

#### Minnesota State University Moorhead

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# **Σ**ary

Minnesota State University Moorhead, Mathematics Department

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# 2004-2005 Outstanding Senior Awards

Each year the Mathematics Department selects senior majors for recognition of their achievements. Criteria for selection include both overall and mathematics G.P.A.'s, performance in capstone courses and other advanced mathematics courses, results of the E.T.S. Major Field Test in mathematics and participation in departmental activities.

This year, Lisa Cooper and Elizabeth Smith have been selected as recipients of the "Outstanding Senior" awards. In addition to recognition by the faculty, Elizabeth and Lisa will each receive membership in the mathematical society of their choice.



**LISA COOPER** comes to MSUM from Minnetonka, where she graduated from Hopkins High School. Her parents are Paul Cooper and Veronica White.

While at MSUM, Lisa has served as a tutor for the mathematics department and has also been Rugby Club President, and captain and cofounder of the rugby team.

She is completing a major with a mathematics education emphasis and also will obtain a coaching certificate. After graduation, she plans to look for a teaching position in Minnesota, but will consider graduate work as well.

Lisa has chosen membership in the Mathematical Association of America (MAA) for her award.



**ELIZABETH SMITH** graduated from Green Bay West High School and is the daughter of David and Rae Ellen Smith of Green Bay.

While at MSUM, she has been a member of both Alpha Lambda Delta and Phi Kappa Phi honor societies and has also worked at the Café Connection and as a tutor in the Mathematics Department.

After graduation, Elizabeth plans to teach mathematics at the secondary school level. Accordingly, she has selected membership in The National Council of Teachers of Mathematics (NCTM).

## Wallen Scholarship Recipient

The Wallen Scholarship is given to junior mathematics majors and is named after Jim Wallen who was a member of the department for 30 years. Thanks to the contributors to this scholarship fund the department was able to grant two awards this year.

Jayne Linstad and Mukesh Khanal are this year's recipients of James T. Wallen Scholarships.



• Jayne Linstad is a graduate of Fargo North High School. Her parents are Paul and Cindy Linstad.

While compiling an excellent record in mathematics at MSUM, Jayne has also majored in physics. In addition she has been President of the Math Club, a math tutor, and is a member of MAA. In 2006 she will spend a semester in Budapest working on mathematics.

Jayne plans to attend graduate school after completion of her work at MSUM.



• Mukesh Khanal comes to MSUM by way of transfer from Truman State University in Missouri. His hometown is Biratnagar, Nepal, where he attended Kathmandu University High School, and his parents are Murari Prasad and Tara Khanal.

Mukesh is also a double major, with economics as his other interest. While at MSUM he has served as a tutor for the Mathematics Learning Center and for the Mathematics Department. He has also been involved with the Supplemental Instruction program.

Like Jayne, upon graduation he plans on attending graduate school where he will pursue a Ph.D. in mathematics and economics.

The fund supporting Wallen Scholarships is always open to further donations, so if you choose to join this effort please send your check to the MSUM Foundation and specify that your contribution be credited to the Wallen Scholarship Fund.

# Other Department Awards

Thanks to the generosity of alumni and faculty, the phonathon and other fund raising efforts have enabled the department to grant several additional scholarships and awards.

This year, Upperclass Mathematics Achievement Scholarship Awards go to Jackie Doerr and Nicole Voge. Both students are interested in Mathematics Education and both have participated in varsity athletics at MSUM while achieving excellence in mathematics.

For her contribution to Mathematics Department activities, a Mathematics Service Award is given to Laura Lee Finstrom.

Mathematics Achievement Awards go to excellent students who are approximately at the mid-point of their major. This year's awards go to Amber Anderson, Jon Nilson, Alicia Stevenson and Jessica Trautwein.

New Freshman Awards are presented to outstanding students who are currently enrolled in calculus classes. This year, the awards go to Kapila Gunasekera and Jill Rivinius.

