



MATHEMATICS & STATISTICS DEPARTMENT ALUMNI NEWSLETTER 1995-96 UNIVERSITY OF MISSOURI-ROLLA

NEWS FROM ALUMNI

We are pleased that many degree recipients from UMR in mathematics continue after graduation to honor us by writing in. Some visit and give us first hand knowledge of their experiences, others write notes from time to time, some include monetary contributions that immensely help those following in their footsteps. We know you are all busy, but hope

you will continue to find time to tell us about yourselves. We take pride in having been a small part of your successes.

An interesting note from JOEL BRAND (BS ChE '86, MS Math '94, PhD Physics '94) tells that he has "... settled down in Colorado with his wife ANN CARTER (BS C. Sci. '84)." He is "New Product Scientist" with Monitor Labs in Denver, developing photometric gas analyzers. They are quite

happy with Colorado, enjoying skiing among other things. He sends, "Thanks to all my profs, especially Dr. Hicks, ...". Address: 6980 Monty Place, Colorado Springs, CO 80908. Phone: (719) 495-1586.

Congratulations are in order for THERESA SWIFT (MS '92) and husband, Brian, on the birth of daughter REBECCA MAE, November 13, 1994. Theresa is a lecturer in mathematics at UMR.

ELIZABETH MAY HADLER (BS '88) is campus minister and coach at University of Wisconsin-Stout. She and husband GARY LEE HADLER (BS ME '89) reside at E5730 689th Avenue, Menomonie, Wisconsin, 54751. Gary is with 3M.

MARCEL A. MAUPIN (Marcel Wehrman) (MS '78), 1904 Cedar Ridge Road, Edmond, OK 73013-6019 is Associate Professor at Oklahoma State University-Technical Branch in Oklahoma City. She gave a talk on statistics at the AMATYC convention in Tulsa in November, 1994.

It is always good to hear from PAUL W. ELOE (MS '77, PhD '80), Professor of Mathematics, University of Dayton. He writes his "Family of PAUL, LAURIE, NATHAN (6) and KATIE (3) all are doing well. Their address is 2743 Springmont Avenue, Dayton, OH 45420-3042, telephone (513) 254-7588. Paul is well remembered here as one of are most promising graduate students.

LINDA HAND NOEL (BS '82) address 1515 Woodland Crossing, Webb City, MO 64870-3109, has continued her education and academic experiences throughout the years. Now Associate Professor (promoted in 1994) at Missouri Southern State College, her letter reads in part: "after a semester of teaching at Longview Community College,... I received my masters in Applied Mathematics (CMSU, '84). ... In 1991, I got married, pregnant and finished my dissertation to receive my EdD (Oklahoma State '91)." Linda has a "beautiful 3 year old son, Andrew." Keep up the good work, Linda, and stop by when you are in Rolla.

Professor HARMON C. BROWN (PhD '72), Harding University, Searcy, AR 72143-6508, writes, "My oldest son, Mark, a tenor, sang on national TV special Live from Lincoln Center with Pavarotti in January 1993." Mark was to sing on another such special on PBS in March '94. We always appreciate your faithful interest in UMR, Harmon.

CATHY JANEEN CORLEY (MS '87), Operations Research Analyst, US Army, Fort Leavenworth, KS writes "I graduated from the Department of Defense Executive Leadership Development Program in 1994. ... During the course I fired military weapons, rode in an Air Force refueling tanker, and took the first leap in paratroop training. It was a great 14 weeks."

A baby girl, Emily Rose, born September 3, 1994 is new to DENISE ANN MAUSSHARDT (BS '83) and husband CHUCK (CSc '83). Denise is now "a stay-at-home mommy and I love it, though I hope to teach again some day." We share your wish to return to teaching, Denise, and send congratulations on the addition to your fine family. Denise and Chuck live at 448 Wildwood Parkway, St. Louis, MO 63011-2632.

Promoted to full Professor of Mathematics and Computer Science at Lake Forest College, Lake Forest, IL 60045 in March 1995 was ROBERT L. HOLLIDAY (BS '72). Our heartiest congratulations go to you for this fine accomplishment, Robert, and we look forward to further communication with you in future years.

DAVID NICHOLAS TAYLOR (MS '93), software developer for Texas Instruments, Plano Texas sends a very nice note. His address is 4141 Rosemeade Parkway #6112, Dallas, TX 75287-2619.

