



FHSU Secures NSF Grant

Money will be used primarily for scholarships for math & science education students, and to develop teacher-leaders who are prepared to teach in rural communities.

After many previous attempts and rejections, FHSU was finally awarded the Robert Noyce Teacher Scholarship Program grant last fall. Of the over \$1.1 million dollars awarded, at least 75% of the money must go directly to benefit students, and a large share of this will be used to award scholarships over the next five years to the most talented math and science education students FHSU has to offer.

The Noyce Scholarship Program was started 10 years ago, in response to the shortage of highly qualified math and science teachers across the United States. During this time, nearly 3000 students have graduated from the program, and another 8000 students are currently receiving scholarship assistance from the

program. The hope is that with excellent math/science teachers, students will become excited about the fields and a new generation of top-notch math and science students will develop. There is a service requirement when accepting a scholarship; for each year a student accepts the scholarship, he/she is required to teach after graduation for 2 years in a high-needs district. NSF agrees with FHSU that rural areas are high-needs, so the graduates of FHSU's program will receive special training preparing them



Dr. Bill Weber speaks at a press conference after receiving the Noyce grant.

to be teacher-leaders within rural schools and communities, including distance education training as well as rural field experiences and seminar courses giving them the training necessary to succeed in teaching within a rural setting. Starting in fall 2013, the first 6 of these \$12000 scholarships will be awarded to students

who are at least Junior status.

The second major component of the grant will focus on recruiting more students to consider math or science teaching as a career. FHSU will be

actively searching for freshman and sophomore level students who might consider this career path to help with the various science and math camps we currently offer each summer. These students will be paid \$400 per week to assist with the faculty-led camps; gaining valuable experience in working with middle and high school level students along the way. Starting this summer 2013, the first 6 of these awards will be given.

Many other components of the grant exist, including personal mentoring for all FHSU Noyce graduates for their induction years of teaching, paying for Noyce graduates to attend state Math/Science conferences, and even AP training for interested teachers. Overall, it is a wonderful opportunity for some of the most talented and bright math and science students to have some of their schooling paid for, as well as engage in a career which can inspire so many students.

More information about the grant can be found at

<http://www.fhsu.edu/noyce/>

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Classes offered this summer

MATH 010 Intermediate Algebra

MATH 110 College Algebra

MATH 250 Elements of Statistics

MATH 331 Calculus Methods

If you would like to have a math or math education class offered in the summer, please let us know.

Summer Internship — Victoria Koehn

Internships are not just another summer job to put on your resume. They offer a real life experience that's puts your education to the test, and it gives you the opportunity to make sure this is the field you want to work in once you graduate from college. As a Computer Science major with an emphasis in Mathematics, I had many options in the way of a career. My programming and mathematics courses at Fort Hays were always interesting, challenging, and left me wanting more. The yearning for more stemmed from the restrictions of a classroom. My teachers were great, but you can only do a few small projects when you are meeting only three hours a week. Fort Hays built on my programming foundation and increased my problem solving ability, but I really wanted to apply these skills. An internship seemed like the perfect solution to my lack of real life experience, so I started doing some research. I soon found out that my endeavors were too late in the recruiting season. Most of the internship positions for the summer had been filled in September. A few good things did arise from my tardiness; I became more motivated to keep my grades up, and start researching for an internship early.

As the new school year started on my senior year, I saw an advertisement for an Information Technology internship at Koch Industries. I had grown up in Wichita, Kansas, where Koch Industries is centered, so I was somewhat familiar with their businesses. Before applying for the Information Technology position, Career Services offered to polish my resume. They offered many suggestions that I feel lead to my first and second interview and eventual hiring for the summer of 2012 at Koch Industries.

As the summer approached, I began to feel that I wasn't completely prepared for this internship. The job description included knowledge of SQL, Visual Basics, Visual Studio, Oracle, XML, and many other technologies that I had no experience with, but my fears were settled when my supervisor explained that Koch understands that the interns have minimal experience. Koch's business philosophy is based on learning new things, asking questions, and sharing your knowledge with others, and I spent the whole summer doing these three things. In addition to learning Visual Basics, SQL, HTML, and how to use Visual Studio, I also added value to the company. During the summer, another intern and myself created a

calendar used to track and monitor routine duties completed at the Flint Hills Resources' refining, chemical, and bio-fuel plants around the country. We were given real responsibility to program and develop this software. If we coded incorrectly there were real consequences; machinery could break, plants could explode, or other catastrophic events could occur. To help reduce the stress of blowing a plant up, we had many supervisors and mentors that assisted us when questions rose during development and the program has been successfully transitioned into production.

