I am pleased to highlight some of the recent accomplishments of our faculty and students.

The last twelve months have been exceptionally productive for our department in terms of awards and special honors received by our faculty members. Alexander Arhangelskii was named an Ohio University Distinguished Professor, in recognition of his outstanding accomplishments as one of the world’s leading set-theoretic topologists. Barbara Grover received the Arts and Sciences Grasselli-Brown Teaching Award for her contributions to high quality instruction and her dedication to students. Todd Young was the recipient of the Dean’s Outstanding Teacher Award, in appreciation of his superior performance in the classroom, and leadership in the use of technology in teaching. M.S.K. Sastry was recognized for his many years of exceptional service to the Department and the College with the Dean’s Outstanding Service Award. Finally, Nick Pavel was honored for his substantial contributions to the theory of differential equations and optimal control, by being awarded the title of Doctor Honoris Causa of Ovidius University in Constanța, Romania.

We have been actively involved in research and scholarship. Last year, our faculty members authored 39 publications, and gave talks at prestigious universities and professional meetings throughout the world. We had a number of outstanding visitors, and a stream of reputable speakers sponsored by our department and the Ring Theory Center. Currently, we are engaged in the organization of a meeting of the American Mathematical Society, which will take place in Athens in March 2004, in the context of the Ohio University Bicentennial.

We continued to foster outreach. Examples include a “second edition” of the Math Day, and a public lecture by Gene Kaufman during the Mathematics Awareness Month.

Our recruiting efforts, both at the undergraduate and graduate level, have been fruitful. The number of mathematics majors has increased to 103 (including 4 Honors Tutorial students), while that of computer science majors remained steady at over 100. We had a record number of students graduating in 2002-03 (31 mathematics, and 22 computer science majors.) The graduate program attracts quality students. We currently have 23 Ph.D. and 65 Master’s students, including 12 enrolled in a Master’s for Teachers program that is being offered on the Zanesville campus. Several of our graduate students participated in national meetings, with partial financial support from the department.

As I close this brief overview of a successful period for us, I wish to thank all of our alumni and friends for their support. Your gifts, comments, and suggestions are highly appreciated. I hope that you will continue to help us sustain an outstanding mathematics program at Ohio University.
reputation and has been regarded over the last thirty years as one of the most important general and set theoretic topologists (the other being Mary Ellen Rudin),” said Peter Collins of Oxford University, United Kingdom, in a letter of nomination for Arhangel’skii. A colleague from the University of Washington said he is “one of the foremost general topologists in the world today.” Another colleague from Spain says, “His prodigious research output is exceptional and proves him to be an original thinker and tireless author of top-quality mathematics.”

His works introduced important concepts and many new interesting problems. Research in various fields of general topology, carried out all over the world, was considerably stimulated by Arhangel’skii’s works. The most famous of Arhangel’skii’s results is the solution of the old problem of P.S. Alexandroff (1922) on the cardinality of a compact Hausdorff first-countable space, in 1969.

Barbara Grover Awarded the Jeanette G. Grasselli Brown Annual Faculty Teaching Award

The Jeanette G. Grasselli Brown Teaching Award seeks to honor individuals who excel in the classroom, and to encourage their efforts to refine the intellectual skills of their students. Dr. Grover’s contributions have been a tremendous boon to her students, the University and the community. It is hard to imagine anyone more deserving of this recognition.

Barbara Grover is an exceptionally talented and dedicated educator who has a profound influence on her students. The student-teacher relationship that starts in the classroom often blooms into a long-term mentoring and advising bond. Former students cite her as a role model and inspiration for their own careers. Beyond the classroom, Dr. Grover has made substantial improvements to the curriculum and instruction of a variety of mathematics courses and helped the University play a greater role in the education of students throughout Southeastern Ohio.

Congratulations to M.S.K. Sastry on Receiving the 2003 Dean’s Outstanding Service Award

M.S.K. Sastry has been serving the Department of Mathematics and the Ohio University community since 1967. His service has been described as “even-handed, high quality, dependable, fair, efficient, tireless, honest and hard-working.”