Networking Consultant at Sandia National Labs is SHAWN DAVID EDWARDS (BS '92), 10700 Academy Road NE #423, Albuquerque, NM 87111-7330. His wife, Becky, is a civil engineer with Wilson and Company, a Kansas-based engineering firm.

RICHARD BROWNE (BS '68), a consultant, shows interest in our mathematics program here at UMR. We hope you will continue that interest, Richard, and that your questions have been answered sufficiently. Richard's address is 12045 Inwood Road, Dallas, TX 75244.

Word has been received here that THOMAS D. AKERS (BS '73, MS '75), has been promoted to colonel in the USAF. Tom, one of the very few astronauts, and UMR's only one to date, has always been one of our most faithful graduates. We offer him the greatest congratulations on his promotion. His address is 1707 E. Hedgecroft, Seabrook, TX 77586. We very much enjoyed your visit to the department here on November 20, Tom.

Visiting the department recently, and speaking with its members was GARY W. HAVENER, who was in the first UMR class to receive the BS degree in applied mathematics, 1962, and was honored with a professional degree in 1994. Gary's main interest at present seems to be in developing various industries from "unprofitable" to "profitable" and in horse racing. The Cabre Corporation, which he bought out of bankruptcy, now has a \$12 million annual sales volume. He became its Chairman and CEO, and is also responsible for getting an unconditional license for Trinity Meadows, a horse racing facility near Fort Worth. Many recent graduates of UMR have been assisted with scholarships support made possible by an endowment scholarship fund created by Mr. Havener.

LINDA PENAS (PhD '85), a professor at the University of California-Riverside, writes of her continued enjoyment of teaching there. Condolences on the passing of your precious cat Tigger, Linda. There may be some consolation in the fact that Garfield is still with us.

Congratulations are in order for ANDREA LYNN VORWARK (MS '94) and TERRY W. HOBBS (MS '91) who were united in marriage at Higginsville, MO on October 7, 1995. Their home: 313B McLeod Street, Florence, SC 29501, phone (803) 661-7682. Andrea writes that she is teaching at

Francis Marion University—12 hours of algebra and trigonometry. She states their home is quite suited for visitors, with the beach not too far, and graciously welcomes her colleagues there.

Congratulations are also in order for TA KIMBERLEY ANN NIGL (MS '95), for being a repeat winner of the Outstanding Graduate Teaching Assistant Award. She was presented this award, based on student evaluations done at the close of the 1994-95 academic year, having also received the same recognition in 1994. This is the seventh time since 1986 that a GTA in Mathematics and Statistics has won this award.

Invited back for the second time to UMR campus for its Leadership Conference Banquet was LEROY HAMPELMAN (BS '64), Manager of Information Systems, the Boeing Company. Leroy's address is 507 Partridge Lane, Derby, KS 67037.

FACULTY NOTES

A paper titled "Point Value Mappings of Sets" by Professor MATT INSALL has been published in the *International Journal of Mathematics and Mathematical Science*.

Professor ILENE H. MORGAN attended the R. C. Bose Memorial Conference at Colorado State University, Fort Collins, CO in May, 1995. She also presented a paper "Construction of Complete Sets of Mutually Equiorthogonal Frequency Hypercubes" at the Third International Conference on Finite Fields and Applications in Glasgow, Scotland, July 1995. She participated in Project NEX_T (New Experiences in Teaching) a program intended to give new faculty members a running start in joining the mathematical profession.

Professor TIM RANDOLPH presented a talk on "Evolutionary Semigroups and Dichotomy of Differential Equations" at AMS-MAA meetings in San Francisco, January 1995. He gave an Invited Colloquium Talk at St. Louis University in April 1995, and attended the general session on "Teaching Linear Algebra" there. He also participated in

and/or attended various meetings in Columbia, MO, June 1995, Snowbird, UT, May 1995 and Atlanta, GA, March 1995. He has papers to appear in *Journal of Differential Equations*, *Journal of Integral Equations* and *Operator Theory*, and *Computers and Structures*.

Chairman TOM INGRAM was invited to participate in a week-long workshop in topology in Morelia City, Mexico, last November. He is a co-editor of a book published last summer by Marcel-Dekker entitled "*Continua With the Houston Problem Book*".

Drs. ROBERT ROE and MATT INSALL have been promoted to Associate Professor and given tenure. We congratulate both and hope to enjoy their expertise for many future years.