Over all, my internship was an amazing experience. I worked with great supervisors and mentors who taught me a lot and gave me real experience and responsibility. By the end of the summer I felt as though I learned more in those three months than I did in my four and a half years in college, and I was given the opportunity to continue at Koch Industries after I graduated. My advice is to start looking for internships early, use the services on campus, and learn as much as you can; you might find a company that is a true joy to work for.



Vicotria, a December 2012 graduate in Computer Science is in the second row second person from the left in red. She is currently employed at Dodge City Community College.

FHSU's Computer Science Emphases Draw Numerous Majors —Jeff Solheim

Fort Hays State University offers the Bachelor of Science degree in Computer Science. Other schools also offer the B.S. in Computer Science, but FHSU's has a unique twist that makes it quite attractive: a student has the choice of seven different areas of emphasis. This affords each student the opportunity to tailor her or his education to specific interests and career goals.

An FHSU Computer Science major completes 14 so-called "major courses" in Computer Science, plus additional courses outside of Computer Science in an area of emphasis selected by the student. The seven different areas of emphasis are:

Business	Mathematics	Geographic Applications
Physics	Technology Studies	Networking
Cyber Security		

A student who chooses the Business emphasis will gain useful background in accounting, management (including management information systems), marketing, economics, and finance. In addition to completing the Computer Science major courses, the student will complete 9 courses selected specifically for the Business emphasis.

For the student whose interests tend to be more on the mathematical side, FHSU has the Mathematics emphasis. This emphasis includes courses in Calculus, Linear Algebra, Statistics, Differential Equations, Discrete Structures, and Numerical Analysis. The Mathematics emphasis would be a great fit for the student who has an eye toward someday developing software that has a scientific or mathematical angle to it.

The need for software engineers having background in geography is great. And this is just the background a student would get if he or she completes the Geographic Applications emphasis. This emphasis includes not only courses in the standard subjects of geography, such as physical geography and cartography, but also courses in the emerging field of geographic information systems. This emphasis also prepares one to work with aerial- & satellite-gathered data by way of its course in aerial photo and remote sensing.

The Physics emphasis is a great choice for the student who enjoyed physics and computer programming classes in high school. FHSU faculty conduct research in topics such as solving "the heat equation" using methods from an area known as "computational physics" – in fact, FHSU has a course entitled Computational Physics!

The student who chooses the Technology Studies emphasis obtains great preparation for a career in manufacturing, power and energy, or construction. This emphasis includes useful courses such as Engineering Graphics, Computer-Aided Manufacturing, and Industrial Management. Pair this with a Computer Science background, and you'll be unbeatable!

The Networking emphasis is for the student who wants to know exactly how telecommunications systems and computer networks (including the Internet) work. This emphasis includes courses such as Advanced Routing, Advanced LAN Switching, and Internetworking Troubleshooting.

Finally, if computer security is your thing, the Cyber Security emphasis is for you! The student completing this emphasis will augment a background in internetworking with courses in Web Security, Operating Systems Security, Network Security, and Cryptography.

FHSU's Computer Science program offers an emphasis for just about every possible area of interest. If a student isn't yet sure which area he or she might prefer, that student might take courses in several different emphases before selecting one -- in fact, a student with broad-ranging interests might decide to complete multiple emphases!

Student Point of View

PAUL FLESHER

Being able to practice and perform the two things that I love the most has made my experience here at Fort Hays successful. I am really interested in mathematics and music, and both departments have been prime examples for professional development. We can all enjoy doing something, but in order to excel, simply doing isn't enough. The atmosphere here promotes both learning and practicing; without this combination I wouldn't be able to attend graduate school. Taking lessons for trombone and participating in ensembles have instilled the value of conscious and intentional practice. This progressive realization really should encompass everything we do. Math problem solving is a fine example of the application of math outside of the classroom. There we utilize the knowledge from various classes and apply critical thinking, a necessary skill that requires some refinement through continual use. With this said, I advise you all to follow the many facets of your love, and instead of solely seeking answers, seek understanding with intent and thought.



Paul Flesher is a senior in Mathematics at FHSU. After graduation in May, Paul will attend Kansas State University to pursue a masters and PhD in mathematics.



Kevin is a 2008 graduate of Fort Hays State University with a degree in Mathematics. He is pictured here with his wife Angela and their daughter, Madyson.

