

5-1991

Σ ary

Moorhead State University, Mathematics Department

Follow this and additional works at: <https://red.mnstate.edu/mathnews>



Part of the [Mathematics Commons](#)

Researchers wishing to request an accessible version of this PDF may [complete this form](#).

Recommended Citation

Moorhead State University, Mathematics Department, " Σ ary" (1991). *Math Department Newsletters*. 10.
<https://red.mnstate.edu/mathnews/10>

This Newsletter is brought to you for free and open access by the Math Department at RED: a Repository of Digital Collections. It has been accepted for inclusion in Math Department Newsletters by an authorized administrator of RED: a Repository of Digital Collections. For more information, please contact RED@mnstate.edu.

1990 Modeling Contest Results

The 1990 Mathematical Modeling Competition gave competitors a choice of two problems, one dealing with proper dosage for a new drug, the other with finding an optimal route for two snowplows. One team from Moorhead State entered, consisting of Paul Johanson, Neil Lodin, and Peter Shea. They prepared a paper which presented a solution to the snowplow routing problem, and received honorable mention for their entry (of 236 teams in the contest, 100 entries were categorized as outstanding, meritorious, or honorable mention). In addition, Johanson, Lodin and Shea were awarded free memberships in the Operations Research Society of American for their performance in the contest.

Win Ritchie Awards

The Bill V. Ritchie Award for excellence in Mathematics has been established in his memory by family and friends. The award is to be made to a graduating MSU mathematics major who has been accepted at a graduate school to study mathematics. Ritchie, who died in 1987, taught in the MSU

Mathematics Department from 1968 until his retirement in 1984. He is remembered for being an excellent teacher and a superb problem-solver.

This year the money available from the award's endowment was supplemented by Dr. Eleanor Ritchie so that two awards could be made. Sheila Girtz and Peter Shea are this year's award winners and their biographies appear in the article describing their winning our Senior Awards.

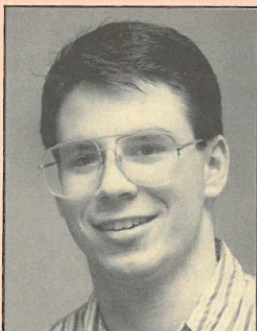
Students Pass Actuarial Examinations

Again in the spring of 1990, several students took courses designed to prepare them for the first or second examinations given by the Society of Actuaries. Eight students passed the first examination: Nicole Appelbaum, Jessica Dahl, Ed Kambour, Neil Lodin, Bonnie Loeks, Linda Wirth, Donelle Ylitalo, and Ken Lindemann (an MSU alumnus). In addition, three students passed the second examination: Ed Kambour, Veng Lam, and Greg Landmark. These outcomes were quite good, as nationally only about 40% of those who take the tests pass.

1990-91 Outstanding Senior Awards

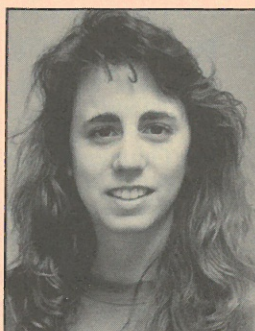
Each year the Mathematics Department awards memberships in professional societies to outstanding senior mathematics majors. These awards are financed by contributions from members of the department.

This year's recipients are Sheila Girtz and Peter Shea. Sheila chose membership in the American Statistical Association, while Peter chose to become a member of the Mathematical Association of America.



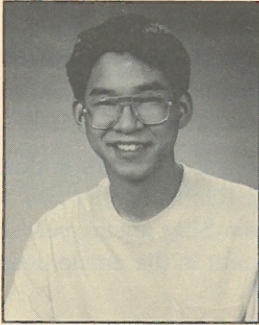
The son of Tom and Cathy Shea of Evansville, Minnesota, Peter Shea graduated from Evansville High School in 1987. While at MSU Peter has served in the Student Senate (1990-91), been a resident assistant (1988-90), a member and current president of the Mathematics Club, and a member of the MSU College Democrats. His outstanding

academic record has been recognized by his selection for Phi Kappa Phi, a national honor society, and by his being awarded Upperclass Scholarships in his junior and senior years. Peter was a member of the 1990 Mathematical Modeling Team which received Honorable Mention in the national competition. He plans to do graduate work in mathematics, but at this time is undecided as to field and school.



