

MACS DEPARTMENT NEWSLETTER

VOLUME 34 SPRING 2008

PROBLEM SOLVING IN THE MACS DEPARTMENT

Every year Mathematics and Computer Science faculty from colleges and universities across the state of Kansas attend the Kansas Mathematics Association of America Conference to meet new people, share ideas, and renew old friendships. For the past three years, a problem solving competition for students has been held in conjunction with the KMAA meetings. Fort Hays State University had five students enter the competition at the 2007 annual meeting. Complete results can be found below. Our students competed very well considering that FHSU did not provide an avenue for students to engage in the art of problem solving. Student enthusiasm, however, was high.

Beginning in the Fall 2007 semester, the MACS Department faculty decided that problem solving would provide an additional opportunity for students to receive seminar credit. Every Tuesday several professors and interested students, gather in a classroom to solve problems proposed in The College Mathematics Journal, Mathematics Magazine, The American Mathematical Monthly, and Math Horizons.

Originally the proposal was for students to solve problems individually, review solutions to problems, and present them to the group. We began having so much fun solving new problems there was not time to present old problems.

Currently we have about four mathematics students and three faculty attending regularly. Part of the fun for the students and the faculty is to watch problem solving in practice. These problems are not following the format we see in the classroom or the textbook, but rather all of our mathematical knowledge must be applied in an attempt to solve the problems. It is also very fascinating to watch Drs. Riazi and Zeng begin to solve the problem, think and re-think through it, and finally make all of the connections. It is a beautiful process.

Problem Solving Group meets each Tuesday from 3:00-4:00 pm. Students then type the solutions for submission. At the time this Newsletter the problem solving group has submitted four problems for publication.

STUDENTS ATTEND COMPETITION IN WICHITA

The Third Annual Mathematics Competition was held on March 31, 2007 at Wichita State University in conjunction with the Kansas Mathematics Association of America meeting. Five students from Fort Hays State University participated. The competition required students to solve problems using concepts learned in calculus, real analysis, probability, statistics, and combinatorics. Ben Faber and Roger Bach finished fourth while Natalie Hilger, Mike Carlson, and Andrew Leiker finished tenth in the competition. FHSU was competing against ten other teams from Kansas universities and colleges including University of Kansas, Kansas State University, Emporia State University, Baker University, Highlands Community College, and Washburn University.

CHECK OUT ONE OF OUR SOLUTIONS TO A PROBLEM ON PAGE 11.

FEEL FREE TO SOLVE THE PROBLEM GIVEN ON PAGE 11

INSIDE THIS ISSUE:

NEW FACULTY UCAN SERVE	2
TIGER CALL	3
SCIENCE OLYMPIAD MATH RELAYS	4
STUDENT POINT OF VIEW TIDBITS	5
SCHOLARSHIP ACTIVITIES	6
RETIRED FACULTY NEWS	6-7
SCHOLARSHIPS AWARDED	8-9
2007 GRADUATES	9
KME UPDATE	10
GETTING TO KNOW YOUR SCHOLARSHIPS PROBLEM SOLVING	11
ALUMNI NEWS	12-13

TWO NEW FACES IN THE MACS DEPARTMENT

BY KEITH DREILING

Ginger Hamilton

Ginger Hamilton teaches two sections of College Algebra. She earned her B.S.E. at Emporia State University in 1992, and she taught for 5 years at Mulvane High School and 4 years at McLouth High School. After 4 years as a full-time stay-at-home mom, Ginger returned to school to pursue a major in pre-physical therapy, but she decided instead to complete the course requirements for a physics endorsement. As Ginger completes her courses this spring, she must decide whether to return to high school teaching or begin work on a Masters in Mathematics and then teach at the collegiate level.

Ginger's hometown is Arkansas City, KS. She has two children, Mikayla, 7, and Ashton, 4. She is active in church



activities such as bell choir, Sunday school, and middle school youth sponsor. She enjoys exercising at CHI, watching sports, and attending live concerts and theater productions.

Tina Herrman

Troy and Tina Herrman moved to Hays in August after being in Scott City for five years. They wanted to move closer to family and do less traveling. Having three little kids (Alexandra--7, and twins Jessica & Nicholas—almost 4), they have enjoyed staying home a little more on the weekends!

Tina grew up on a farm North of Walker (15 miles East of Hays) and attended school at Victoria. She received a B.A. in Mathematics from FHSU. "It's really neat to be back at FHSU and see some familiar faces. Dr. Raizi, Dr. Sandstrom, and Bev were all there while I was attending FHSU. And most exciting... Bill & Lanee were students the same time I was."

Her current position at FHSU is a Virtual College Intermediate Algebra instructor. She teaches one section. "It's a perfect fit...I am blessed to be able to stay at home with my children, yet do just a bit of math through the Virtual College."

Upon graduating from FHSU, she taught one year at Shawnee Mission North High School in Overland Park while her husband finished Physical Therapy School at KU Med. They then moved to St. Francis and shortly thereafter started a family.



Tina loves spending time with her husband and kids. She enjoys running, shooting hoops, playing frisbee, dancing, and reading. Most of all, she loves

playing volleyball and challenging Lanee to a game of racquetball [author's note: it is a bitter racquetball rivalry much like the Eltze-Dreiling rivalry earlier this cen-

UCAN SERVE AMERICORPS EDUCATION AWARD PROGRAM

BY KEITH DREILING

The UCAN (Utah, Colorado, Arizona, New Mexico) Serve AmeriCorps program provides service awards to groups or individuals who develop programs to improve the community. UCAN Serve focuses on three primary goal areas: education, public health and safety, and community strengthening. Students in an unpaid student teaching position are eligible for this award. UCAN awarded 30 service awards worth \$1800 each to Fort Hays State University student teachers

this spring. Candidates submitted a letter with biographical information, the need for financial assistance, and their service project (student teaching). Three Mathematics Education majors were awarded this scholarship: Kelsey Beisner, Mary Gleason, and Craig Stramel. Also, a scholarship was awarded to Joan Steinkuhler, an elementary education major who is completing coursework for a middle school mathematics endorsement. Congratulations to all of you.

