

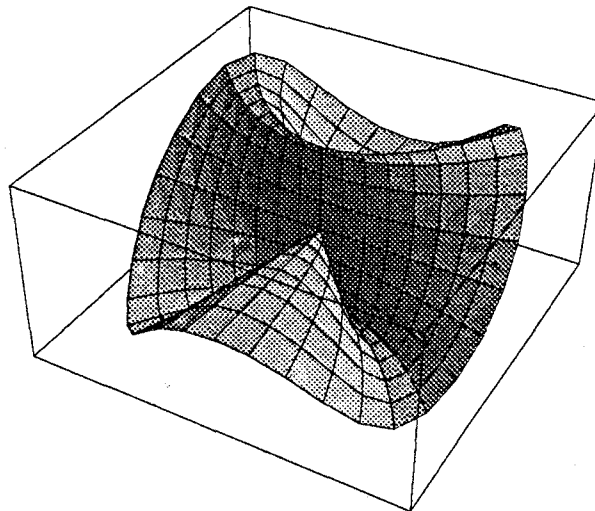


UNIVERSITY OF MISSOURI-ROLLA

College of Arts and Sciences

Department of Mathematics and Statistics

326 Mathematics-Computer Science Building
Rolla, Missouri 65401-0249
Telephone (314) 341-4641



$$z = \frac{x^2y}{x^4 + y^2}$$

**UMR MATHEMATICS AND STATISTICS DEPARTMENT NEWSLETTER
1989-90**

When fall arrives, the alumni sometimes have a feeling of nostalgia. They wish they were back on campus, enjoying the friendly relations with classmates and the friendly but sometimes prodding nature of their professors. The 1989-90 school year has gotten off to a good start, although the usual hectic times for the first couple of weeks have prevailed. The campus is beginning to take on the glowing appearance of fall color, and students, faculty, and staff are all set to do the "best job ever" scholastically. All in all, it appears we are off to an excellent start.

New Chairman, **WILLIAM T. (TOM) INGRAM** has capably taken over the reins with absolutely no loss of continuity. Professor Ingram (Ph.D. Auburn University, '64) has, in the short time since his arrival endeared himself to his faculty, students, and staff. We hope that all of you, at some time in your careers, will have a chance to drop in and meet him personally. His main hobby is photography, so perhaps he will insist upon your posing for him.

In addition to Professor Ingram, we have four new faculty members, while one is still on leave. There have been no retirements since the last Newsletter.

From the University of Wyoming (Ph.D., '87) comes **ROBERT P. ROE** as Assistant Professor. His previous teaching experience has been at Jeffrey City, Wyoming High School, Montana State University and Fort Lewis College, Durango, Colorado. His hobbies are bicycling, skiing, woodworking, and gardening. With him are wife Coleen and sons Aaron 6 and Nathan 4.

MATT INSALL (Ph.D. Houston, '89), joins us as Assistant Professor after several years of very positive activity in mathematics as a recipient of various teaching and instructorship grants. His dissertation was, "Nonstandard Methods and Finiteness Conditions in Algebra". He has published in American and German periodicals. Matt and his wife, Rosemarie, are expecting their first child early next year.

A new addition to the statistics group is Assistant Professor **MICHAEL LAVIOLETTE** (Ph.D. University of Southwestern Louisiana, '89). Professor Laviolette was awarded a three-year fellowship for graduate study, after experience in teaching and as a design engineer with South Central Bell Telephone.

Professor **DAVID EDWARD GROW** starts with us as Associate Professor this year after having held Assistant and Associate Professorships at Parks College of Saint Louis University. He received his Ph.D. at the University of Nebraska-Lincoln in 1981, with dissertation "A Class of I_0 -Sets". He has to his credit four publications since 1984, with one more in preparation. Also, he has a very impressive record of teaching and service awards from both students and colleagues. He is married to Dr. Pamela K. Grow and they have two sons, Alan, 8 and Edward, 3.

Your faculty, both old and new, have been quite active in paper presentations and meeting attendance during the past year. At the Annual Meeting of the Mathematical Association of America, held April 7, 8 in Columbia, presenters were Professor **T. L. HICKS**, graduate student **RHONDA MCKEE**, Professor Emeritus **LYLE PURSELL** with undergraduate **HANSON CHEN**, Associate Professors **LEON HALL** and **SELDEN TRIMBLE**, Assistant Professor **PHYLLIS SINGER**, and two alumni **JAMES GUFFEY** (Ph.D., '88) and **ROCHELLE BOEHNING** (Ph.D., Computer Science '85). Also in attendance were Professors **A. GARVER**, **G. HADDOCK**, **JEAN MCKEMIE**, and graduate student **LINDA FITZGERALD**.

