre-algebra, algebra and statistics.

## Contributions to an Account – Recognition\*

### 210174 - E.W. Hamilton Quasi-Endowed Scholarship

John G Newton  
Judith & Samuel Seymour

### 210474 - Wanda & Carl Wehner Mathematics Teaching Endowed Scholarship

Dow Chemical Company  
William R Hillyard  
Nancy J Hoing  
Lois & David Kail  
Mrs. Karen Page  
Mr. Carl Orville Wehner  
Wanda Lee Wehner

### 210591 - Diane Lee Sorenson Baum Fund

Dr. Daryl Basler  
Diane Lee Baum Revocable Trust

### 210976 - Patricia Lange Memorial Mathematics Endowed Scholarship

Reuben & Nancy Collins  
Robert Lange  
Stephen & Karrie Mullenberg

### 211124 - Fred W. Lott Endowed Scholarship in Mathematics

Diana Anderson  
Jerome F Jurschak  
Eldon & Lynne Meyers  
Ronald & Judith Moehlis

### 211292 - Augusta Schurrer Endowed Fund for Mathematics

Lowell & Mary Doerder  
Randall & Julie Holmes  
Jerome F Jurschak  
Jane & Ludolph Lechner  
Pamela Liegl  
Robert & Marjorie Nelson  
John M Orth  
Jerry & Beverly Ridenhour

### 211516 - John F. & Ruth Cross Endowed Scholarship

Terry & Janice Gambaiani  
John M Orth

### 211553 - Charles & Dorothy McLeod Tubbs Math Education Endowed Scholarship

Charles Tubbs Sr

### 211718 - Michael Millar Endowed Scholarship

Lanny C Buls  
Gene & Ellen Carey  
Terry & Janice Gambaiani  
William R Hillyard  
Pamela Liegl  
Ruth Millar  
Robert & Marjorie Nelson  
John M Orth  
Kory & Conni Swart

### 212206 - Marian Rigdon Ponder Math Education Scholarship

Marian & J.Glen Ponder

### 212220 - Rich and Dee James Secondary Mathematics Teaching Endowed Scholarship

Rich & Dee James  
Wells Fargo Foundation

### 212396 - Principal Financial Group Actuarial Scholarship

Principal Financial Group

### 212418 - Robert A. and Carol L. Hendrickson Crane Scholarship in Secondary Math Education

Carol & Robert Crane

### 212528 - John C. Peterson Mathematics Education Graduate Student Scholarship

John & Marla Peterson

### 212639 - Bonnie Litwiller Mathematics Teacher Endowed Scholarship

Deceased Bonnie Litwiller  
Jerry & Beverly Ridenhour

### 212664 - George and Mary McCoige Math Education Scholarship

Jeffrey A McCoige

### 212828 - Robert R. Johnson Endowed Scholarship for Mathematics

Robert R Johnson

### 220127 - Math Quasi-Endowed Fund

Donald & Jane Bachman  
Marina Bernard-Naden  
Russell B Campbell  
Mary Ann & John Cross  
Gregory & Carol Dotseth  
David & Helen Duncan  
Roger & Karen Fread  
Annette & Joseph Haas  
Marilyn L Hala  
IBM Corporation  
Austin & Kim Jones  
James & Mary Lou Krueger  
Margaret & Tom Magner  
Robert & Barbara Mittman  
Mary Mumm  
Susan Rock  
Dennis R Schachterle  
Matthew D Schafer  
Jon & Laura Scoles  
Kim Sprain  
Pamela & Marshall Swan  
David & Deborah Tschiggfrie  
Charles & Nancy Weber  
Vicki A Williams  
Chun-Kwan & Colleen Yee

### 221015 - Mathematics Education Leadership Endowed Fund for Excellence

Melisa Bartlett  
Mary Borthwick & Robert Minch

Fidelity Charitable Gift Fund  
Bryan & Christine Redemske  
Kim Sprain

### 221162 - Math Leadership

Dr. Daryl Basler  
Marshall & Theresa Blaine  
Galen & Katherine Howsare  
Bryan & Christine Redemske  
Bud & Joyce Smith  
Kim Sprain