In a letter to the Dean, then Department Chair, Don Norris wrote, “His service to the department is exceptional” and goes on to mention “he is an extremely fair-minded individual who works for the benefit of the department. His excellent and faithful service deserves special recognition.” Current Chair, Sergiu Aizicovici echoed and amplified Dr. Norris’ assertion with the following statement, “Professor Sastry is a model faculty member, who has dedicated his career to the well-being and progress of our institution. His recognition as a worthy recipient of the Dean’s Outstanding Service Award has been long overdue.”

Todd Young Receives the 2003 Dean’s Outstanding Teacher Award

Todd Young is a talented teacher, educator, and an energetic creator and promoter of new technologies in teaching. He is also active in advising students and assisting them in mathematical research. Dr. Young has developed and taught several new courses in the Department of Mathematics at Ohio University, and has initiated the use of MatLab in teaching of undergraduate courses. This award is in recognition of his work concerning the development of new courses, introducing new computer related techniques in teaching, and for sharing his teaching experience with the community in his publications.

Nick Pavel Awarded the Title of Doctor Honoris Causa

On September 3, 2003 Professor Nick Pavel was awarded the title of Doctor Honoris Causa of Ovidius University in Constanta, Romania, in recognition of his outstanding work on nonlinear analysis, ordinary and partial differential equations, control theory and optimization. This is the highest award bestowed by a European university upon an internationally recognized authority in his/her area of research and teaching. Dr. Pavel has published over 90 research papers in professional journals and 10 books. He has been the advisor of 10 Ph.D. students and has served as a member of more than 30 Ph.D. committees. He is also a Honorary Professor of the University of Iasi and the current Secretary General of the American Romanian Academy of Arts and Sciences.

All in a Day’s Work. . .

Rushing to work, I was driving too fast and as a result was pulled over by the highway patrol. The state trooper noticed that my shirt had the name of a local high school on it. “I teach math there,” I explained.

The trooper smiled, and said, “Okay, here’s a problem. A teacher is speeding down the highway at 16 m.p.h. over the limit. At $12 for every mile, plus $40 court costs, plus the rise in her insurance, what’s her total cost?”

I replied, “Taking that total, subtracting the low salary I receive, multiplying by the number of kids who hate math, then adding to that the fact that none of us would be anywhere without teachers, I’d say zero.”

He handed me back my license. “Math was never my favorite subject,” he admitted. “Please slow down.”

- Juliana Kemp (Reader’s Digest, September 2002)
Faculty Activities

- Sergiu Aizicovici presented “On An Abstract Nonlinear Programming Problem” as a Special Session speaker, at the 10th Mediterranean Conference on Control and Automation in Lisbon, Portugal.

- Jeffery Connor served as a member of a focus group reviewing committee on Undergraduate Programs in Mathematics Curriculum Proposals at the National AMS meeting in Baltimore, Maryland.

- Barbara Grover and Laura Moss led a workshop entitled “Using Calculators to Develop Conceptual Understanding” at the National Council of Teachers of Mathematics 81st Annual Meeting in San Antonio, Texas.

- Archil Gulisashvili was an invited speaker at the International Mathematics Conference on Potential Theory and Related Topics in Saint-Priest de Gimel, France. The title of his talk was “Nonautonomous Kato Classes and Feynman-Kac Propagators.”

- Dinh Van Huynh presented “Results on Sigma-CS Rings”, at the 32nd Mid-Atlantic Algebra Conference at North Carolina State University in Raleigh, North Carolina.

- Surrender Jain presented “Group Algebras in which Each Complement Right Ideal is a Direct Summand” at the 2003/2004 Warwick Symposium on Noncommutative Algebra and its Applications in Coventry, United Kingdom.


- David Keck attended the Columbus T3 Regional Conference and Ohio MATYC/OCTM/MAA Winter Institute in Columbus, OH.

- Sergio Lopez-Permouth presented “Finite Rings Characterized by the Equivalence of their Codes”, a joint work with Hai Q. Dinh, as a plenary talk at the 15th Latin American Algebra Colloquium held in Cocoyoc (Morelos), Mexico.

- Martin J. Mohlenkamp attended the 6th New Mexico Analysis Seminar and presented a talk entitled “For what values of a, b, and c. . .?” in Albuquerque, New Mexico.