Professor Emeritus **LYLE PURSELL** attended the annual summer meeting of AMS-MAA in Boulder, Colorado in August, 1989, at which time he was fortunate in getting to visit with former students **JOHN KUBICEK** (Ph.D. '75), **SHIRLEY HUFFMAN** (Ph.D. '78) and **ED HUFFMAN** (Ph.D. '77), among others. Shirley was elected to the Board of Governors of the MAA (1988-1991). **HAROLD HAGER** (Ph.D. '70), now with SEMO, was a Missouri member for 1985-88.

Professor **LEON HALL** is now president-elect of the Missouri Section of MAA, to begin his term in Spring '90. Professor Hall is also working with Professors **TRIMBLE**, **SCRIVNER**, and **GEE** on the "Calculus with Mathematica" project, which is a computer aided system for teaching calculus. The present program is being used in certain second and third semester courses. Next semester, Professors **HADDOCK** and **ROE** will use it in certain first semester courses. The department has acquired twenty Macintosh computers for use by the students and faculty.

Professor **MIN MING TANG** is still on leave. We shall miss Professor **TIM WRIGHT** (statistics), who has transferred to the Statistics Department at UMC. Professors **MCKEMIE** and **POWELL** have resigned, and we wish them well in their new positions.

Letters from former students in our department continue to come in. Our pride grows when we read of the great success they are having in various and sundry endeavors. Most, of course, enter fields of industry, teaching, and research which are the most direct applications of their training. Many, however, seem to prefer "striking out on their own", and thus put to use in some manner the broad programs they pursued as students of life in general, as well as of strict engineering and science study. We shall devote the rest of this newsletter to a brief list of excerpts from letters.

JAMES E. (JIM) JAMISON (Ph.D. '70), Professor at Memphis State, spent the fall of '88 term at the University of Edinburgh. He writes that Scotland is a very interesting country, and was particularly impressed by their kilts and bagpipes. One of his fellow graduate students here was **PAUL M. HARMS** (Ph.D. '70), who is a professor at Taylor University in Upland, Indiana.

Conoco Oil, Ponca City, Oklahoma has, as a Senior Analyst in its Computer Exploration, Research, and Engineering Division, **MICHAEL L. HUFF** (BS '82).

Self-employed as a software consultant in Dallas is **GARY K. COBB** (BS '79). He writes, "I spent 1988 making the world safe for rock-n-roll, OS/2 and tax reform".

MICHAEL G. HILGERS (MS '87) is married and working on a Ph.D. in Applied Mathematics in Providence, RI. His wife, **PAULINE HART HILGERS** (MS '87) teaches at Residential Center for Adolescent Girls.

WILLIAM M. BLACK (BS '72) is Senior Actuary with Noble Lowndes, Inc., Chicago. He was recently a speaker at an American Academy of Actuaries Conference in Washington.

McDonnell Douglas has the services of **WILLIAM F. WINTERS** (BS '66), as Senior Computer Scientist in Manufacturing Industry.

JOHN W. MARSH (MS 1969, Ph.D. '74) is Management Systems Specialist with Lockheed, Titusville, Florida.

Associate Professor **JAMES M. JOINER** (MS '62, Ph.D. George Peabody) has the distinction of having been the first masters degree recipient from this department at UMR. Professor Joiner is an accomplished linguist in Latin American languages and has been cited by Latin American governments for his continuing efforts to help UMR students to bridge the Spanish-American language gap.

TERRY L. JOHNSON (BS '65) is with NCR in Wichita, Kansas.

DAVID K. BISHOP (BS '77) is Principle Systems Designer with Martin Marietta in Colorado Springs, Colorado.

ORVILLE E. SCHMIDT (MST '67) is an educator in the Omaha (Nebraska) Public Schools.

Remembered as having been on the UMR staff for several years, is **HERBERT L. ALCORN** (MS '64). Herb retired as computer consultant with Queve Systems, Inc.

A professor of statistics at North Dakota State University in Fargo is **RHONDA CHERYL MAGEL** (Ph.D. '82).

THOMAS F. CRABTREE (BS '68) is Manager of Business Systems with Bell Helicopter in Fort Worth.

NOLAN SULLIVAN (MST '65) has retired from teaching at Rockford East High School, Rockford, Illinois.

Some older staff members here will remember **WILLIAM VAN ALSTINE** (MS '66) as one of our most promising young faculty. Bill is now program head for developmental mathematics at Aiken Technical College, Aiken, SC.

LELAND R. MILLER (Ph.D. '70) is on the Computer Science staff at Bowling Green State University, Bowling Green, Ohio. Leland was one of our first departmental doctorates, who served us well while pursuing graduate studies here.

CLAYTON E. PRICE (MS '85) continues graduate work and part-time teaching here at UMR.

MICHAEL J. CAHILL (MS '73) is Scientific Programmer with NASA Flight Training Center, Edwards Air Force Base, California.