A 1987 graduate of Pierz-Healy High School in Pierz, Minnesota, Sheila Girtz is the daughter of Daniel and Janet Girtz of Pierz. At MSU she has been a Student Advisor for the Mathematics Department and a tutor in English and mathematics for the New Center. Also she has served as an officer for Alpha Lambda Delta, the Honors Club and Pi Sigma Epsilon, a marketing honorary organization. Sheila plans to do graduate work in statistics and will attend either Colorado State University or the University of Minnesota-Minneapolis.

Special Award



In addition to the two Senior Awards mentioned on Page 1, the Mathematics Department voted this year to make a Special Award to Moorhead High School senior Michael Lin. Mike, the son of Ben and Jenny Lin of Moorhead, has been taking mathematics classes at MSU since he was a high school sophomore and during his eighth and ninth grade years he took algebra and calculus courses here under the University of Minnesota Talented Youth Mathematics Program. In the junior and senior-level courses that he took he was always at the top of his class.

Here are just a few honors that Mike has received: winner of the Class AA Division of the Tri-College Mathematics Contest for each of the past six years, recipient of a Tandy Technological Scholarship, National Merit Scholarship finalist, semi-finalist in Westinghouse Talent Search, and finalist for a Science Museum of

Minnesota Scholarship.

In addition to his mathematical interests, Mike plays flute in the Moorhead High School band, is president of his 4H club, and is a member of the MHS swimming team.

Michael will attend college next year; he has not chosen a school as yet, but has been accepted at Carnegie Mellon University, the Massachusetts Institute of Technology and Stanford University.

His award will be membership in the Mathematical Association of America.

Department News

New on the faculty this year are:

- **Athula Abeyratne**, who comes here from the University of Wisconsin-Milwaukee, where he recently finished his Ph.D. in probability.
- **Timothy Peil**, who just finished his Ph.D. in difference equations at the University of Nebraska.
- **Sixiang Zhang**, who recently completed his Ph.D. in statistics at Michigan State University. Zhang will be leaving next year to take a tenure track position in Erie, Pennsylvania.
- **Peiyi Zhao**, who comes here from the University of Iowa, where she earned her Ph.D. in knot theory.
- Promoted effective this year were **Shelda Warren** to Associate Professor, and **Walter Sizer** and **Vernon Wolff** to Professor.
- **Christine McLaren** has been awarded three research grants totalling \$38,000 this year. Two involve developing and evaluating statistical methods used in medical laboratory work, and the third is a research travel grant which will enable her to work with the director of a medical laboratory in Glasgow, Scotland, this summer.

- **S.J. Drouilhet** will be working again this summer at the Jet Propulsion Laboratory in Pasadena, California, under a NASA summer faculty fellowship. In the past he has worked on computer tracking simulations of space debris; this summer his work will involve computer work on the asteroids and other inter-planetary bodies.

- **Milton Legg** was elected to a sixth three year term as chair.

Publications by department members this year include:

- "Discrete Best L_1 —Approximation in the Gauges Sense", by **Sayel Ali**.
- "Defect Relations for Degenerate Meromorphic Maps", by **Wanxi Chen**.
- "Restricted Range Approximate Solutions of Nonlinear Differential Systems with Boundary Conditions II", by **Ronald Jeppson**.
- "Disconjugacy of Second Order Linear Difference Equations", by **Timothy Peil**.
- "Undergraduate Research Experiences in Mathematics", by **Christine McLaren**.
- "Mathematics Before the Age of Writing", by **Walter Sizer**.

Alumni News

Stephanie Davis (1987)—A mathematics teacher at Alamo Junior High School in Alamo, Texas, Stephanie has been promoted to department head this year. She also coordinates the University Interscholastic League competitions for her school and, as coach of the MATHCOUNTS team, is proud that her team placed third in the local chapter competition.

Mike Baumgartner (1988)—Mike teaches geometry to ninth and tenth grade students in the Pharr-San Juan-Alamo Independent School District of Texas. He is also attending graduate school at the University of Texas—Pan American.