TIGER CALL BY RON SANDSTROM

MACS faculty and students joined 520 other FHSU students, faculty and staff again this year to participate in the annual FHSU TIGER Call co-chaired this year by Dr. John Heinrichs, Geosciences, and Glen McNeil, Health & Human Performance. Students Kevin Brooks, Joan Dreiling, James Heit, Jeffrey Kaufamn, Catelyn Manly, Paul Maseberg, Brandon Nimz, Kevin Schulte, Kylie Simpson, Craig Stramel, and Nicholas Uhlrich joined faculty Don Clewett Mary Kay Schippers, Jeffrey Sadler, Ron Sandstrom, and Mohammad Riazi to help the FHSU Endowment Association surpass the goal of \$450,000., in fact \$468,000 was pledged. We want to thank each of you in particularly we want to thank those of you who designated the MACS Dept. as recipient. You will notice that the list below seems to increase each year. We know there is an upper bound but we are a very large epsilon away from it. There were 32,000 alumni called and those who designated MACS are: Joan Albers, Thyla Aldrich, Nolan & Geralyn Allen, Charles & Cathryn Allphin, Lavern & Cari Andrews, Dirkson & Jennifer Anderholz, Stephen & Suzanne Barker, Lida Barrett, Leonard & Phyllis Bartel, Paul & Angela Basgall, Charles & Sharon Beckman, Gary & Bernice Bell, Elton & Wendy Beougher, Rex & Beverly Blandling, Sonny and Therese Blyn, Alvin & Lynnae Boedeker, Jerry & Edith Bollig, Susan Bozeman, Jerry Braun, Darren Brungardt, Gabriel & Paula Buser, Melvin & Bernice Capps, Neil & Sharon Carlson, Larry Carter, Terry & Kerry Cleveland, John & Mimsie Coen, Kent & Lisa Colwell, Vernon & Pricilla Cowan, Willis & Alma Crabtree, Lowell & Sharon Crist, Mary Cunningham, Craig & Anita Curtis, Elmer & Laura Davis, Robin Deters, Scott Claassen & Francine Dreiling, Keith & Pam Dreiling, Kay & Mildred Dundas, James & De-

ana Eberwein, Dennis & Dianna Echard, Thomas Edgett, Ken Eichman, Dan & Martha Eining, Ali & Magie Farahani, Richard & Amelia Franke, Tom & Kay Franke, Leslie & Karen Freeman, Mickey & Lynnette Frownfelter, Michael & Vicky Garza, Betty Gingrich, Leroy & Mary Gnad, Walter & Marilyn Griest, Dora Gross, Donald Hager, Jon & Robin Hanna, Rod Hanson, Jacqueline Havel, Chad & Lora Heckman, Troy & Tina Herrman, Al & Marilyn Herren, Marvin & Marty Hines, Jerrod and Jessica Hofaker, Gregory Hoffman, Harris Holler, Darren & Cynthia Horn, Kent Huffman, Rod & Karen Hunley, Vaughn and Kristi Huslig, Roger & Teressa James, Stuart & Donna Jarvis, Justin & Amy Johnson, James and Judy Johnson, John & Regina Johnson, Loyal & Wanda Johnson, Sandra Johnson, Nathan Jones, Betsy Kelly, Norm and Sherry Kinderknecht, Vernon & Virginia Kisner, Lloyd & Nixie Koelling, Norwin Kohls, Richard & Sandra Kratzer, Michael & Carmen LaBarge, Darrell & Sheila Latham, Clint Ledbetter, Bob & Kim Lee, Francis & Mary Ann Legleiter, Larry & Donna Leitner, Don & Linda Lesovsky, Aaron Lessor, Dolores Lessor, Max & Thelma Liggett, Evalee Lundy, Ken & Edith Mahan, James & Shirley Malcolm, Reza Marefat, Jared & Tami Marshall, Larry & Connie Masters, Mason May, Richard & Linda McCullum, Joe and Jennifer McLeland, Merrill & Jean Miham, Ron & Debbie Miller, Robert & Anel Minneman, Carl & Joan Mooney, Mike and Peggy Moore, James & Wanda Morford, Steve Morgan, Donald & Cleo Mounday, Ronald & Barbara Musgrave, Wayne & Alberta Neal, John C Neuschafer, Larry & Betty Newton, Phuoc Nguyen, Weeden & Rosalie Nichols, Merlin & Della Ohlemeier, Marty & Tonya Orth, Curtis & Karen Pahls, John & Wilman Payne, Marvin & Katrina Penka, Geoffrey Peter, Don & Kathryn Petr, James & Sharla Pfeifer, Larry & Darlene Plymell, Roger & Ruth Pruitt, Jason & Rachel