Major **THOMAS D. AKERS** (BS '73, MS '75) continues his training as an astronaut with the U.S. Air Force-NASA, Johnson Space Center, Houston. He expects to get his first shuttle flight in 1991 or 1992.

DENNIS R. MORGAN (BS '73, MS '74) has been appointed Market Research Manager for Caterpillar Industrial, Inc., Mentor, Ohio. He returns to the United States after serving in the company's Geneva, Switzerland based subsidiary since 1982.

ROBERT LOPEZ (MS '66 UMR, Ph.D. Purdue) Professor of Mathematics at Rose-Hulman Institute of Technology, received the 1989 Dean's Outstanding Teacher Award at Rose-Hulman's 111th commencement. Bob "has utilized a new computer-aided instruction to the teaching of freshman calculus. Bob is remembered here as one of our best TA's, and for his great interest in the applied side of mathematics.

DENISE ANN MAUSHARDT (BS '83) has moved "with my husband to St. Louis". She began working part-time at St. Louis Community College, which she enjoys more than high school teaching.

Having completed a two-year term as secretary-treasurer of the North Central Section of MAA, and presently president, is **DERALD D ROTHMAN** (Ph.D.

'70), Professor of Mathematics at Moorhead State (Minnesota). He is also a 1988 recipient of the Burlington Northern Outstanding Teacher Award.

DARRELL A. PLANK (BS '80 C.Sc., BS '80 Applied Math.) is a programmer for Microsoft in Bellevue, Washington. He loves the Northwest.

U.S. Navy Instructor in Orlando, Florida is **KEVIN THOMAS DAVIS** (BS '86). He writes, "For applied mathematics, the Naval Nuclear Power School Instructor program can provide an excellent technical experience for those interested in teaching".

JOAN BRUNE WOODARD (BS '73, MS Stanford, Ph.D. California-Berkeley) is Manager of Materials Characterization Department for Sandia National Laboratory in Albuquerque.

CATHY JANEEN CORLEY (MS '87) is Operations Research Analyst for the Department of the Army at Fort Leavenworth. She has been developing software for the Army, has submitted two papers, and accumulated four trophies. She enjoys volleyball and bowling.

LORI BETH WILKE (BS '83) is with Washington University School of Medicine, working in image processing for the Division of Nuclear Medicine.

RALPH P. BORDING (BS '67) is employed by Minnesota Supercomputer Center in Claremore, Oklahoma. He sends regards to his teachers here.

RAYMOND G. TEMME (BS '74), Mathematics Instructor at Hermann, Missouri, was married to Cheryl Koenig of Hermann, and they have a son Bryan George.

LINDA SUSAN HARRIS (BS '87) has elected to remain in Rolla. She teaches at the Rolla Middle School.

WARREN E. KRUEGGER (BS '66) is Product Research Manager for Hallmark Cards, Inc. in Kansas City. He has been with Hallmark for 15 years. We are happy to know that his daughter, Marjie, plans to come to UMR to continue her education.

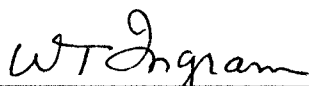
We are most grateful for all the wonderful responses to our previous Newsletter. Please keep us posted as to your activities. Remember, when you receive promotions and other accolades, it makes us feel that we, too, have been somewhat important in your success. So we like to know about it!

Comments from the chair: I have been in Rolla for just a little over two months now. Just as the faculty of this department were patient with you while you were learning mathematics here, the faculty and secretarial staff have been very patient with and supportive of me while I have been learning my job here. I am pleased to have joined a department with such a high quality faculty and student body. I am also impressed with the quality of the alumni of this department whom I have met so far. I am pleased that so many of you are interested enough in the academic programs of your alma mater that you have contributed to our alumni development fund. Last year, we received in excess of \$6000 in alumni contributions, and all but a small portion of those funds have been made available to the department to spend as it needs or as you prescribe. With these funds we have been able to

purchase some books and software and assist some students in travelling to conferences as well as provide scholarship support to others. I believe that soon we will have enough capital to endow a permanent scholarship fund which we will use to assist in recruiting undergraduates to our mathematics program here.

Several exciting and innovative things are happening here. One noteworthy experiment we are engaged in is the teaching of calculus using Mathematica aided by a computer learning center set up by the campus. In fact, the picture of the surface on the first page of this newsletter was produced using Mathematica. I hope you can stop by to see us the next time you are in the vicinity to see some of the things which are happening here. I am looking forward to meeting more of our graduates, and I am sure the faculty would be pleased to see you. Please keep in touch and let us know about the things you are doing.

I will close this year, as Glen did last year, with a special note of thanks to Dick Erkiletian who once again generously agreed to spend the time necessary to get this Newsletter prepared. Without his work, as well as that of the departmental secretaries, Martha Grisham and Carleen Shackelfurd, this would not have gotten to you.



W. T. Ingram, Chairman