- Maria Rizzo presented “Hierarchical Clustering Based on a Generalized Measure of Heterogeneity” at the 2003 Spring Research Conference on Statistics in Industry and Technology at the University of Dayton, Dayton, Ohio.


- Vladimir Vinogradov was invited by McMaster University in Hamilton, Ontario, Canada to deliver a seminar entitled “Power-Variance Families: Properties and Applications.”

- Quoc-Phong Vu participated in the Frontline Solutions Expo, Conference and Exhibition on Automatic Identification and Data Capture, in Chicago, Illinois.

- Thomas Wolf presented “Divisibility and Character Degrees of Solvable Groups” at the AMS meeting in Madison, Wisconsin.

- Todd Young was invited to present “Intermittency New Bifurcations” at a mini-symposium on Non-uniformly Hyperbolic Systems at the SIAM Conference on Applications of Dynamical Systems in Salt Lake City, Utah.

Riddle Me This. . . (Answers to riddles in the last issue)

Solution for #1  The right idea to solve this problem rests upon the following remark: if we break the set of 16 camels into 4 groups of 4 each, then anyway you let 11 camels to step forward, at least one group will have two camels. Now we can arrange the camels in the following way. Let \( G_1 = \{C_1, C_2, C_3, C_4\} \), \( G_2 = \{C_5, C_6, C_7, C_8\} \), \( G_3 = \{C_9, C_{10}, C_{11}, C_{12}\} \), \( G_4 = \{C_{13}, C_{14}, C_{15}, C_{16}\} \), and put them in the reverse order: \( G_4, G_3, G_2, G_1 \). This will satisfy the condition of the problem.

Solution for #2  We note that somewhere in the process we will need to break one ball. As the result, we will know the floor \( F_1 \), from which a ball was flung and broken, and the floor \( F_0 \), from which the balls, if flung, would not be broken \( (1 \leq F_0 < F_1 \leq 100) \). With one ball left in possession, we must start from floor \( F_0+1 \), \( F_0+2, \ldots \), until possibly floor \( F_1-1 \). Thus, we need minimum \( F_1-F_0-1 \) flings to determine the required floor. This remark suggests the following strategy. We use one ball in order to determine the floors \( F_0 \) and \( F_1 \) with the above properties, so that to narrow down our search to the floors \( F_0 \) to \( F_1 \), then we use the remaining ball to test all the floors from \( F_0 \) to \( F_1-1 \). In order to determine \( F_0 \) and \( F_1 \), we divide 100 floors into groups of \( k \) floors. Say, we start by flinging from floor number \( K \). If the ball is broken, then \( F_0 = 1, F_1 = K \). If the ball is not broken, then we continue to fling from floor number \( 2K \). If the ball is broken, then \( F_1-2K = 2K \), \( F_0 = K \), otherwise, we continue to fling from floor \( 3K \), and so on. Thus, we need \( 100/K+1 \) flings to find out \( F_0 \) and \( F_1 \). So the total number of flings that will definitely determine the required floor is \( F_1-F_0-1+[100/K]+1=F_1-F_0+100/K \). Now we can count the minimum number of flings for some selected values of \( K \), say for \( K \) from 7 to 13, and find out that the minimum number of flings is 19, as well as the method to find the required floor after no more than 19 flings, in any case.

Solution for #3  There are positions on the Earth, which is supposed to be a sphere, that the complete parallel is 100 miles (all points on a circle not very far from the North pole satisfy this property)! Now if we start from any such position and go South 100 miles, we will reach positions on Earth with required properties. There is one more special position on the Earth with this property, which is the South pole!
2003-04 Scholarship and Award Recipients

C. PAUL AND BETH K. STOCKER SCHOLARSHIP
Mathematics: Jim Johanson Cristin Kenney
Matthew Mckenney Jennifer Poeppelman
Computer Science: Alex Baker

LELA S. EWERS SCHOLARSHIP
Mathematics: Ryan Schwiebert
Computer Science: Jonathan Schaffert

ELLERY GOLOS AWARD
Cristin Kenney

UVA MCHARG AWARD
Katherine Moran

SARAH PARKS DEVINE SCHOLARSHIP
Christopher Hildenbrand Tanya Pazitny Kristy Palmer Tasha Preisler
Michael Panik Amy Shelker Gilbert Patt