Purdy, Lynne Rahm, John & Sondra Raile, Rich & Debora Rawlings, Roy & Eugenia Richards, Shayne Riley, Bill & Donna Roe, Kevin & Jodi Ruda, Christopher & Karen Ruder, Rich & Sharon Ruder, John & Becky Saddler, Jeffrey & Lorilyn Sadler, Ron & Cathy Sandstrom, Bob & Christine Sauber, Paul Scheuerman, James & Jeanine Schieferecke, Dan & Mary Kay Schippers, Neal & Lorrinda Schmeidler, Ron & Kim Schmidtberger, Joseph & Sandra Schon, Janet Schuetz, Edward & JoAnn Schwartzkopf, Shawn & Sarah Schartz, Jim & Lida Sharp, Lori Shively, Gary & Charlotte Sneed, Harry & Loretta Spencer, Pat & Kathy Spicer, J Gail Stanley, Jim & Debbie Stelter, Adam Taylor, David & Betty Taylor, Stephen Tebo, Ken & Linda Trimmer, Mitchell Ummel, Blake & Crystal Vacura, Douglas & Melinda Vahle, Ellen Veed, Charles & Rita Votaw, Wilmer & Sue Waldman, Bill & Tiffany Weber, Wells Fargo Foundation, Donald & Mary Werner, Douglas & Shelley Whisler, Freddy & Roxi Wilson, Marilyn Wilson, Rex & Margaret Wilson, Jeffrey & Mandy Windholz, Leroy & Sharon Winklepleck, Lori Wittrock, Charles & Neoma Wonderlich, Clem & Ruby Wood, Lane Young, Gene & Mary Zimmer, and Marvin & Janine Zimmer. We really appreciate those employers who matched your contributions. I apologize if I have inadvertently left off someone's name. This list of names indicates what the Foundation claims: The percentage of mathematics graduates who participate in financial giving to the university is among the highest of all departments. These monies allow us to attract and keep mathematics and computer science majors so that the students can become successful citizens like you. If you know of any potential mathematics and computer science majors please send the names to us.

MATHEMATICS FACULTY ASSIST WITH SCIENCE OLYMPIAD

BY LANEY YOUNG

Science Olympiad is a national, non-profit organization dedicated to improving the quality of K-12 science education through participation in Science Olympiad Tournaments and incorporation of the Science Olympiad into classroom curriculum.

Science Olympiad competitions are like track meets, consisting of 23 individual and team events. Each year, events are updated to reflect the ever-changing nature of biology, earth science, chemistry, physics, computers, astronomy, engineering, and technology. By combining events from all disciplines, Science Olympiad encourages a wide cross-section of students to participate.

Students who participate in Science Olympiad are taught advanced science through active, hands-on participation. All events involve team work, group planning, and coop-

eration. There are now over 5,500 middle schools and high schools from all 50 states who participate in Science Olympiad.



The Department of Mathematics and Computer Science at Fort Hays State University has been actively involved in coordinating, organizing, and judging events for the past several years. Keith Dreiling and Laney Young judged Mission Possible for middle school students (Division B). Hong-

biao Zeng judged Metric Mastery also for Division B students. Write It Do It, Division B and C, was judged by Bill Weber. Jeff Sadler judged Scrambler for Division C on February 15, 2007. The MACS faculty are predicting another successful Science Olympiad in 2008.

MATH RELAYS 2007--BACK, BUT WITH A TWIST!

BY BILL WEBER

After a one-year hiatus due to construction at the Memorial Union, the members of the FHSU Mathematics & Computer Science Department were anxious to host the 29th Annual Math Relays. Many of the top math students from across the region competed, and with a few new rules added in, the competition was one of the smoothest in memory.

After piloting some new rules in 2005 to help with keeping the number of students at a manageable level, the Math Relays Committee decided on the following rule changes:

- Each student must participate in at least 4 of the 6 events.
- Teams are limited to 1 team per event per school

Individuals will be limited to 5 individuals per event per school

These new rule changes helped to keep the total number of entries down, but more importantly, they helped to keep the students busy, as they were involved in at least 4 tests. It also seemed to encourage schools to bring their top math students, making the Math Relays a top-quality mathematics competition.

In the 1A division, the top three teams were Pawnee Heights, Golden Plains, and Skyline. In the 2A/3A division, TMP-Marian won the competition, with Sacred Heart and Ellsworth rounding out the top three. Finally, in the 4A-6A division, Salina South was the champion, with Salina Central and Hays High finishing 2nd and 3rd. For a complete listing of

individual winners, please check the website <http://www.fhsu.edu/macs/mathRelays/mathrelays.htm>

The 30th Annual Math Relays will be held on Thursday, November 13, 2008.



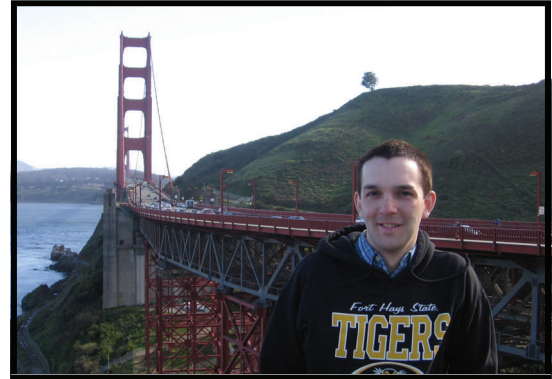
STUDENT POINT OF VIEW

BY PAUL MASEBERG

I started my time at Fort Hays State University as a physics major and then added a computer science major. When I was just a physics major, the math department did a great job of giving me the tools to handle physics. What I learned in my math classes I would most often need in my physics class soon thereafter. The combination of learning physics and math at the same time was a great experience. I would say the sum of learning them together is greater than the sum of learning them apart. While the math classes gave a strong theoretic approach, the physics classes helped me see the application. Math is the language of the universe and physics is still trying

to understand how to speak.