Harley Haug (1974)—Harley is Secretary-Treasurer and co-owner of MinKo Construction, Incorporated, of Fargo. MinKo is a general construction company specializing in commercial work. Harley and wife Cheryl have three children, Nicole, 12, Jessica, 10 and Jay, 8 years.

Steven Hilgers (1973)—A secondary mathematics teacher at Barnesville High School since 1979, Steve is also head varsity volleyball coach and was voted

Regional Coach of the Year in 1989 and 1990.

Theresa M. Fedor (1985)—Teresa is an Actuarial Associate with Allstate Life Insurance Company in Northbrook, Illinois, working with Asset/Liability Management in the Investments Department. She reports that she recently passed exams 160 and 162 in the series of examinations of the Society of Actuaries.

Lester Olson (1977)—Lester teaches at the University of Pittsburgh where he was recently promoted to Associate Professor of Communication.

Jeffrey Marty (1988)—Jeff is an Ensign in the United States Navy, specializing as a Nuclear Propulsion Officer. He is currently undergoing training at the Idaho National Engineering Laboratory where he will be stationed until June, 1991, after which he goes on to training in Surface Warfare Officer School. Jeff attended Officer Candidate School in Newport, Rhode Island where he graduated first in his class of 105 and Nuclear Power School in Orlando, Florida, graduating eighteenth out of a class of 96. Jeff and wife Donna (Wilhie), a 1986 MSU alumna, have two children, Zachary, 3-1/2 and Caitlin, 1-1/2.

Steve Versoi (1978)—Steve moved from North Carolina to St. Cloud, Minnesota, where he continues as Head Produce Buyer for Nash Finch Company. He is responsible for purchasing produce to supply stores in Minnesota and eastern Wisconsin.

Steve Dale (1983)—Steve and wife Tracy live in Jamestown, North Dakota, and report that they used some interesting equations to formulate Jamestown Hospital's first baby of the year. A daughter, Morgan Catherine, was born on January first, 1991 to join son Brandon Steven. Tracy is a Registered Nurse at Jamestown Hospital while Steve farms and works at the Stutsman County Agricultural Soil Conservation Service.

Merry Kellerman (1989)—Merry divides her time between teaching mathematics and being the Principal at Chaffee High School in Chaffee, North Dakota. We were happy to have her as one of this year's Mathematics Careers Week speakers.

Joel Langenfeld (1987)—Programmer/Analyst for Owner-Manager Systems Incorporated, Joel and wife Karen (Hostetler), an MSU alumna, live in Minneapolis. Joel received a master's degree in mathematics from the University of Wisconsin—Milwaukee in May of 1989.

Donna Asch Liska (1981)—Donna and husband Mark both teach mathematics at Poway High School, Poway, California, which is located in San Diego County. This year she is on maternity leave as the couple has a new seven-month-old daughter, Kristin Ann. Donna recently completed a master's degree in education, obtained an Administrative Credential and is working on a public school Counseling Credential. In 1990 she received the Exemplary Teacher Award at her high school, modestly claiming that this was due to the "excellent instruction" that she received at MSU.

Allan Ward (1976)—Allan is Medical Director of St. Alexius Physical Medicine Clinic in Bismark, North Dakota. He is a member of the American Academy of Pain Medicine and a fellow of the American Academy of Physical Medicine and Rehabilitation.

Lisa Halbakken Wigdahl (1978)—A mathematics teacher and computer coordinator at Ashby Public Schools, Lisa lives in Rothsay, Minnesota.

Kim Hasz DeBruyckere (1985)—Currently Kim is a mathematics and computer science teacher at GFW High School in Winthrop, Minnesota. Husband Arlyn, a 1983 MSU graduate, teaches chemistry and physics at Hutchinson High School.

Gail Kelm (1985)—In addition to teaching special education classes at Clinton-Graceville High School in Graceville, Minnesota, Gail teaches a seventh grade mathematics class and a pre-algebra class. This is Gail's sixth year of teaching special education classes and her second year of also teaching mathematics; she says "I really enjoy it."