Finally, Mathematics Specialty Awards are given to elementary education majors who are also completing a specialization in mathematics. This year's awards go to Sarah Kastner, Erin Kiel, Amy Rosengren and Julie Russell.



# **Department Notes**

A graduate asked who was still in the department, so here's the list: Drs. Rothmann, Mattson, Hatzenbuhler, Sizer, Drouilhet, Rhoads,

Wijetunga, Ali, Chen, Wolff, Peil, Ng, Harms, Stockrahm, Montis, and Hill. Mrs. Rath runs the Mathematics Learning Center for us. Mrs. Jones heads the department office. Adjuncts teaching one or more classes this year have been Dr. Emmel, Mrs. Schmiess, and Mrs. Schwert. Dr. Hatzenbuhler was just re-elected for three more years as department chair, but while he is on sabbatical next year Dr. Mattson will be acting chair. Dr. Midgarden is currently serving as Vice President for Academic Affairs and Dr. Jeppson is Dean of the College of Natural and Social Sciences.

Two big department projects this past year have been preparing for an upcoming department review and planning space requests in a remodeled MacLean Hall. We have been in MacLean Hall for over twenty-five years, but the building is scheduled to be renovated this decade.

Two students, Jayne Linstad and Amber Anderson, gave presentations at the University of Nebraska Conference for Undergraduate Women in Mathematics in Lincoln, Nebraska, February 4-6. Anderson presented a talk entitled "Conic Sections with the Minkowski Metric", and Linstad presented a poster, "Confidence Intervals in Flourescence Lifetimes from a Non-linear Least Squares Analysis" based on her work in an internship at a local company.

#### The Problem Corner 2005

- 1. Suppose a railroad track (one piece) having length of 1000 feet is fastened securely (only at its two endpoints) to level ground. On a hot summer day the length of the track expands by 2.4 inches causing the midpoint of the track to rise vertically forming an isosceles triangle with earth as the base. Determine the amount of the vertical rise. Remember the endpoints remain fastened to the earth. Comment: This is an easy problem with a surprising answer.
- 2. Let x be a positive integer whose units digit is a "five". Apply the following scheme:
  - "Pull the five off", square it getting 25.
  - ii. Multiply the remaining integer (after the five has been "pulled off") by the integer one larger than this remaining integer. Place this product in front of 25. You should now have x ².

For example  $(75)^2 = 5625$  since  $(7) \times (8) = 56$ , and  $(255)^2 = 65025$  since (25)(26) = 650.

Use elementary algebra to show that the above scheme always works.

3. The following problem comes from Arithmetical Questions for the Recreation of the Teacher and the Discipline of the Pupil by Rev. D. Jesse Knisely (published 1870), p. 68, problem 189:

"Allow that the walls of my room are at right angles and perpendicular to the floor. A cannonball rolls into the corner. What is the diameter of another ball, which, being in the same corner, is touched by the former?"

Comments:

- i. It would appear that the diameter of a cannonball was common knowledge in that era. Since you probably do not have that figure at hand, call it d.
- ii. The other ball is between the cannonball and the corner. Assume both balls are touching two walls and the floor.

To find solutions for these problems go to the MSUM website (www.mnstate.edu) and then go to the Mathematics Department's webpage.

### 2005 Alumnews:

**Lois Jensen**, '59, is retired and lives in Glyndon.

**Richard MacGregor**, '63, is retired from teaching and lives in Pelican Rapids, MN. ddmac@prtel.com

Ray B. (Skip) Adams, '64, is currently at the East Tennessee Technology Park. It was formerly the "K-25" site of the Oak Ridge facility that was instrumental in building the atomic bombs that were dropped on Japan. He is doing the respirator fit testing for Bechtel Jacobs Corporation and its subcontractors for all three of the sites at Oak Ridge, i.e. Oak Ridge National Lab (formerly X-10), Y-12 and ETTP (formerly K-25). One of the major projects Skip is involved with is the decontamination and demolition of the K-25 and K-27 buildings at ETTP. These buildings were involved with the enrichment process of the uranium used in the bombs along with the rest of our nuclear warheads. He also keeps busy playing in senior golf tournaments in the Knoxville and east Tennessee area.