As I neared the end of my physics degree, I decided to double major in physics and computer science. In physics, I had been trying to create computer simulations and I felt I lacked computer knowledge. Once I started my computer science classes, my knowledge of how computers work and how to create software for them was greatly increased. Again, knowledge I learned in my computer science classes greatly helped my research. It has not been uncommon for me to learn something in class that I use. the



Paul Maseberg is a senior Physics and Computer Science Student at FHSU.

No matter whether in math or computer science, the MACS department has been there for me.

TIDBITS FROM THE MACS DEPARTMENT

This summer the MACS department is offering the following courses: Intermediate Algebra, College Algebra, Elements of Statistics, and Calculus Methods. Concepts of Data and Probability will be offered as part of the Western Kansas Mathematics Academy.

Molly Copper (current student) married John McMurtrie on August 4 2007. Molly is scheduled to graduate in May 2008 with a degree in math education.

James Heit (current student) married Kara Gerstenkorn on September 29, 2007.

Mary Gleason (current student) married Jarett Schmeidler on December 29, 2007.

Lida K. Barret was awarded the Yeuh-Gin Gung and Dr. Charles Y. Hu Award for 2008. Dr. Barrett's husband was chair of the MACS department. Full details are available in the March 2008 edition of The American Mathematical Monthly.

JOAN DREILING NOMINATED FOR FELLOWSHIP

by Keith Dreiling

Joan Dreiling, a senior majoring in physics and mathematics, has been nominated by the FHSU chapter of Phi Kappa Phi for a \$5000 graduate fellowship. Phi Kappa Phi, a national interdisciplinary honor society, awards 60 fellowships of \$5000 each and 40 awards of excellence of \$2000 each to PKP members entering the first year of graduate or professional study. Each PKP chapter can nominate one candidate from local chapter applicants. Award recipients will be announced by April 30. Congratulations and good luck, Joan.

The National Math Panel Report, *Foundations for Success*, was released March 13, 2008.

You can access the report at: <http://www.ed.gov/about/bdscmm/list/mathpanel/index.html>

2006-2007 SCHOLARSHIP ACTIVITIES

BY RON SANDSTROM

We now have only two faculty working on PhD's through KSU. Congratulations Drs. Dreiling and Young. "Yeah google^{google} times!!" Hopefully, next year's newsletter will have that number reduced again. The highlights of this year's activities as were last year's activities would have to be the two grants we received from KSDE to develop two on-line courses for teachers wanting middle school mathematics endorsement. One course is "Geometry and Measurement" (Dreiling and Weber), and the other is "Calculus" (Sadler and Young). "Geometry and Measurement" was taught last summer and this spring. "Calculus" is being taught this semester. Four faculty have also been working with Dr. Germaine Taggart, Interim Chair of Teacher Education, on courses and activities in conjunction with the Western Kansas Math Academy which is also designed to help K-12 teachers become highly qualified. This fall will be the last of the KSDE related courses and this summer will be last for the Western Kansas Math Academy. Hopefully, KSDE will

have some funds available so we can keep the WKMA going. There seems to be lots of demand for moving Elementary School teachers up to the Middle School level. We had four faculty PRESENT at the KATM Conference in Colby with 10 students attending sessions. Six attended the KMAA in Wichita with two presentations. Don Clewett submitted to the MAA Monthly a paper entitled "Rates of Approach of Arbitrary Differential Equations to Steady-State in One Dimension." Dr. Dreiling submitted for publication an article to Action in Teacher Education. He attended and made a presentation "Analyzing Data on TI-84 Graphing Calculator" at NCTM Regional in Kansas City. He also attended the Phi Kappa Phi Triennial Convention. Dr. Riazi submitted correct solutions to problems 826, 827, 828, 829, and 830 of Collegiate Mathematics Journal. Bill Weber attended and made a presentation "Statistics on the TI-83" at T³ Conference in Las Vegas, NV. He attended and presented "The Breaking Spaghetti Problem" at NCTM Regional in Kansas City. He attended the

NCTM National MEETING in Atlanta. Dr. Hongbiao Zeng submitted for publication one research paper "A New NP Problem from a Math Game" to Proceedings of 5th International Conference on Dynamic System and Applications". He submitted for Publication one research paper "Choose Topic for MACS Seminars" to Journal of Computer Sciences in Colleges. He also attended the joint MAA/AMS meetings in San Diego and made a presentation "The Introduction Session of College Algebra. He will attend and make a presentation to CCSC 19th South Center Regional Annual Conference this April. He will attend a conference on "Teaching Software Correctness" at the University of Oklahoma. Michelle Zeng attended the joint MAA/AMS meetings and participated in a workshop "Contemporary College Algebra." Dr. Sandstrom was chair of two NCA teams conducting comprehensive evaluation visits at universities similar in size to FHSU. BUSY, BUSY, BUSY we are.

RETIRED FACULTY NEWS

BY KEITH DREILING

Author's note: Some of the retired faculty members sent their information to me in written form, and others provided the information to me over the phone. I have summarized the information from the phone interviews, but I have included the written information as it was sent to me since it seemed to be more interesting to read than if I had summarized.