KEVIN BROOKS

Numbers are everywhere. Recently, the number three has been on everyone's mind in Scott City. Most likely it is due to the boys' basketball team winning their third straight State championship...a three-peat! However, the number on my mind is five. It has been five years since I graduated from FHSU and started my teaching career at Scott Community High School. I have had the opportunity to teach a variety of classes over those five years: Pre-Algebra, Algebra I, Algebra A, Algebra B, and Financial Algebra to be exact. I am fortunate enough to be in a big enough school where I have four preps each day; however, it is a small enough school that I know *everyone's name, even if I don't have them in class. Teaching has been a rewarding career thus far. The good days still outnumber the bad.*

Many schools across the state are gearing up for the transition to the Common Core Standards. My school is no different. I currently am serving on a committee to help make decisions as we advance towards the new standards. In the five years that I have been at SCHS, I have taught out of the same textbook, therefore, adopting a new textbook series is our top priority for next school year.

Teaching is not my only career. I also farm full time after school and during the summer months near Healy, KS. A person would be amazed at how much of the classroom I take to the farm, and how much of the farm comes back to the classroom. Along with my wife, Angela, we have managed to make a good life for us and our daughter, Madyson.

MATH RELAYS — 2012

by Bill Weber

Another successful Thursday in early November was enjoyed by the members of the MACS department, as the 34th Math Relays was held. The 2012 version had 681 students attend from 48 schools, which is more students than the past few years due to the fact we allowed each school to enter one more team per event. Although we would love to continue to expand, we're getting close to reaching fire code, so we'll have to be satisfied with bringing about 700 students to the FHSU campus for a positive experience.

In class 1A, the overall team winner was St. Johns Catholic, in the 2A/3A category, TMP-Marian, and in the 4A-6A category, Hutchinson took top honors. For a complete listing of team placing and individual winners, please check our website <http://www.fhsu.edu/macs/Math-Relays/Past-Winners/>.

The 35th Math Relays will be held on Thursday, November 14, 2013. We look forward to another fun day of around 700 students coming to FHSU for a day to take math tests!

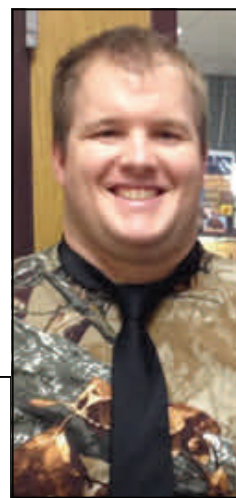
Bits of News

- ∞ Kerry Bahl, 1959 graduate from Fort Hays State University, and his wife Dorothy, recently donated 50 acres of land to the Mathematics & Computer Science Department and the Physics Department. Mr. and Mrs. Bahl have fond memories of their time at FHSU including having Everett Marshall as a professor in his MACS classes. As a major in math and physics, Kerry went on to work as a nuclear physicist at Los Alamos and Lawrence Livermore National Laboratories. The faculty of the Mathematics & Computer Science Department are grateful for the generous donation from Kerry and Dorothy Bahl. The money will be invested in ways that can enhance the education of our math and computer science students.
- ∞ On February 23, Rose Marie Weber, Hoxie native and MACS Alum professed her vows of chastity, poverty, and obedience as a Sister of the Immaculate Heart of Mary of Wichita.
- ∞ Dr. Ervin Eltze was honored at Kansas Section MAA Meeting at Kansas State University for his fifty-year membership in MAA.
- ∞ Ken Eichman, MACS Alum, retired in May from teaching at Metropolitan Community College-Longview after 22 years there and 32 years altogether. He is now living in Prague, Czech Republic teaching (as a volunteer) at the Christian International School of Prague. This year he is teaching Senior Math (SAT review), Statistics, Algebra 2, and Precalculus. This K-12 school follows an American model and is one of three schools in which classes are taught in English. The faculty and staff are from the USA, Czech Republic, Canada, Macedonia, Ukraine, and Costa Rica while students are from the USA, Czech Republic, South Korea, Poland, Germany, United Kingdom, Greece, Nigeria, Cuba, Ukraine, Philippines, New Zealand, China, and Spain. They share a building with a Czech elementary school and preschool which is great for students taking classes in both the Czech and English school. You can check out his blog at keninprague.blogspot.com.
- ∞ Rita (Gnizak) Risting started her PhD in Operations Research (OR) with Engineering at the Colorado School of Mines. She received a fellowship position at the National Renewable Energy Laboratory (<http://www.nrel.gov/>), working on a renewable energy tool to assess the financial viability of renewable energy at sites around the world (mostly for the Navy, hopefully eventually the Army, and DOE as well). She said, "It took a bit to get everything arranged, but I'm in a really great spot right now; they are fully funding me and I'll be helping to develop a commercial tool that helps companies to see the \$ value in switching to renewable energy! I love the classes that I'm taking -- linear programming, integer programming, and statistical methods. It's all about figuring out how to use math to model industrial problems and fix them! It's a perfect fit, and I also love the job opportunities afterwards."
- ∞ Cafer Caner Akdeniz got a job at GTM Sportswear in Manhattan, KS as a web developer.