Professor ALBERT GOODMAN presented a short talk on his research at San Francisco meeting in January. He attended a Center for Discrete Mathematics and Computer Science workshop at Rutgers in June, attended summer meeting in August at Burlington (receiving a certificate of participation in a Project NE_XT for completing that year). He created a preliminary World-Wide-Web page for the Mathematics & Statistics Department here. The address is <http://www.umn.edu/~mathstat/>. Visit our home page and let us know what you think of it.

FROM THE FILES OF R. M. RANKIN

The late R. M. RANKIN, chairman of the Department of Mathematics at MSM from 1942 to 1962, was a man of whom it was said, "His mold has been destroyed - there will never be another like him." This writer, having probably known him better than anyone living today, wishes to include a few items of the many from his files.

GEORGE R. DEAN: I am not in favor of any kind of sectioning in mathematics except that of putting the very best (about 5%) in a separate section and giving them a good run for their money, not because they are prodigies, but because they are so much

better than the rest it is impossible to keep them from being bored by the stupid performances of the others.

Again DEAN: A course in college mathematics is supposed to give them (the students) a choice to develop their thinking and reasoning faculties. All we can do with the majority is to make them commit to memory like a parrot and to do "stunts" like a horse or a dog.

Professor C. V. MANN (expert on testing): Engineering is the scientific use of natural forces and materials in construction, production and operation of works for the benefit of mankind.

RANKIN: (To prove a flea and elephant weigh the same) let w = the weight of the elephant, z = the weight of the flea. And let

$$\begin{array}{r}
 w + z = 2x \\
 w = 2x - z \\
 \hline
 w - 2x = -z \\
 \text{multiplying} \quad w^2 - 2wx = z^2 - 2xz \\
 \text{add } x^2 \quad w^2 - 2wx + x^2 = z^2 - 2xz + x^2 \\
 (w - x)^2 = (z - x)^2 \\
 \text{so} \quad w - x = z - x \\
 \text{or} \quad w = z
 \end{array}$$

Note: This is a variation of the old proof that $1 = 0$, and of course all the algebraic operations are ok but the result is meaningless.

RANKIN: No nation ... has made so tremendous an effort to achieve mass education as has the United States. Yet, each day we see this, our greatest industry, handicapped by divergent purposes and misdirected effort." (This statement was made nearly 60 years ago. True also today?)

RANKIN: The discovery of ... zero set the world far on its scientific way. Up to this time it had been impossible to write a number such as 703 ... for there was no way to show that there were no tens! "In the history of civilization the discovery of zero will always stand out as one of the greatest single achievements of the human race."

RANKIN: Problem: A band of 13 Chinese bandits obtained a certain number of gold coins. They tried to distribute them evenly but found they had 8 left. Soon two of the pirates died of smallpox. Then, after distributing the coins there were 3 left. Thereupon, thinking the riddance of three of their members would settle the matter, they shot three of their members. To their consternation, when a distribution was made there was a remainder of 5 coins. What is the least number of coins in possession? (Note: Rankin gives 333 as his answer. This writer, having gotten writers cramp from this Newsletter will respectfully refrain from solving the problem to verify. However, the fact that 333 is stated to be the LEAST solution suggests fewer equations than unknowns.)

KAPPA MU EPSILON MATHEMATICS HONOR SOCIETY

EMILY KATHRYN WYANT, a professor at Northeastern Oklahoma State Teachers College, is considered the founder of KME. As soon as she first arrived at its campus, Dr. Wyant, having been affiliated with Pi Mu Epsilon, national mathematics honorary, at University of Missouri, saw a need for such an organization that would appeal more generally to the undergraduates.

To implement the start of KME, Dr. Wyant, with the aid of Professor L. P. WOODS, head of the Department of Mathematics, transformed the Mathematics Club there into the Oklahoma Alpha Chapter, with Wyant, Woods and 22 other faculty and students as charter members. This installation took place in 1931. The society has grown from its original 24 members to well over 40,000.

Professor of Mathematics and Dean of Southwest Missouri State University, CARL V. FRONABERGER, now deceased, was the installing officer of the Missouri Zeta Chapter of KME at the University of Missouri-Rolla.

This occurred on May 19, 1961. We were most fortunate in having Dean Fronaberger do these honors, as not only was he National President of KME, but he was well known and extremely liked by many of us on the faculty at Rolla.