ELTON BEOUGHER

Our lives have been filled by grandkids and their activities. One granddaughter is a 5'10" sophomore in high school and plays basketball. We have made several "road trips" to see her play. It's three hours one way so that makes 6 hours of traveling and 1 ½ hours of basketball. But it's worth every minute and mile. Another granddaughter, 13 years old, is really into horses and does

English-style riding and showing. We made several trips to see her do her stuff. She earned beaucoup ribbons and we learned a lot about horse showmanship! That's a whole different world. Both of these girls live northeast of Wichita. We have a new grandson, 2 ½ months old. He lives in Denver. Wendy has made several trips out and I have made one. We have a total of 8 grandchildren, ranging in age from 2 ½ months to 18 years. Three live in Denver, two in DeSoto,

east of Lawrence, Kansas, and three in the Wichita area. The oldest is a college student. That makes us feel old. We are proud of all of them and have pictures to show and anecdotes to tell and we do so at every opportunity. So be warned. If you ask what we have been doing you will get the full load. A big event occurred in my life the past year. I attended my 50th year high school class reunion. I can remember thinking how OLD those people were who graduated 50 years ago. It's hard to imagine I'm now one of them. When my grandma was in her eighties, she used to tell my mom that she felt like there was a 16 year-old girl inside her. I now know how that feels. It seems like there is a 17 year-old boy inside me, but I try not to act like it.

LARRY DRYDEN

Larry reported that he has not done much lately. He has mainly tried to stay warm over the winter. He plans to spend time visiting relatives in Texas this March.

CAROLYN EHR

Carolyn reported that not much is new in her life. She continues to do volunteer work, and she plays with her dog, Faith. She has taken three trips to the southeastern United States to visit her brothers in North Carolina and South Carolina and to visit "her beloved University of Georgia." It is there that she attended a classic film Elderhostel.

ERV ELTZE

This has been an uneventful year for us. Our only traveling has been to visit family. Our 12 year old grandson lives in Cedar Rapids, Iowa. He is on a traveling soccer team and we went to see him play in tournaments in Omaha, Denver and Kansas City. LeAnn was one of our churches delegates to Annual Conference in Hutchinson. I am still enjoying playing cello in the Hays Symphony.

ROSALIE NICHOLS

Weeden and I have had a full year of traveling. Highlights include a river cruise from Budapest to Vienna the first 10 days of April and a land tour – cruise to Alaska. We spent the longest day of the year in Fairbanks. It was really strange to have the sun shining at midnight. We continue to serve on various boards and committees. We are continuing to play duplicate bridge, garden, and visit families and friends.

RUTH PRUITT

The biggest event this year was Christmas at our house. Present were David and Nicola; Morgan (8); Daniel and Jennifer (5 year old twins); Doug and Amy; Andrew (5); Helen (3); Fiona (2 months); Roger's sister and her friend. As the grand kids are from Portland, Oregon, and Hot Springs, Arkansas, they don't have much chance to play in a lot of snow. They really enjoyed building a big snowman.

Due to something I said in this newsletter a couple of years ago, Beverly Unruh has been to a few meetings of the local chapter of the Daughters of the American Revolution. Ellen Veed comes occasionally too. We're looking for new members so we would like to get both of them inducted. I am the chapter Regent which takes a lot of time, but I do enjoy it.

ELLEN VEED

Between race car driving and sky diving, Ellen Veed hardly has time to compete in weightlifting competitions anymore. Oh wait...she answered her phone, so I don't have to make up stories, and I can write about what she has actually done recently. Ellen spent much of her time last year traveling. She went to a pastel workshop in New Mexico last June, and she spent time at her cabin last summer. She and Carolyn Ehr went to a film festival in Athens, Georgia, and they recently returned from Myrtle Beach, North Carolina. Her artwork will be displayed in a show in the Bank of America in Hays in April.

CHARLES VOTAW

I don't have much to report. We still look after our great-grandsons after school and on weekdays when there is no school. I am now getting back into computer programming, learning Microsoft's Visual Express and Java to help my older great-grandson, who thinks he wants to learn to write computer games. I spent some time recovering from heart surgery, but I am now to the point of not noticing any significant physical limitations due to the surgery or the symptoms that convinced me that the surgery might be of value.

SCHOLARSHIPS AWARDED IN 2006-2007

BY JEFF SADLER

The MACS Department offered over \$33,500 in student scholarships during this past academic year. Most funding of the scholarships, which provide significant financial support for numerous students pursuing higher education at FHSU, came from generous contributions by alumni and friends of the department. Three main categories of scholarship awards exist through the MACS department.

The Award Of Excellence (AOE) Scholarships in Mathematics and Computer Science, now in its nineteenth year, recognizes graduating high school seniors interested in pursuing higher education with a major in the MACS department. The award for this past year was for \$500 in scholarship dollars, \$250 for residence hall fee reduction and \$250 for educational expenses such as tuition or books. The AOE MACS award is usually given to freshmen with sufficiently high ACT scores and high school achievement in mathematics and science. This past year, the department offered 37 AOE scholarships to students contemplating attendance at FHSU. Of this group, thirteen students enrolled for classes at FHSU during the fall of 2007 and received AOE monies. Those students included:

Adam Falcon (Sylvan Grove)	Jeffrey Brummer (Wilcox, NE)
Kylie Simpson (Hays)	Cole Gottula (Franklin, NE)
Daniel Schneider (Olmitz)	Nathan Ratliff (Glade)
Ashley Sakumura (Lawrence)	Jeffrey Bordner (Bennett, CO)
Josh Post (Hays)	Donald Lowe (Kirwin)
Jordan Boor (Sylvan Grove)	Nathaniel Pletcher (Yuma, CO)

Gavin Martin (Andale)

The department is asking for alum assistance in recognizing any local high school students with an interest or talent in mathematics, mathematics education or computer science and in encouraging such students to choose higher education at FHSU. The department has a goal to consistently have twenty-five well-prepared high school seniors begin their higher education in mathematics and computer science at FHSU during the fall semester after their high school graduation. To reach this goal the department needs friends of the department in the various communities to direct such students toward the FHSU MACS Department. As further incentive, the AOE Scholarship is undergoing a structure change for the next year, including awarded amounts of up to \$900, almost double the current award amount.