DANIEL SCHNEIDER

My name is Daniel Schneider and I teach geometry at Great Bend High this year. I graduated from FHSU with a BS in Mathematics and Secondary Education in May of 2012. After graduation I got in on some of the curriculum planning at the high school level because there is a paradigm shift to the common core standards instead of the NCLB standards. Here at Great Bend I help run the Panther Enrichment Program (PEP), where students can come in for extra homework help before or after school. I coached Varsity wrestling this year at Hoisington High School and was part of their second best finish ever as a team. Now that the spring semester is halfway over I am in the middle of state testing and getting ready for another summer or preparation because our school is going to a seven period day next year instead of the block schedule that we now implement.

Daniel is a 2012 graduate of FHSU. He is pictured here in his camo for Spirit Week at Great Bend High School



New Faculty In the MACS Department

Editors Note: The new faculty were asked to introduce themselves to the readers of this newsletter. The editor wishes to thank them for sharing their dedication and creativity with the FHSU MACS Department and our extended community.

I am one of three new faculty members in Fort Hays State University's Mathematics & Computer Science (MACS) Department in the 2012-2013 academic year. Born and raised on a farm in South Dakota, I majored in Computer Science at South Dakota School of Mines and Technology in Rapid City, graduating from SDSM&T in 1982.

From South Dakota, I travelled west to Bozeman, Montana, and obtained my Master of Science degree in Mathematics from Montana State University in 1984. After working as a computer programmer and a teacher, I returned to school to get my Ph.D. in Mathematics and Computer Science (a joint degree) from the University of Wyoming in Laramie in 1992.

I arrived at FHSU's campus in August, 2012, with twenty years' teaching experience at the college- and university-level at schools in Nebraska and Kansas. In my most recent teaching position, I was Professor of Mathematics and Computer Science at Dana College in Blair, Nebraska, where I taught for 15 years before the college closed in 2010.



Dr. Jeffery A. Solheim
Assistant Professor - MACS

I enjoy teaching a wide range of subjects from both Mathematics and Computer Science. Some of my favorite subjects to teach are Discrete Mathematics, Geometry, Abstract Algebra, Trigonometry, Calculus III, Calculus I, Computer Graphics, and "off-beat" programming languages (such as ML and Smalltalk). Several years ago I enjoyed teaching a course exploring social, legal, and ethical issues related to technology, and would like to be able to offer that course at FHSU one day.

Strangely, in my 20+ years of teaching, I've not yet taught Linear Algebra, but would like to. I studied Theory of Computation in graduate school, and would like to teach that one day, also.

I have used a very wide range of languages over the years: FORTRAN, Pascal, BASIC, SNOBOL, Ada, COBOL, assembly language, C, C++, Smalltalk, ML, SQL, Java, Lisp, Prolog, JavaScript, XML, XSLT, and G (a graphical language used with LabVIEW), to name a few. I'd have to say that my favorite language is probably English.

Chess is one of my hobbies. I learned how to play at age 12, and played in a few small, informal tournaments by the time I reached my twenties. At age 45, I decided to take up the game again, and play in "rated" tournaments. My main claims to fame are winning the gold medal in the Reserve section at the 2009 Cornhusker State Games, and being the Class C champion for the state of Nebraska in 2009. I've enjoyed the competition, and made many good friends at the chess tournaments I've attended.

Another hobby I took up a couple of years ago is the study of Spanish. I picked up two of Dorothy Richmond's workbooks (which I highly recommend), and began doing the exercises in them. In Fall, 2012, during my first semester at FHSU, I sat in on Chita Espino Bravo's beginning Spanish class and enjoyed it thoroughly. It was great to have an expert available to answer my too-numerous questions! Also, I was glad to finally have others with whom to converse in Spanish.

I've made acquaintances with many wonderful people here at FHSU. My colleagues and the students have been quite friendly and have welcomed me into the community. I look forward to continued teaching and learning with them.



Dr. Taylor Jensen
Assistant Professor—MACS

My name is Taylor Jensen, and I joined the MACS Department in the Fall of 2012. I was raised by very loving parents in Great Falls, Montana, where I was fortunate enough to get a chance to try my hand at many things—both in and out of school. I especially loved music; I sang in choir and played the bassoon. I also adored playing sports—soccer, basketball, and tennis—though I didn't play any of them particularly well. I always

had an affinity for mathematics as a subject, but I liked so many things as a kid that I had no idea that I'd end up teaching math professionally someday.