**Douglas Grouws**, '64, lives in Columbia, MO and works in the Mathematics Education department at the University of Missouri.

David Jacobson, '68, has worked for the State of Minnesota for 29 ½ years, first at the Minnesota Energy, and then at the Public Utilities Commission. He has been involved in energy facility certification all of that time. David's wife Carol currently works for two financial planners. Their daughter Kristin graduated in 2003 from the University of Wisconsin at Madison. David's interests

include golf, spectator sports, horse racing, choral singing, and winter travel. He summarizes his career between MSUM and the PUC as Chaplain's Assistant in the U.S. Army, January, 1969 – December, 1970; and M.S. Mathematics, 1973 and M.S. Statistics, 1975, both from the University of Minnesota.

Duane G. Lura, '68, reports that after teaching mathematics for 37 years (Frazee-1968-70 and West Fargo High School-1970-2005), he will retire this spring. dnp64@cableone.net

Carol Cossette, '72, is retired as of February 2<sup>nd</sup>, from the position of Director of Elementary and Middle Schools, Sampson County Schools, Clinton, NC, after 28 years of service with North Carolina Public Schools. She says, though, it won't be full time at home. Carol has contracted as a computer lab facilitator with an elementary school and as a math consultant to conduct in-service for elementary math teachers. jonesda@intrstar.net

Joel Hood, '83, continues his teaching career in Bagley, MN (21 years). His classes include Algebra II, Trigonometry, and AP Calculus. Joel's wife of 21 years, Marilyn, teaches English in Bagley. Their three daughters, Hillary, 17, Katie, 14, and Andrea, 11, along with their teaching assignments, keep them very busy, but happy. MJHoods@gytel.com

Ilo (Lewis) Myhra, '83, is an Advocate Support Representative at Lakeview Technology, Inc. in Rochester, MN. She provides technical software support to several strategic accounts that use Lakeview's MIMIX product, a high availability/disaster recovery software application for the IBM iSeries computer systems. Ilo lives in Rochester with husband

Jim and their dog, Woody, and enjoys playing French horn in the Rochester Community Band. ilomyhra@charter.net

Dudley Wells, '86 and '87, has been very busy teaching technical and junior college freshman algebra classes including an eightweek summer TV class to several Minnesota technical colleges, and an IVN pre-calc class broadcast to six small high schools spread around North Dakota. He is also taking a graduate math class at NDSU on modeling biological systems. As of last April (2004), Dudley became a grandfather when daughter Kaila (MSUM – Econ, '01) had her first child, daughter Kaisa, whom he visits regularly in Gillette, Wyoming.

Mike Pischke, '87, is currently employed with Genisys Software, Inc. in Brooklyn Park, MN as the Director of Development. He has been employed by Genisys for the last 13 years, developing software for the rental business industry, including ski rental shops at Mammoth Mountain, Sun Valley, and Aspen. mike@genisys-software.com.

Scott Stephenson, '89, reports it's been an extremely busy, but exciting year for him. He was married in May to Sandy Braun (also an MSUM alumnus). They built a new home in Moorhead and moved in at the end of August. Then, to top it all off, they were blessed with their first child, Nicole Elizabeth, on October 7th. Scott is still working for Microsoft (Microsoft Business Solutions, formerly Great Plains Software) as a Developer Support Team Manager and continues to enjoy his job helping software developers customize, extend and integrate to their business

solutions software applications. He hopes all is going well for the mathematics department at MSUM and really does cherish the experience he gained in his time at the school. He sends a special 'hello' to Dr. Rothmann. sstephen8@cableone.net

Craig Conzemius, '91, lives in Becker MN, just southeast of St. Cloud, with wife Jody (Safar), MSUM, '91, and their two children, Matt, 7, and Jack, 5. He currently works for Benedictine Health System as a Financial/Systems Analyst and is responsible for the implementation of Microsoft Great Plains financial software. They have a corporate office and 40 remote divisions throughout MN, ND, SD and WI. Craig.Conzemius@bhshealth.org