The department also presented scholarships in a second category, the MACS Departmental Scholarship. Supported by contributors to the annual TigerCall Telethon, \$400 scholarships were awarded to the following six students:

Mary Gleason (Dodge City)	Thomas Hornung (Stratton, CO)
Rita, Gnizak (Hays)	Mark Garrett (Dodge City)
Jeremy Dreiling (Hays)	Andrew Leiker (Hays)

Larger award amounts in the MACS Departmental Scholarships are desired, but increases will only be possible with the generosity of departmental alum. So, next year when answering your telethon call, please think seriously about contributing a few extra dollars to help the next generation of mathematicians, computer scientist, and mathematics educators.

In the final most prestigious scholarship category, sixteen dedicated students working on degrees in computer science or mathematics were awarded named scholarships within the MACS Department. These scholarships are funded through both endowed dollars and newly received designated contributions, some dollars also coming from the annual TigerCall Telethon. A new series of mathematics education scholarships, titled the Moore Family Scholarships, were also funded and established this past year.

The following FHSU students received both the deserved recognition and the associated awards:

- Charles Hansen (Hays)—Tebo Family \$1100 Scholarship
- Nicholas Uhrich (Washington)—Toalson \$1100 Scholarship
- Joan Dreiling (Ellis)—P. Miller Math/Physics \$1,000 Scholarship
- Kevin Brooks (Healy)—Moore Family \$1000 Scholarship
- Jordan Funk (Hoisington)—Moore Family \$1000 Scholarship
- Katelyn Manly (Lakin)—Moore Family \$1000 Scholarship
- Chelsea Weber (Hoxie)—Moore Family \$1000 Scholarship
- Natalie Hilger (Phillipsburg)—Jimmy Rice Memorial \$1000 Scholarship
- Craig Stramel (Hays)—E.E. and L. Colyer Memorial \$750 Scholarship
- Mike Carlson (Norton)—C.W. Lowry \$750 Scholarship
- Joshua Peterson (Abilene)—Denio \$600 Scholarship
- Kevin Schulte (Goodland)—O.E. and P. Etter \$500 Scholarship
- Allison Chretein (Hays)—Marshall \$500 Scholarship
- Paul Maseburg (Macksville)—E. Veed \$500 Scholarship
- Jeffrey Kaufman (Hoxie)—Baxter \$400 Scholarship
- Kiley Simpson (Hays)—Ogle \$400 Scholarship

Students awarded scholarships often express appreciation for any and all financial assistance received, especially when the funds come from friends of the MACS department. If you have questions about departmental scholarships or have the ability to assist in identifying and/or recruiting possible MACS students from your local region, please contact Jeff Sadler by email at jsadler@fhsu.edu or by phone at (785)-628-4416. If interested in contributing either new or continued funds to any MACS scholarships area, please do so by sending a check to the MACS department payable to the FHSU Foundation—specify the mathematics scholarship fund of interest on the memo line. Additional specified scholarship information may also be obtained through submission of a completed form as found on the last page of this newsletter.

2007 GRADUATES

BY MARY KAY SCHIPPERS

*Graduated with Honors

Travis Briggs

Travis' occupation is unknown at this time.

*Tony Brown

Tony passed the first actuarial science exam on November 28, 2007. Congratulations Tony!

James Hauck

James' occupation is unknown at this time.

Kristy Koch

Kristy is teaching mathematics at Goodland High School.

Andrew McElwain

Andrew is employed at Liberty Mutual Insurance in Kansas City, Missouri as an Infrastructure Analyst.

Torre Roenne

Torre is attending graduate school in Applied Math at Wichita State University.

KME UPDATE

BY LANEY YOUNG

KME/MACS Club is beginning to increase in numbers and activities. The KME Spring 2007 Banquet was held at The Bakery Shop on April 30. The new initiates were Don Clewett, Jeremy Dreiling, Thomas Hornung, Andrew Leiker, Catelyn Manly, Craig Stramel, Derek Vonada, and Chelsey Weber. Dr. Elton Beougher retired professor of mathematics, was the speaker for the evening. Everyone in attendance enjoyed the pictures and the discussion about Dr. Beougher's trip to Israel and the Middle East. We are all hoping to see the rest of the pictures at a later time.

This fall KME/MACS Club kicked off the new school year with an ice cream social in August to meet the new freshmen. Early in the fall semester we had pizza with the MACS faculty and students.

LATE RALLY LIFTS FACULTY OVER STUDENTS

Despite losing right fielder Mary Kay Schippers early in the game and trailing throughout the game, the faculty team was able to overcome adversity and defeat a younger student softball team. In dramatic fashion, the faculty team scored 10 runs in the bottom of the last inning for a final tally of 21 – 20. With two outs and runners on first and third, utility player Bill Weber scored the winning run when pitcher Laneey Young drilled a walk-off single over the shortstop's head.

The faculty team was able to keep the score close until the late innings when the students put on a display of power and speed to

Late in September we had our annual softball game followed by a barbeque in the park. It was a beautiful day for a softball game. The students made t-shirts with their team name (Calcoholics) and gave the faculty a good run for their money. The short version – faculty win!! The long version can be read in "Late Rally Lifts Faculty Over Students." There were enough students and faculty to field two teams.

There are plans for some more friendly competitions (dodgeball and volleyball anyone??) and as always, more food.