I went to college in Utah, graduating with a Bachelor's in Mathematics and Statistics from Utah State University and then with a Master's in Mathematics from USU. Between my first and second undergraduate years, I served a two-year mission in Houston, Texas for the Church of Jesus Christ of Latter-day Saints (commonly known as the Mormon Church). I loved the many people I worked with, many of whom had immigrated from Mexico, Honduras, El Salvador, and other Spanish-speaking nations. After returning home, I met my beautiful wife Krista during my last semester as an undergraduate at USU. (Krista and I both minored in Spanish—and we met in a Latin American Civilization class. Since then, I've always advised my students to minor in something; you never know what the extra classes might bring!)

By the time I graduated from USU the second time, my wife and I had been married for a year and we were expecting our first baby. I worked for one year at Brigham Young University-Idaho; then, we began our “Ph.D. seeking” adventure at Montana State University. I spent four years as a graduate student in Bozeman, Montana, a gorgeous place if there ever was one, and our little family grew in number as I continued (plodded?) on through the program. I took a position as an Instructor at Dixie State College (now DSU) located in St. George, Utah, before finally finishing my doctorate in Mathematics Education in 2009. At the time of my graduation from MSU, Krista and I had three kids. We’ve since added a fourth, because, quite frankly, we’re both slightly insane.

But we love our children—Kyla, Caleb, Emma, and Mara—dearly, and we cannot imagine life without them.

I have experience teaching a variety of math courses in the undergraduate curriculum, from Intermediate Algebra to Advanced Calculus, from Elementary Statistics to Point-Set Topology. I have realized through my teaching that the beauty of mathematics lies in its consistency and in its reasonableness—and what is remarkable is that we’re able to impose our mathematical “structure” on so many seemingly unrelated things to the distinct advantage of humankind. It is a joy to be a teacher; it is more so when the subject matter one gets to teach is so darn amazing. I hope to continue teaching (and learning!) for years to come.



Dr. Todd Moore
Assistant Professor - MACS

Todd Moore's many exploits have been described by experts as unbelievable, heroic, miraculous, heroic, confusing, **made-up**, and heroic. Born in Savannah, Georgia in 1983, the son of an Army Colonel, Todd already had achieved his Ph.D in Mathematics, pre-natally. Being a newborn, however, Todd's cognitive faculties had not fully developed yet, and he foolishly lost his Ph.D in a poker game. This necessitated his many year struggle to earn another to replace it.

His family settled in a country home a few miles outside of Woodbine, KS in a house that Todd singlehandedly built using toothpicks and glue. Granted, those aren't the best building materials and the house fell down, but he was only five years old! He wasn't even allowed to use a hammer yet, so give him a break! After learning his lesson on Engineering, he rebuilt the house using stronger materials - popsicle sticks and paper mache; that house still stands to this day. Meanwhile, Todd attended Hope School for his K-12 education.

After graduating in 2001, Todd attended the Colorado School of Mines for his freshmen year, majoring in Physics. Todd transferred to Kansas State in order to major in Biology. In his last years of College, he added Mathematics as a dual major and graduated in 2006. He went on to graduate school at K-State after turning down many offers from NASA, the CIA, and whatever the organization was that James Bond was in. Oh and also he turned down being President because, since his current age was below what the constitution required, he felt that taking the position would be in poor taste to the integrity of the U.S. Constitution, regardless of how much the public demanded he take it.

It was in this way that Todd was again able to earn his Ph.D in Mathematics in 2012. He also earned his Ph.D in Physics, Biology, Neuroscience, Philosophy, Psychology, and Arm wrestling, but he lost all of those in ill-conceived poker bets. He was hired at FHSU in 2012 and focus on his teaching instead of his odd quest for presidency.

MACS CLUB/KME ACTIVITIES

By Lanee Young

Much has changed and much stays the same as you look at our annual update of KME/MACS Club activities. The KME Spring 2012 Banquet was held in The Memorial Union on April 26. The new initiates were James Beard, Aimee Overmiller, Allison Schley, Shelby Smith, Kaylee Sotelo, and Aidan Winblad. Dr. Pat Coyne from the Western Kansas Agricultural Research Center gave an inspiring talk connecting all areas of mathematics and computer science to the world of agriculture.

This fall KME/MACS Club kicked off the new school year by meeting with all freshmen math and computer science majors. A pizza party was held with all students and faculty early in the fall. We had a good turnout because everyone loves all-you-can-eat pizza. The annual softball game was held this year. The few students that showed up and the kids of some of the faculty competed against the faculty team. Our memories may be failing but I am pretty sure the faculty won. It was a tough battle because Dr. Dreiling's son, Levi, and Dr. Weber's son, Sheldon, are growing up fast. We celebrated PI Day on March 14. Last year we had about 30 people and 15 pies. I can't wait to see what flavors are available this year. Stop by if you are in the neighborhood, we might even share some pi.