### 221288 - Actuarial Science Fund

Randall & Julie Holmes  
Northwestern Mutual Foundation  
Kim Sprain

### 221293 - Augusta Schurrer Endowed Mathematics Grant

Augusta Schurrer Revocable Trust  
Randall & Julie Holmes  
IBM Corporation  
James & Sally Lockwood  
Chun-Kwan & Colleen Yee

### 222452 - Mathematics Undergraduate Research Assistant Fund

Kim Sprain

### 242778 - Doris Littell Bock Memorial Fund

Debra Bagby

### Competition Fund

Greg Dotseth

*\*We tried to include everyone who contributed to Mathematics Department Funds. It is possible that we may have missed some donors. To them we apologize.*

## IN MEMORIAM



### George Immerzeel

George was born on May 30, 1926, in Kansas City, MO. His family moved to Jefferson, IA, when he was still very young and he received his early education there. A few years later the family moved again, to Davenport, IA, where he completed his education. After graduating high school at age 17, he enlisted in the Navy and served in the Pacific during WWII.

Although he was good at many things, his first love was teaching. Taking advantage of the GI Bill, he received both his BA in Mathematics (1948) and MA in Mathematics (1956) at UNI. He became part of the faculty at the Malcolm Price Lab School where he taught mathematics to children of all ages. His focus was always on problem solving, and he developed and designed an instructional math problem solving curriculum using skills not commonly taught in textbooks. While on the Price Lab faculty, he taught a modern mathematics class using an "electro writer" to parents so they would understand what their children were learning. He would write on a screen which was then transmitted by phone to different centers in Iowa.

In 1975 George became a faculty member in the UNI Department of Mathematics, continuing to teach and write. He chaired NCTM's (National

Council for Teachers of Mathematics) Committee for Mathematics Curriculum which produced the Agenda for Action. This was NCTM's most prominent policy document, laying the foundation for a major reform in mathematics.

George resigned from the faculty at UNI in 1983 and relocated to Boston. While in Boston, he continued writing and became part of a writing group of authors who shared similar visions for the progress and modernization of mathematics. He continued teaching, becoming a member of the faculty of Boston University, Leslie College, and the Carroll School, an elementary and middle school for children with dyslexia and other disabilities.

According to George's wife Marcia "in 1988, we left Boston and retired to Bainbridge Island, WA, and Delray Beach, FL. We were married on Bainbridge Island where George enjoyed his retirement - fishing, golfing, and traveling."

Sadly, he passed away on March 1, 2012, in Delray Beach, FL.

George was the author of many mathematics textbooks, problem solving books, and many books solving mathematics problems using the calculator.

## Department of Mathematics Funds

The following funds and scholarships are named for UNI emeritus faculty members:

**Diane Sorenson Baum Fund** – scholarships for elementary education majors with a K-8 mathematics minor (21-210591)

**E.W. Hamilton Quasi-Endowed Scholarship** – scholarships for students enrolled in any mathematics program (20-210174)

**Bonnie Litwiller Mathematics Teacher Endowed Scholarship** – scholarships for students majoring in Mathematics-Teaching (30-212639)

**Fred W. Lott Endowed Scholarship in Mathematics** – scholarships for incoming freshmen who are mathematics majors (30-211124)

**Michael H. Millar Endowed Scholarship** – scholarships to graduate students (30-211718)

**Augusta Schurrer Endowed Scholarship for Mathematics Excellence** – scholarships for students majoring in mathematics – Teaching (30-211292)

**Augusta Schurrer Mathematics Grant** – scholarship for math majors with 65 hours of completed work at UNI; preference to secondary teaching major (21-221293)

**Carl and Wanda Wehner Math Teaching Endowed Scholarship** – scholarships for juniors or seniors majoring in Mathematics – Teaching (30-210474)

The following funds have been established by alumni and friends of the Department of Mathematics:

**Robert Allender Mathematics Teaching Endowed Scholarship** – scholarships for sophomore, junior, or senior students majoring in Mathematics-Teaching (30-211638)

**American Society for Quality Control-Endowed Math & Computer Science** – scholarship for juniors or seniors majoring in mathematics (30-210419)