Spring 2007 KME Initiates: Andrew Leiker, Craig Stramel, Chelsey Weber, Catelyn Manly, Don Clewett, Thomas Hornung. Jeremy Dreiling not pictured.

mount a seemingly insurmountable lead. But the never-say-die attitude of the faculty was the difference in this hard-fought instant classic. "We knew this would be a team effort---that no one of us could win this game by themselves," exclaimed and exuberant Ben Sadler, the nine-year-old speedster and faculty catcher. "You play the game one pitch at a time," chimed in eleven-year-old defensive phenomenon Levi Dreiling. "One batter is not able to score all ten runs, but together we knew we could score ten runs as a team."

The win snapped a losing streak that the faculty team has suffered in recent years at the hands of the student team. The next action for both teams is Fall 2008 when the students will undoubtedly seek revenge. "They are a great team, and they showed their experience and poise today," remarked a dejected Natalie Hilger, second baseman for the student team. "We can learn a lot from them, and with diligent recruiting, extensive training, and focused mental preparation, we hope to be victorious next year." "Natalie is right," added student right fielder Craig Stramel. "We cannot take a team like the faculty lightly. Even though the sum of their years greatly exceeds the sum of our years, they proved that they know how to play the game," he added mathematically.



GETTING TO KNOW YOUR SCHOLARSHIPS

Editor’s Note: This is the third contribution to a continuing feature in our annual newsletter. The purpose is to describe in greater detail the history and the people for whom our scholarships are named. This year, we caught up with Mike and Peggy Moore.

Mike and Peggy Moore both graduated from FHSU in the late '60's and had often talked about establishing a scholarship for students. After retirement, they decided it was time to act. Their first thought was to help the college that had helped them so much with an outstanding education and a great educational experience. Peggy taught business classes, which eventually became computer classes in high school and junior high, and Mike taught math and science for nearly all of their working lives. They really wanted students to follow in their footsteps and become math, science, and computer teachers. Nearly all of their teaching was in the Grinnell, Wheatland, and Maize school districts from which they retired in 1999. Mike states, “we are very hopeful to soon see some of our scholarship students in school classrooms, teaching the subjects which we taught, and preparing other students to be able to successfully compete in college and earn a degree.”

Any undergrad student or incoming freshman enrolled or enrolling in math education, with the intention of becoming a teacher, is eligible for the Moore Family Scholarship. Priority is given to students who graduated from Grinnell, Wheatland, or Maize high schools. Four scholarships each year are available, for \$1,000 each, renewable for 3 additional years to undergraduate students. As long as the student is in good standing, and is making satisfactory progress toward the degree while maintaining at least a 3.0 GPA, the scholarship may be renewed.

Mike and Peggy are both retired. They spend their free time volunteering at St. Josephs Church, traveling, attending FHSU football, basketball, volleyball, and wrestling. Peggy is currently undergoing treatment for ovarian cancer. The couple resides in Hays.

ONE SOLUTION AND ONE PROBLEM

Below is the solution to one problem solved by the problem solving group

Show that

$$\int_0^1 \frac{4x^3(1+x^{4(2006)})}{(1+x^4)^{2008}} dx = \frac{1}{2007}$$

Solution submitted by Fort Hays State University Problem Solving Group

First, apply a u-substitution

$$u = 1 + x^4 \text{ and } du = 4x^3 dx$$

$$\int_1^2 \frac{1+(u-1)^{2006}}{u^{2008}} du$$

Then simplify into two separate integrals as follows:

$$= \int_1^2 u^{-2008} du + \int_1^2 \frac{1}{u^2} \left(1 - \frac{1}{u}\right)^{2006} du$$

Integrating the first integral:

$$\int_1^2 u^{-2008} du = -\frac{1}{2007} u^{-2007} \Big|_0^2 = \left(-\frac{1}{2007}\right) \left(\frac{1}{2^{2007}}\right) + \left(\frac{1}{2007}\right)$$

Introducing a second substitution in order to integrate the second integral results in:

$$t = 1 - \frac{1}{u}, \text{ and } dt = \frac{1}{u^2} du$$

$$= \int_0^{1/2} t^{2006} dt = \frac{t^{2007}}{2007} \Big|_0^{1/2} = \left(\frac{1}{2007}\right) \left(\frac{1}{2^{2007}}\right)$$

Now add the two together

$$\left(\frac{1}{2007}\right) \left(\frac{1}{2^{2007}}\right) - \left(\frac{1}{2007}\right) \left(\frac{1}{2^{2007}}\right) + \left(\frac{1}{2007}\right) = \left(\frac{1}{2007}\right)$$

We are still thinking about the following problem proposed in the December issue of Mathematics Magazine.

For a positive integer k , define $odd(k)$ to be the number of odd digits in the base 10 expansion of 2^k .

Prove that

$$\sum_{k=1}^{\infty} \frac{odd(k)}{2^k} = \frac{1}{9}$$

ALUMNI NEWS BY MARY KAY SCHIPPERS**Chris Allen, '04**

Chris is now teaching at McPherson High School.

Andrew Anderson, '65

Andrew is the new mathematics teacher at the Junior-Senior High School in Lincoln, KS. He has been teaching for over 39 years. Andrew and his wife Ann have two grown sons.

Lisa Arnoldy, '89

Lisa is no longer teaching and has become a professional photographer.

Roger Barta, '67

After 40 years of teaching high school mathematics with 29 years at Smith Center High School, Roger is retiring. Roger will continue coaching Smith Center Football however, with a supplemental coaching contract. Smith Center is a perennial football powerhouse and just won their fourth straight 2-1A state championship.