Lisa Udem (1990)—A May 1990 Distinguished Graduate in Air Force R.O.T.C., Lisa is a Second Lieutenant and entered active duty in April, 1991. After attending schools in Florida and Arizona

she will be stationed at Harlbert Field in Mary Ester, Florida. As an Air Weapons Director she will manage electronic command systems, provide radar control of air weapons and participate in surveillance and identification of airborne objects.

Julie Carlson Henry (1979)—Julie, husband Scott and daughters Jessie, 4, and Kate, 1, live in Roseville, Minnesota. Julie continues as a Computer Sales Representative for Hewlett-Packard and is assigned to the 3M national account.

Fay Spilde (1973)—Fay is a Data Processing Manager for Menards, Incorporated, of Eau Claire, Wisconsin.

Dudley Wells (1987)—A Mathematics Tutor for Education Rx Associates of Myrtle Beach, South Carolina, Dudley tutors mathematics for grades 6-12, SAT preparation and remedial algebra for college-bound students. He is also doing mathematics and reading tutoring as his own business for middle school students. Dudley says that he "had a wonderful time and wrote the entire curriculum" when he taught a creative mathematics class last summer at U.S.C.—Coastal Young People's University.

Daryl Spartz (1982)—As a Staff Programmer for IBM in Rochester, Minnesota, Daryl's responsibility is to design and maintain a PC code that communicates with the IBM AS/400 minicomputer. He works with the D.O.S. Windows and OS/2 operating systems.

Robert Dosch (1987)—A graduate student at the University of Iowa, Robert is in the first year of a Ph.D. program in accounting.

Judy Ehlen (1989)—Judy is a mathematics teacher at South Junior High School in Grand Forks, North Dakota, where her assignment is seventh-grade mathematics and ninth-grade algebra. She manages to keep busy with additional duties as yearbook advisor.

Ernie Moe (1990)—Ernie works as an Associate Computer Programmer for Schwan's Sales Enterprises of Marshall, Minnesota.

Merilee Sustad Potucek (1982)—Merilee is completing eight years as Bookkeeper/Receptionist for Charlson

and Marben, P.A., in Thief River Falls, Minnesota. By the time this is in print Marilee and her husband will be the parents of their first child, an adopted daughter from Korea.

Todd Peloquin (1980)—Todd, wife Becky and 22 month-old daughter, Coley, live in Keizer, Oregon. He is co-owner of a Salem, Oregon firm, ATWIN Computer Service which specializes in consulting and service for microcomputer users.

Patricia Smidt (1989)—Pat divides her time between being a student at the University of North Dakota, where she is working towards a degree in Spanish, and her job as a Teller at Norwest Bank of Thief River Falls, Minnesota.

Sue Haller (1984)—A May, 1990, recipient of a master's degree in mathematics education from St. Cloud State University, Sue began teaching there last September as a mathematics instructor.

Barry Mulari (1970)—Since 1973 Barry has owned Barry's Up North, a retail outdoor equipment business located in Aurora, Minnesota. He is active in Ducks Unlimited, the Lions Club and the Aurora Chamber of Commerce. Barry says that he continues to bake pies, hunt, fish and this year has begun to downhill ski at nearby Giant's Ridge.

Kimberly Tschepen (1990)—Kim says that the problem-solving skills that she learned as a mathematics major are very helpful in her job as a Product Support Specialist for Great Plains Software in Fargo. She supports accounting software including payroll, accounts payable and general ledger modules over the telephone.

Christine Garnes (1987)—In her third year of teaching, Christine now is a full-time mathematics teacher in both junior and senior high at Detroit Lakes.

Gary Krenz (1978)—Recently promoted to Associate Professor with tenure at Marquette University in Milwaukee, Wisconsin, Gary is also a research mathematician with the Physiology-Research Service at the Veterans Administration Medical Center in Woods, Wisconsin. One of the many projects he is involved in at the V.A. Medical Center involves using "transmission line

equations" to model pulsatile flow in a distributed model of the lung. In connection with this work he will attend FASEB presenting "A fractal model of the pulmonary artery bed." Gary feels that "undergraduates should know that mathematics occurs in the strangest places. . . and can be used in wonderful ways to aid the human condition!"