**Athene Actuarial Scholarship** – scholarships for students majoring in Actuarial Science (21-212673)

**Conrad and Jeannette Baumler Mathematics Education Scholarship** – scholarship for juniors or seniors in mathematics education (21-212506)

**Carol Woolson Beck Endowed Scholarship** – scholarship for junior or senior in mathematics education (30-212611)

**Robert W. Bettle Math Education Endowed Scholarship** – scholarships for seniors in mathematics education (30-211269)

**Doris Littell Bock Memorial Scholarship** – scholarships for female seniors in mathematics education (21-212778)

**Glenn Boysen Endowed Math Scholarship** – scholarships for students majoring in mathematics (30-211136)

**Alice & George Brown Endowed Math Scholarship** – scholarships for a declared major in the Department of Mathematics (30-211526)

**Irvin and Dorothy Brune Mathematics Education Endowed Scholarship** – scholarships for mathematics education majors (30-211613)

**Robert and Carol Hendrickson Crane Scholarship in Secondary Math Education** – scholarships for juniors or seniors in secondary mathematics education (21-212418)

**John F. and Ruth Cross Endowed Scholarship** – scholarships for Statistics and Actuarial Science majors (30-211516)

**Rich and Dee James Secondary Mathematics Teaching Endowment** – scholarships for juniors or seniors in secondary mathematics education (30-212220)

**Patricia Lange Memorial Endowed Math Scholarship** – scholarships for juniors or above in any mathematics major (30-210976)

**George and Mary McCoige Mathematics Education Scholarship** – scholarships for sophomores and above majoring in Mathematics-Teaching (21-212664)

**Marian Rigdon Ponder Math Education Scholarship** – scholarships for incoming freshmen mathematics education majors (21-212206)

**Prem Sahai Actuarial Science Endowed Scholarship** – scholarships for actuarial science majors (30-211550)

**Principal Financial Group Actuarial Scholarship** – scholarships for juniors or above majoring in Actuarial Science (21-212396)

**Myrtle Wiese Smith Memorial Endowed Scholarship** – scholarship for juniors or seniors in mathematics education (30-212498)

**Marcia E. Traer Endowed Scholarship Fund** – scholarships for juniors or seniors in any mathematics major (30-211199)

**Charles & Dorothy McLeod Tubbs Math Education Endowed Scholarship** – scholarships for students majoring in mathematics education (30-211553)

## Department of Mathematics Contribution Form

Would you like to support a Mathematics student and/or the Mathematics Department?

If so, please fill out the form below and return it to: **UNI Foundation Financial Services**  
1223 W. 22nd St.  
Cedar Falls, IA 50614-0239

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

E-mail \_\_\_\_\_

Phone  home  cell  business

Please check if new address, phone or e-mail.

I/we would like to support the following fund(s).

\$\_\_\_\_\_ **Mathematics Department Quasi-Endowed Fund** (provides Alumni Scholarships, faculty development and travel, equipment, and support for all programs) 20-220127

\$\_\_\_\_\_ **Mathematics Education Leadership Endowed Fund for Excellence** (discretionary fund for all mathematics education programs in the UNI Department of Mathematics) 30-221015

\$\_\_\_\_\_ **Actuarial Science Fund** (provides John E. Bruha Award in Actuarial Science, Northwestern Mutual Scholarship, non-endowed scholarships, and covers student fees on successfully completed actuarial exams) 21-221288

\$\_\_\_\_\_ **Mathematics Leadership Fund** (for the enhancement of teaching secondary mathematics) 21-221162

\$\_\_\_\_\_ **Mathematics Undergraduate Research Assistant Fund** (for general undergraduate research assistance) 21-222452

\$\_\_\_\_\_ **Dr. Hyo Myung Family Mathematics Faculty Enrichment Endowment Fund** (provides faculty enrichment support for young (3-5 years) pretenured mathematics faculty members at the University of Northern Iowa) 30-222460

**Online:** If you prefer, you may give via the UNI Foundation secure website: <https://www.uni.edu/math>. Use the "Donate to Mathematics" button on the right side. This will take you to a secure site with three mathematics funds choices. Please enter your donation amount in the boxes, or click "Take me directly to the giving page" to contribute to any other project (enter the project name or gift intention in the area marked "Please specify designation" in the "Other" category).