Records Set When Scholarships Awarded During 2012-2013 by Jeff Sadler

During a time in which tuition rates at post-secondary institutions continue to climb, the generous alumni and friends of the MACS Department provided significant financial support for students pursuing a higher education at FHSU. Donated monies and other sources enabled the MACS department to offer a record \$50,200 in student scholarships during this past year. These scholarship dollars significantly impacted the cost of higher education for a record thirty-nine students and their families.

A new department record was also set when eighteen students working on a degree in computer science or mathematics were awarded \$16,400 through the prestigious named-scholarships. These scholarships are funded through both endowed funds and other designated contributions, some pledged during the annual Tiger Call Telethon. The following FHSU students received both high recognition and significant scholarship dollars:

James Beard (Peyton, CO)-awarded the O.E. and P. Etter \$600 Scholarship
Sara Boden (Beloit)—Frances E Shockley \$600 Scholarship
Nikolas Boyle (St. John)—Moore Family \$1,000 Scholarship
Jocelyn Conway (Osborne)-awarded the E.E. and L. Colyer Memorial \$800 Scholarship
Paul Flesher (Hays)—Moore Family \$1,000 Scholarship
Paul Flesher (Hays)-awarded the Jimmy Rice Memorial \$500 Scholarship
Naomi Kitzis (Hays)-awarded the Elgin & Freda Denio \$1500 Scholarship
Vitoria Koehn (Wichita)—Baxter \$600 Scholarship
Carlos Linares (Aurora, CO)—Ruth and Roger Pruitt \$800 Scholarship
Sydney Lower (Wichita)-awarded the Ogle \$600 Scholarship
Emma Meier (Hays)-awarded the Tebo Family \$1200 Scholarship
Aimee Overmiller (Beloit)-awarded the Veed \$800 Scholarship
Kaitlyn Paul (Salina)—Moore Family \$1,000 Scholarship
Alex Schaeffer (Hays)—Ron and Cathy Sandstrom \$1000 Scholarship
Trevor Siebert (Colby)—Marshall \$600 Scholarship
Shelby Smith (Hays)-awarded the Toalson \$1200 Scholarship
Nolan Trapp (Susank)—Moore Family \$1,000 Scholarship
Margo Voth (Scott city)-awarded the C.W. Lowry \$600 Scholarship
Aiden Winblad (Goessel)- awarded the P. Miller Math/Physics \$1,000 Scholarship

Using charitable telethon supporters' contributions, the department was also able to award several MACS departmental scholarships. The telethon dollars provided two levels of departmental scholarships and were given to the following students:

\$400 Scholarships

Jocelyn Adams (Hays)
Scott Denney (Ulysses)
Jordan Elliot (Great Bend)
Drew Lindsey (Goddard)
Allison Schley (Englewood, CO)

\$300 Scholarships

Gloria Johnson (Garden City)
Kyle LeRoy (Great Bend)
Kaylee Sotelo (Dodge City)

The Academic Opportunity Award (AOA) Scholarship in Mathematics and Computer Science is used to recognize incoming freshmen. Now in its sixth year, the AOA continues to be a valuable resource for freshmen by providing \$250 for residence hall fee reduction and \$650 for tuition expenses. The award and amount is based upon a student's interest in pursuing a degree within mathematics or computer science as well as upon the student's high school academic achievement and ACT/SAT scores. This past year, the department offered a record thirty-seven AOA scholarships totaling \$30,900 to students interested in attending FHSU. Of this group, thirteen students enrolled for classes during the fall of 2012, also a record for MACS AOA's. Those students included:

Luke Abbott (Great Bend)
Kenneth Fairlie (Wichita)
Nicholas Hoffmann (Wichita)
Sydney Lower (Wichita)
Ryan Norton (Louisville, CO)
Kaleb Stark (Liebenthal)
Lakin Werth (Hays)

Jordon Cantu (Belle Plaine)
Elaina Haberer (Luray)
Nathaniel Lanier (Walton)
Blake Michaud (Salina)
Charlee Samuelson (Green)
Zane Swafford (Hays)

As in the past, the department is seeking the assistance in recognizing and encouraging local high school students with an interest or talent in computer science, mathematics education, or mathematics. The department has a goal to have at least twenty-five well-prepared high school seniors begin their higher education in mathematics and computer science at FHSU. But we are in need of assistance from friends and alums to reach this goal. Please contact us with names of prospective students so we can let them see the benefit of becoming a FHSU Tiger within the Department of Mathematics and Computer Science.

Students are truly appreciative of any and all financial assistance received through funds provided by 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 Endowment Association—specify the mathematics scholarship fund of interest on the memo line.