Debbie Foley Sauer (1983)—Debbie and family live in Ames, Iowa. Currently a full time mother to a daughter born in September, 1990, Debbie will start working this spring as a consulting dietician for the WIC Program.

Teresa Falling Friebohle (1990)—Terry is a seventh grade mathematics teacher at Kingman Junior High School in Kingman, Arizona. She is a member of a curriculum committee that is revising the K-8 curriculum so that students will be prepared for a new state-wide assessment test. The test will consist of short answer and essay questions requiring students to explain their thought processes clearly.

Russ Opdahl (1990)—Russ is a member of the Technical Staff for the GEODYNAMICS Corporation located in Sunnyvale, California. GEODYNAMICS is an aerospace company that develops defense and intelligence software. Russ is currently supporting a satellite communications system.

John Bisek (1977)—A Principal Software Engineer with Unisys Corporation in Roseville, Minnesota, John presently is working on the design, development and support of language software.

Cheris Kelley (1989)—In March 1990 after two months of specialized training in Texas, Cheris arrived in Dayton, Ohio, as a Lieutenant in the United States Air Force. She is now a Cost Analyst/Financial Manager at Wright-Patterson Air Force Base.

Kenneth Lindemann (1989)—Ken is a mathematics teacher and football and wrestling coach at O'Gorman High School in Sioux Falls, South Dakota.

Bill R. Johnson (1982)—Bill recently received an MBA, summa cum laude, from California Lutheran University and is Project Manager at the Naval Satellite Operation Center in Thousand Oaks,

California. He and his wife have been married six years, have an eleven month-old son and are expecting their second child.

Angela Larson (1987)—Currently Angela is on maternity leave after she and husband Vernon became parents of their first child, Zachary Vernon. Angela is Assistant Closer for Equity Title Services, a branch of Edina Realty. Angela and family live in Brooklyn Park, Minnesota.

Martha Moore (1988)—Martha is a graduate student at the University of Minnesota, Minneapolis working towards a master's degree in medical biophysics.

Katie Carlson (1986)—Katie lives in Harlem, Montana, where she is a seventh and eighth grade mathematics teacher with Harlem Public Schools. She continues her work with the Harlem Volunteer Fire Department, currently being a captain and planning to attend a class at the National Fire Academy in Maryland this July.

Michael Markert (1972)—Mike is a C.P.A. and is working for the accounting firm of Ernest Jonson and Company in Bothell, Washington.

Rebecca Lewin (1986)—This fall Becky received one of only two Outstanding Teaching Assistant Awards in mathematics given by the University Council on Teaching at the University of Iowa where she is a graduate student. She plans to finish her Ph.D. in mathematics this summer and to obtain a university teaching position for the fall of 1991.

Dean Harris (1971)—At present, Dean is working on automation of annuitant processing and payments for the new Federal Employee Retirement System. He is employed by Computer Sciences Corporation of Falls Church, Virginia, as a Senior Computer Scientist.

Wyman Nelson (1976)—Wyman is a missionary from the Missionary Alliance Church to Burkina Faso, West Africa, where he lives with wife Carma and children Joel, Lindsay and Andrea.

Marci Goldade (1989)—A graduate student at Colorado State University, Marci will receive her master's degree this spring and continue work towards the

Ph.D. She has been concentrating on numerical methods in partial differential equations and finds the subject very interesting.

Shelley Gregory (1989)—Shelley will graduate from Iowa State University this spring with a master's degree in statistics and plans to take a job with business or industry. This past year she won an I.S.U. Teaching Excellence Award which honors the top ten percent of graduate teaching assistants at the university.

Theodore Saxman (1971)—Ted continues to work for ("and like") IBM in Rochester, Minnesota. After 6-1/2 years in management he is looking forward to a career change to a position as Development Programmer. He is also starting to take some computer science classes from Winona State University in Rochester to update his academic background.

Donna Coyle (1989)—Donna lives in Selby, South Dakota, and is a grades seven through eleven mathematics teacher at Selby Area High School.

Roger Bachmeier (1989)—Roger is in his second year as a mathematics and computer science teacher at Lewiston-Altura High School in Lewiston, Minnesota.