Chris Copeland, '96, lives in Cedar Rapids, IA, with wife Amy and their two-year-old son, Ben. They are expecting another child in July. Chris is currently employed as a Risk Manager with AEGON, a Dutch life insurer with its U.S. headquarters in Cedar Rapids. His job duties include asset/liability management, investment strategy, and asset allocation for fixed annuity and institutional spread-based product portfolios. Chris has attained his Fellowship in the Society of Actuaries (FSA) and his Chartered Financial Analyst (CFA) designation. Chris wishes everyone well in Moorhead stating it's been some time since he's been that far north. He especially sends greetings to Dr. Peil, Dr. Chen, and Dr. Hatzenbuhler. cjcopeland@aegonusa.com

James Johansen, '97, lives in Sylva, NC and teaches math at Western Carolina University, Cullowhee, NC. He is also finishing his Ph.D. in the area of animal breeding. iohanson@wcu.edu

Andrew Lindow, '98, coaches Boys JV Basketball at Nevis (MN) High School. He has owned his own plumbing business for five years. Andrew is married and has two daughters.

Fiona (Johnson) Brendemuhl, '99, has been teaching high school math in Litchfield, MN for the last six years, and is currently coaching girls swimming and Knowledge Bowl. Last summer, she finished her Master's Degree in Mathematics from St. Cloud State University. Fiona sends a 'Hello' to her former classmates and professors!

Fiona\_Brendemuhl@litchfield.k12.mn.us

Mindy (Hanneman) Fuder, '01, is currently a substitute teacher in the Fergus Falls and Pelican Rapids School Districts, and a Cheerleading Coach at Fergus Falls High School. She has been married 3 1/2 years to Brian Fuder and they welcomed their new baby boy in April. bmfuder@prtel.com

Angie Hodge, 02, received her master's degree in mathematics last December from Purdue. Also at Purdue Angie is currently working towards her PhD in mathematics education and teaching two sections of math for elementary school teachers. She'll be supervising student teachers this spring. ahodge @ math.purdue.edu

Darren Glur, '04, is in his first year of law school at Hamline University School of Law in St. Paul, MN. dglur@hotmail.com

Katie Kapsner, '04, lives in Burnsville, MN, and is employed by Kraus Anderson Insurance there, in the position of Account Manager. She is a licensed insurance agent for the state of MN. kkapsner@kainsurance.com

Mary Kreie, '04, lives in St. Louis Park, MN. She began working at the Department of Veteran Affairs in July 2004. Mary works in the Pension Maintenance Center, and her job consists of assisting veterans to receive pensions, an income-based government program, and since it is income-based, they make adjustments on veteran's awards as their income changes. Over 35,000 Eligibility Verification Reports (EVRs) were sent in December and they are now starting to receive these completed forms to process. There are 78 Veteran Service Representatives (Mary's title) and they have to process these claims as quickly as possible. In order for veterans to receive their benefit (pension check) they must turn in their EVR, otherwise they don't receive their money. Mary says she is fortunate enough to see veterans receive the financial help they need. She states that for one to even be eligible to receive a pension, as a single veteran, one's income must be under \$9895 a year. Mary works with the poor population of veterans to bring them up to the poverty level. (Isn't the government nice ?!?) But she can see people's lives being changed and they are grateful for what they do receive. mykreie@yahoo.com

Jennifer (Selstedt) Holm, '04, had a name change in June when she got married. She is currently working as the Item Processing Lead at American Federal Bank in Fargo, ND. jselstedt@yahoo.com

Ann Johnson, '04, will be looking for a high school math teaching job this spring! She is currently subbing in the Fargo/Moorhead area. annjohnson?@hotmail.com

**Udip Rayamajhi**, '04, is currently working as a ColdFusion Programmer at Jobdig in St. Louis Park, MN. The company that he works for is an Employment Newspaper.