Thank You for Supporting FHSU MACS Department

The Department of Mathematics & Computer Science enjoys this opportunity each year to list the donors who have given so generously to our department. Without your contributions it would not be possible for us to award scholarships to our deserving majors. Please check out the list of students receiving scholarships on the previous page of this newsletter. We wish to thank each of you who have shared your financial resources with the University, and especially wish to thank those of you who designated the MACS Department as recipient. We also appreciate the employers who matched your contributions. Individuals or companies contributing to the Spring 2012 campus drive or Fall 2012 Tiger Call are:

Joan Albers, Geralyn Allen, Charles and Cathryn Allphin, Steve Alston, Lavern and Cari Andrews, Gary and Bernice Bell, Elton and Wendy Beougher, Rex and Beverly Blanding, Stacy Boyd, Susan Bozeman, Stephen and Judy Brummer, Darren Brungardt, Larry Carter, Kent and Lisa Colwell, Willis and Alma Crabtree, Mary Cunningham, Emily Decker, Danny and Connie Dibble, David Dilley, Kyndra Dobson, Keith and Pam Dreiling, Kay and Mildred Dundas, Dennis Echard, Carolyn Her, Leslie and Karen Freeman, Kathryn Fritz, Rhonda Gardner, Kent and Karla Gross, Chad Heckman, Cheryl Helget, Al Herren, Troy and Tina Herrman, Jerrod and Jess Hofaker, Kent Huffman, Amy Johnson, James and Barbara Johnson, James and Judy Johnson, John and Regina Johnson, Brad Kearn, Vernon Kisner, Norwin Kohls, Richard Kratzer, Mike and Carmen LaBarge, Darrell and Sheila Latham, Clint and Carol Ledbetter, Larry and Donna Leitner, Don and Linda Lesovsky, Aaron Lessor, Max and Thelma Liggett, Pat Luea, Lois Lutz, Larry and Connie Masters, Ronald and Debbie Miller, Bob and Anel Minneman, James Morford, Troy and Laura Munsch, Patrick and Donna Myers, Weeden and Rosalie Nichols, Adam North, Marvin and Katrina Penka, Robert Plomondon, Darlene Plymell, Roger and Ruth Pruitt, Mohammad and Seddigheh Riazi-Kermani, Shayne Riley, Richard and Sharon Ruder, Jeff and Lori Sadler, Ron and Cathy Sandstrom, Robert and Christine Sauber, Dan and Mary Kay Schippers, Kim Schmidberger, Janet Schuetz, Dennis and Gaylene Shank, Loren Shannon, James and Lida Sharp, Joyce Buckles, Pat and Kathy Spicer, J Gail Stanley, Todd Stanton, Debbie Stelter, Betty Taylor, Textron, Inc, Ken Trimmer, Blake and Crystal Vacura, Ellen Veed, Charles and Reta Votaw, Charlene Weber, Bill and Tiffany Weber, Donald Werner, Westar Energy Foundation, Joe Whitley, Rex and Margaret Wilson, Marilyn Wilson, Leroy and Sharon Winklepleck, Wilbur and Shirley Wood, Lane Young, Hongbiao and Michelle Zeng, Eugene Zimmer.

Apologies are extended if someone's name was inadvertently left off the list. We appreciate each and every donation received! These contributions are so important in allowing us to attract and retain mathematics and computer science majors; which then gives these students the opportunity to become successful citizens such as yourself. If you know of any potential mathematics and computer science majors, please let us know by sending us their names.

CONGRATULATIONS TO Dr. Keyu Jiang, Dr. Robert Meier, Dr. Hongbiao Zeng, and Mr. Ning Wang. They received a Best Paper Award Certificate for a presentation at the 2012 International Conference on Computing Measurement Control and Sensor Network held in Shanxi, China in July 2012. Dr. Jiang was the presenter, and the title of the presentation was Information Filtering against Information Pollution and Crime.

Retired Faculty News

Rosalie Nichols

Weeden and I traveled a lot from May through December. Most of the travels were for Weeden's Scottish Clan or family activities. We did take a trip by car to Canada in October just for fun -- we'd never been in Manitoba before. We managed to leave just ahead of a snow storm.

We continue playing competitive bridge and I am working with a newly forming social action committee in my parish. Our travels begin again in May with high school graduations of two grandsons and a college graduation of a grandson.

Ron Sandstrom

News Flash: I said NO to another organization. My commitment to Golden Belt Community Foundation ends in October when my Presidency and term expire. I am accountant (I have had to eat earlier words) for Rush County Relay for Life and Rush County Historical Society. As part of the Historical Society, I learned that my maternal grandfather's double-wall brick home was the first farm brick home in Rush County. Still doing a little preaching and am looking at a really beat up 1935 Chevrolet pickup.