Generally, requirements for membership are what one would expect: (1) must be or have been a faculty member or student; (2) must have completed 3 semesters or 5 quarters of college courses, ranking in the upper 35%, and (3) must have completed at least 3 college courses including at least one semester (or two quarters) of the calculus with an average of B or better in all mathematics courses.

It is to be noted that, as in the case of its predecessor Pi Mu Epsilon, one need not be a mathematics major. Membership implies an above average of interest and ability in mathematics, and serves as a way for the membership to get together as a group with common goals for discussions, meetings and social events.

Perhaps its best known function here at UMR is its help sessions for students who are conveying knowledge; in other words, give the members a chance to do a bit of teaching for, perhaps, the first time. It has been often said that the best way to learn something is to teach it.

According to the record book, there were eighty charter members, many of whom are still with us at UMR. A number of present faculty have been active in serving as advisors to KME. Professor JAMES JOINER has very capably guided the activities of KME for the last several years. In 1990 there were listed 1039 members (some of course, deceased) in Missouri Alpha Chapter of KME.

Of the charter members, those still in Rolla at UMR, either active or retired are THOMAS BAIRD, ALBERT BOLON, DICKRAN ERKILETIAN, AUGUST GARVER, CHARLES JOHNSON, JAMES JOINER, RALPH LEE, ROBERT NAU, SYLVESTER PAGANO, HOWARD PYRON, JACK SCRIVNER and GARNETT WALTERS.

COMMENTS FROM THE CHAIR

These days it seems that everyone is getting their own home page on the world wide web. The Department of Mathematics and Statistics has joined this parade with its own home page on the web. You may visit the site on the internet at <http://www.umar.edu/~mathstat/>. There you will find a list of the faculty, many of whom now have home pages of their own. Also, we have listed the courses we plan to offer over the next year or so. One of our new faculty members, Dr. Albert Goodman, has been responsible for creating this home page for us. We welcome your suggestions on things you would like to see on the home page. Please visit it and let us know what you think.

Several noteworthy events have occurred this past year in the life of the department and the university. The campus has been awarded the Missouri Quality Award, an award based on the Malcolm Baldrige criteria for excellence. The department has continued its journey into calculus reform by adopting a reform textbook to accompany its use of hand-held technology in the classroom. The department is attempting to get through its first year without the services in any capacity of recent retirees: Gus Garver, Glen Haddock and Jack Scrivner. It is also managing with only limited service from Lee Bain. All four of these retirees were honored with a dinner and retirement gifts on Saturday, November 18. Altogether, the four have contributed 125 years of active service to the department and the university!

Once again this year, in January, we will have our annual phone-a-thon. Your response to last year's phone-a-thon was 25% greater than that of the previous year. We appreciate very much your generous response to this program. These donations assist the department in many ways. By now many of you are aware that much of this money goes into scholarships. This year about \$2,000 has gone into direct scholarship support while another \$2,000 has been used to increase the Alumni Scholarship Fund which has now surpassed the \$20,000 plateau. These

endowed funds, of course, contribute in perpetuity to the support of mathematics and statistics students here at UMR. In addition, your donations allow us to send faculty and students to meetings which they could not otherwise attend. This past summer your donations enabled us to send one of our new faculty members, Dr. Ilene Morgan, to a meeting in Scotland and supported the travel expenses of several Kappa Mu Epsilon students who attended KME's national convention in Durango, Colorado. *In appreciation of your gift to MSM/UMR, Chancellor John Park will give you a book about the history of UMR. If you increase your gift by \$50 or more this year, you will receive UM-Rolla: A History of MSM/UMR by Lawrence O. Christensen and Jack B. Ridley. This is an opportunity for you to read and learn more about UMR's tradition of excellence, as evidence by its long line of successful alumni, students, faculty, and staff.*

Finally, I take this opportunity to say thanks to our "Editor-in-Chief," Professor Dickran Erkiletian for preparing the newsletter. He, the department's Administrative Assistant, Martha Grisham, and the department's Secretary, Tina Martin, have made this newsletter possible. Please continue to keep us apprised of your activities so that your friends from your days on campus will be able to keep in touch with your career through the newsletter.

This academic year culminates 125 years of service to the state and nation. The logo reproduced on the first page of this newsletter was produced by the campus to use as a part of the celebration of the university's quasiquicentennial.

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