Jon Stenerson (1983)—A mathematics instructor at Transylvania University in Lexington, Kentucky, Jon is working on a Ph.D. in mathematics at the University of Kentucky.

Karla Rothmann Herz (1989)—Currently a full-time mother to Kaitlyn Kimberly born in August, 1990, Karla and husband Glenn recently moved to Hope, North Dakota, where Glenn is employed by Satrom Seed Farms.

Lorretta Miller Birkholz (1973)—After graduating from MSU Lorrie was a mathematics teacher for two years. Since then she has worked in the computer industry and is now Administrative Assistant to the Director of Information Management Services Division of the State of Minnesota Department of Labor and Industry in St. Paul. She has "a very busy job in the computer center of the Worker's Compensation program of the State."

Claudia Brainard Wiebold (1981)—As a Senior Systems Analyst/Actuarial Programmer with Minnesota Mutual Life Insurance Company of St. Paul, Claudia designs and maintains systems for the Individual Insurance-Actuarial Department.

Hans Hanson (1990)—Hans coaches the ninth-grade boy's basketball team at Perham High School and has been substitute teaching in the Vergas area.

David W. Jacobson (1980)—On leave from his job as a Staff Reliability Engineer for IBM in Rochester, Minnesota, Dave is pursuing a Ph.D. degree in statistics at the University of Minnesota—Minneapolis under IBM's Resident Study Program. His area of specialization is reliability and quality control. He notes that the transition back to formal education has gone smoothly after a seven year absence. "However with a wife and two kids now, time management has become a top priority."

Candance Johnson Harmer (1973)—Candance is a Senior Software Engineer with Unisys Corporation in Egan, Minnesota. She is responsible for two 16-bit computer simulators which are part of a machine-transferable support system for the United States Navy.

Donna Hoffman (1989)—After teaching part-time last year, Donna is now employed full-time as a mathematics teacher at Southwest High School in Green Bay, Wisconsin.

Ilo Lewis (1983)—This past fall Ilo was promoted to Principal Customer Services Engineer for NCR Network Products Division in St. Paul. This spring she will spend three months in Zurich, Switzerland, providing on-site software support at NCR Switzerland.

Denise Pulkrabek Oppegaard (1972)—Completing her sixteenth year of teaching mathematics at Sacred Heart High School in East Grand Forks, Minnesota, Denise has classes in pre-algebra, and algebra I, II and III.

Sheila Ruona Ascherman (1976)—For the past four years Sheila has been working with the advanced seventh grade at Willmar Junior High School in Willmar, Minnesota. She writes that "I really enjoy the above average, energetic, curious seventh graders."

Kristi Knutsen (1986)—Kristi is a mathematics teacher at Schroeder Junior High School in Grand Forks, North Dakota.

John Hilgers (1978)—John is employed by Cray Research Incorporated in Egan, Minnesota as Manager of Systems Test Group. He is responsible for system testing and performance of the UNICUS operating system. Last year John attended the Cray Research Technical Symposium where he presented a paper on the System Test Driver, used on Cray supercomputers. Married with two children, John has been helping his daughter learn algebra. "She wonders who would ever use this stuff!"

Scott Stephenson (1989)—Since August, 1990, Scott has been employed as a Product Support Specialist by Great Plains Software of Fargo, North Dakota.

Short Cuts

What sort of salary can a beginning teacher expect? Typical entry level salary was around \$21,000 for the 1988-89 school year with the range from \$16,500 to \$22,500. This is comparable to beginning salaries for manager trainees with regional and national retailers. Currently the highest starting salaries are being paid in the southwest and southcentral regions of the United States.

The Minnesota Department of Jobs and Training projects that elementary and secondary education will be among the slowest growing professions in Minnesota at 13% and 11% growth respectively. The fastest growing of 12 major professions requiring four or more years of post-high school education is projected to be that of systems analyst, with a growth rate of 36% between 1986 and 1993.

Fall quarter 1990 enrollment in the seven schools of the Minnesota State University System increased 3.1 percent over last year with more than 64,000 students currently attending one of the system schools. It is expected that enrollment will decrease slightly in fall 1991.