Additional funds, established by alumni and friends, provide scholarships to students in our programs. These scholarships are described on the reverse of this page.

\$\_\_\_\_\_ directed to \_\_\_\_\_

My (or my spouse's) company, \_\_\_\_\_ (name), will match my gift.  
(Please contact your HR office for details and matching gift form to be submitted with payment.)

**Type of Payment:**

**Check:** enclosed, payable to the UNI Foundation  **Credit Card:** please charge my card  
\$ \_\_\_\_\_ beginning (mo/yr) \_\_\_\_/\_\_\_\_  
Please complete card information below.

**Signature** (required) \_\_\_\_\_ **Date** \_\_\_\_\_

Credit card information will not be kept on file

100340

Charge my:  VISA  MasterCard  Discover  American Express (please check one)  
Card Number: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

Department of Mathematics  
University of Northern Iowa  
Wright Hall 220  
Cedar Falls, IA 50614-0506

## Alumni Updates

Mr. Lynn R. Kueck, 1966 secondary math education, earned his MA in Mathematics from Stanford University (1975). This year, Mr. Kueck entered his 17th year as Mayor of Algona, IA.

Ben Matthies, 2004 secondary math education, earned a Master's Degree in Educational Leadership from Viterbo University (2012). He teaches mathematics at Ames High School in the Alternative Learning Program (ALP) where he is the ALP summer school coordinator and the online learning coordinator. He also teaches mathematics courses at the Des Moines Area Community College. Ben and his wife Elizabeth have a daughter named Em-malynn. They live in Boone, IA.

Joyce Boike, 2006 secondary math education, got married in June 2012 to Chris Gilmore. They live in Kansas City. Joyce teaches high school mathematics at Liberty High School.

Stephanie Gipple married Ted Liautaud Jr. on July 13, 2013. She is currently a sixth grade mathematics teacher outside of Kansas City, MO.

## Alumni info request — *Let us hear from you...*

Let us know what you have been up to. You can email us at [mathematics@uni.edu](mailto:mathematics@uni.edu) or return this form to:

Department of Mathematics  
University of Northern Iowa  
Wright Hall 220  
Cedar Falls, IA 50614-0506

First Name \_\_\_\_\_ Last Name (maiden) \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Email: \_\_\_\_\_

Please share any news about you or your family to be included in the next Mathematics Newsletter.

No person shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination in employment, any educational program, or any activity of the University, on the basis of age, color, creed, disability, gender identity, national origin, race, religion, sex, sexual orientation, veteran status, or on any other basis protected by federal and/or state law.

The University of Northern Iowa prohibits discrimination and promotes affirmative action in its educational and employment policies and practices as required by Title IX of the Educational Amendments of 1972, the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VII of the Civil Rights Act of 1964 and other applicable laws and University policies. The University of Northern Iowa prohibits sexual harassment, including sexual violence.

The following person has been designated to handle inquiries regarding the non-discrimination policies and serves as the University Title IX Officer: Leah Gutknecht, Assistant to the President for Compliance and Equity Management, Office of Compliance and Equity Management, 117 Gilchrist Hall, UNI, Cedar Falls, IA 50614-0028, 319-273-2846, leah.gutknecht@uni.edu

In compliance with the Jeanne Clery Act, UNI publishes an Annual Security & Fire Report. The report contains information regarding campus safety and security including crime prevention, crime reporting policies, drug and alcohol abuse, sexual assault and student disciplinary procedures. The report also contains the three previous years' crime and fire statistics for on campus locations and certain off campus locations owned or controlled by UNI. To obtain a copy of the report, contact the UNI Department of Public Safety located at 030 Gilchrist Hall, Cedar Falls, IA 50614, call 319-273-2712 or visit [www.vpaf.uni.edu/pubsaf/crime\\_stats/clery.shtml](http://www.vpaf.uni.edu/pubsaf/crime_stats/clery.shtml).