Jerry Billinger, '74

Jerry, first vice president of Capitol Federal Savings in Topeka, KS has been promoted to director of risk management services. Jerry received the Henry A. Bubb Distinguished Service Award in 1998.

Lisa (Billips) Colwell, '81

Lisa, in her 13th year of teaching mathematics at Hays High School, has been named a Kansas Master Teacher for 2008. Before coming to Hays, Lisa taught at nearby Victoria High School after her graduation from FHSU.

Joe Credit

Joe, a graduate of Worcester State College in Massachusetts, received his teaching endorsement from FHSU and is now teaching 7th and 8th grade math and Algebra I at Peabody-Burns Jr./Sr. High School.

Scott Davied, '06

Scott now works for Eagle Communications in Hays as an Internet-support technician.

Alan Fabrizius, '93

Alan is the store manager for Carrico Implement Company in Hays.

Leroy Gnad, MS '69

Leroy retired in 2007 from the only teaching position he has ever held. Leroy began teaching at Thomas More Prep-Marian High School in Hays (formerly St. Joseph Military Academy) in 1964 and has taught mathematics there continuously for 43 years. In June, he was inducted into the Kansas Teacher's Hall of Fame in Dodge City. But Leroy will still man the scorebook for home basketball games at Al Billinger Fieldhouse, a job he has also held during his entire teaching career there.

Christie Hindman, '03

Christie married Chris Sander on June 2, 2007. She teaches mathematics at Victoria High School in Victoria, KS.

Jerry Holmes, '72

Jerry is the Senior Manager of Operations at Convergys in Olathe, KS.

Amy (Kresin) Johnson, '96, '02

Amy, husband Justin, and big brother Byron proudly announce the birth of Aidan Steven, born April 30, 2007. Amy teaches math and coaches volleyball at Ellsworth High School.

Brad Kearn, '04

Brad completed his Masters degree at Kansas State University and is now teaching mathematics at Seward County Community College. He joins **Luke Dowell, '00**, also an instructor at SCCC.

Dean Larson, '62

Dean retired from Electronic Data Systems in December 2007.

Carol Jean (Hamilton) Martin, MS '77

Carol, a math teacher at Attica High School for the past seven years, received the Soil Conservation's Farm Bureau Environmental Award for dedication to recycling. Carol shared the award with her Honor Society and Service Learning Class. The recycling program was started in 2002.

Richard McCullum, '65

Richard has now retired from teaching at Sterling College in Kansas.

Emily McDonald, '99

Emily started a Masters of Physician's Assistant program at Wichita State in June, 2007. She is scheduled to finish the program in August, 2009.

Dustin McEwen, '95

Dustin is now the Assistant Principal and Athletic Director at Cheney High School in Kansas.

Robert Meier, '62

Robert, professor of accounting and information systems at FHSU, along with two other professors, presented "Are Communities on the Horizon?" at the 24th annual Southwest Business Symposium at the University of Central Oklahoma.

Maryam Moradi, '01

Maryam, wife of Ali Farahani, former FHSU math department faculty member, is working for Mitchell Automotive Software Solution. She and Ali have two children and live in San Diego.

Sherry (Nelson) Reeves, '88

Sherry has been promoted from assistant principal to principal of Basehor-Linwood High School in Bonner Springs, KS. Sherry had previously worked 18 years in the Maize school district near Wichita.

Amber Roadhouse, '04

Amber recently moved to Kansas City and accepted an Agri Underwriting position with QBE, Agri Insurance. QBE is the 25th largest insurer in the world. Her territory will consist of Idaho and California.

Kevin Ruda, '01

Kevin is now teaching at Buhler High School.

Brian Ruder, '64

Brian came out of semi-retirement to teach in the Portland State University MBA program. PSU is the largest university in Oregon.

Larry Schmidt, '74

Larry accepted the position of superintendent of USD 435 in Abilene, KS. He had previously taught in Grinnell, Hays and Concordia before becoming superintendent and principal at Grinnell. Since 1998, Larry was director of business operations in the Junction City school district before accepting his new position.

Gaylene (Hayden) Shank, '67

Gaylene is retiring after 26 years of teaching beginning 40 years ago. She has been teaching math at Goodland High School for the past 17 years.

Jodi (Miller) Stover, '90, '99

In September, Jodi was named Secondary Teacher of the Year by Pittsburg State University. The award encompasses the area around PSU. Jodi teaches at Neodesha High School in Kansas.

Gene Stramel, '48

Gene and his wife live in Mancos, CO. He retired from Shell Oil in 1988.

Steve Vance, '03

Steve and wife Tara, admissions counselor at FHSU, proudly welcomed daughter Evelyn Leigh on January 2, 2008.

Please use this form to notify us of a change of address or to contribute information for the next newsletter.

Return to *Department of Mathematics and Computer Science, Fort Hays State University, 600 Park Street, Hays, KS 67601* or e-mail the information to: *bunruh@fhsu.edu* or *lyoung@fhsu.edu*

DATE _____

NAME _____ FHSU DEGREE DATE (S) _____

PREFERRED ADDRESS

Email: _____

CURRENT POSITION _____

Please send me information on:

- _____ FHSU Foundation
- _____ FHSU Alumni Association
- _____ Mathematics and Computer Science Scholarships
- _____ Masters of Liberal Studies (Emphasis Mathematics)
- _____ Other

NEWS, COMMENTS, OR OTHER ITEMS YOU WOULD LIKE TO SHARE:

(e.g., promotions, publications, weddings, births, etc.)

See ya next year!!! If you have anything you would like to share or if you are interested in writing an article for the newsletter, please feel free to contact me at lyoung@fhsu.edu.