Cathy is still doing a Prayer Shawl ministry heavily involved with Barnard Library, and Relay for Life. She is also still a board member of Southwest Developmental Services. And, of course, keeping track of me.

When Keith sent out last year's request, we were on a beach in Kauai, Hawaii; this year we were on a cruise ship taking in six ports of New Zealand. These two trips were filled in by trips to see grandkids as well as a week in Northern California, three weeks in China, and a week in New York City up to Nova Scotia and back. Two thousand thirteen will see us in the US the rest of the year. Advice: Save your money for RETIREMENT.

Mary Kay Schippers

So far, I have put my extra time to good use. On what would have been my first day of classes last August, I was instead riding my beautiful buckskin, BJ, with the sun on my shoulders and the meadowlarks' song in my ears. As a 3-year-old, BJ really needed hours logged in his training and boy, have I been doing that. For several months I was riding 3 to 5 days a week, 2 to 3 hours at a time. I slowed down with the weather turned bitter but will take it up again with the first warm winds of spring.

I also finished a quilt and several Christmas embroidery projects, and started writing a book for children. I was inspired by Aleah's frequent requests of "Grammy, tell me another story about when you were a kid." So I decided to write them down. Think "Little House on the Prairie" set in 1965. I am writing from the perspective of an 8-year-old and am about two-thirds done.

Those are my special projects. My routine projects include taking care of all the animals twice a day which now include rabbits and six ducks in addition to the horses, dogs, and cats. (Can anyone out there tell me how to say "no" to a grandchild?) We started with two rabbits, the got eight more? Yes, the original two were boy and girl as it turns out, and quite fertile to boot. With my knowledge of the Fibonacci sequence and its origin, the future looked quite sobering! So I kept two of the babies, gave the others away, and got the daddy neutered. (Sorry, Oreo.)

Elton Beougher

The highlight of our year was a cruise around the British Isles. We made stops and tours of Edinburgh, Liverpool, Dublin, Wales, Belfast, Guernsey, Inverness, Cobh, and Le Havre. It was all very interesting, but the last one was the most meaningful. From LeHavre we took a full day tour of the Normandy beaches where the Allies invaded France on D-day during WWII. We stood on the top of the bluffs and looked down about 100 feet to the beach below where our brave soldiers had to cross several hundred yards of beach in full view of the German forces firing machine guns and mortars down on them from the top of the cliffs. I can't imagine what those soldiers might have felt. We stood at a memorial looking down a few steps at the Garden of the Missing. There was a wall around the garden on which hundreds of names of those who were lost in the battle for France and whose bodies were never recovered. A veteran of the Vietnam War stood at attention and saluted those fallen comrades from an earlier war whose final resting place is unknown. That was a very emotional moment for me. This cruise was one of the items on my "bucket list."

Charles Votaw

My activities during the past year were a little different than usual in that I had cataract surgery and my wife and I attended a high school reunion. Beyond that, I found time to walk, read, compute, view and edit videos, and help a great-grandson with school work.

Erv Eltze

September we went on a heritage tour in the Czech Republic. A group of 26 with Czech backgrounds went to small villages looking for ancestral homes and in some cases relatives. We did find the villages of my great grandparents but not any homes. However we did find the church where my great grandparents were married and my grandmother was baptized. We also spent some time in Prague with Ken Eichman.

Our second piece of news is that we have moved to Olathe. This move puts us a lot closer to our children and grandchildren.

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Carolyn Ehr

Living in Las Cruces, NM is very interesting as there are so many new experiences. LC is in Mesilla Valley, a desert city surrounded by Mountains. New Mexico is beautiful but the second poorest of the 50 states.

The MACS Department did not hear from **Ruth Pruitt, Larry Dryden, and Ellen Veed**. We continue to wish them all the best.

CONGRATULATIONS MACS STUDENTS ON THE 2012 HONOR ROLL

Paul Flesher, Jayme Hansen, Naomi Kitzis, Emma Meier, Shelby Smith,
Nik Boyle, Erin Deenihan, Steven Brannum, Shaun Davis, Victoria
Koehn, Alex, Schaeffer, Jami Norman, Robert Mayor, Josh Platt

Science Olympiad

by Lanee 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 cooperation. 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. Members of the MACS faculty were involved in the 2013 Regional Olympiad held on February 12 and 14. Keith Dreiling and Jeff Solheim judged "Helicopters" for the middle school students. Bill Weber and Taylor Jensen judged "Write It Do It" for both divisions. Mission Possible and Todd Moore was judged by Jeff Sadler on Feb 12. Lanee Young assisted with Fermi Questions for Division C. If you ever want to help with or observe a Science Olympiad competition, contact Lanee Young. You will enjoy the experience of watching these young minds at work.