HELEN HOOVER MEMORIAL SCHOLARSHIP
David Cline Bethany Hevener

OHIO UNIVERSITY COMPUTER SCIENCE CLUB SCHOLARSHIP
Mark Goldman

KICHUL ANDREW JUNG SCHOLARSHIP
Alex Baker

ROBERT AND PHYLLIS BUTNER SCHOLARSHIP
Shannon McDonough

CARL H. DENBOW FUND FOR GRADUATE STUDY IN MATHEMATICS
Laura Dolph

DISTINGUISHED PROFESSOR AWARD
Adel Al-Ahmadi

YING-CHIEN CHANG GRADUATE SCHOLARSHIP
Scott Thompson

ARTS AND SCIENCES OUTSTANDING TEACHING ASSISTANT AWARD
Patrick McCormick

OUTSTANDING GRADUATE STUDENT IN MATHEMATICS
Mircea Voisei

RECOGNITION FOR OUTSTANDING RESEARCH ACCOMPLISHMENTS
Hai Dinh

PROFESORS EMERITI
Klaus Eldridge, Associate Professor Emeritus
Hari Shankar, Professor Emeritus
Larry Snyder, Professor Emeritus
Shih-liang Wen, Professor Emeritus

Visiting Faculty

We are pleased to welcome the following visitors in 2003-2004:

- Michal Feckan, Comenius University, Bratislava, Slovak Republic
- Moses Klein, University of Wisconsin-Madison
- Kyeong Hah Roh, Seoul National University and Ewha Womens University, Korea
- Silviu Sburlan, Ovidius University, Constanta, Romania
- Lazar Zambakhidze, I. Javakhishvili Tbilisi State University, Tbilisi, Georgia

Ph.D.’s Defended

Congratulations to the following Ph.D. candidates who successfully defended their dissertations:

Hai Dinh, On The Structure and Equivalence of Codes over Finite Rings (Advisor: Sergio Lopez-Permouth.)

Noyan Er, Rings Characterized by Direct Sums of CS Modules (Advisors: Dinh Huynh and Surrender Jain.)

New Publications


Klaus Eldridge Retires

After 38 years of dedicated service to Ohio University, Klaus Eldridge retired on June 30, 2003. Dr. Eldridge, a fixture of Morton Hall, was the advisor of the Arts and Sciences Computer Science majors. A reception was held in his honor in May 2003. We wish him well in his retirement and all his future endeavors.
**ALUMNI NEWS**

- **Clifford E. Baker, Jr., (BS, 1992)** is a Customer Service Representative with BP Oil.
- **David Bauer, (MS, 1965)** is a Professor in the Department of Statistical Sciences and Operations Research at Virginia Commonwealth University in Richmond, Virginia.
- **Vaughn S. Buaquina, (MS 1991)** is the Dean of the Institute of Graduate Studies at San Sebastian College-Recoltos, Manila, Philippines.
- **Carla M. Cameron, (1999)** is a Computer Security Admin./Analyst at the TransUnion Credit Bureau. She is going back to school for her Masters in Statistics and Probability at DePaul University.
- **Robert H. Corley, Jr., (1980)** is a Visiting Professor at West Virginia Wesleyan College. He is going back to school part-time to earn his Ph.D. in Mathematics.
- **Andy Grimm, (BS & BSCS 2001)** married Barbara Perenic (HTC 2001 Graduate) in 2002. He has been working in Miamisburg, OH at LexisNexis since graduation. Andy works closely with several OU grads, including at least one fellow math major, **Mark Osbourne**.
- **Joel Hecht, (1973)** has taught mathematics for most of his 29.3 years of teaching since he graduated.
- **Zheng Huang, (MS, 1992)** is a Software Engineer for QAD, Inc., in Carpinteria, California.
- **G. M. Johnson, (1965)** is a Registered Investment Advisor, managing primary retirement plans, endowment funds and family trusts in Portland, Maine.
- **Carolyn A. (Trigg) Kennedy, (1983)** is a Mathematics Coordinator for the Columbus Public Schools in Ohio. She is writing curriculum guides to the new Ohio Content Standards.
- **Katherine Kosa, (BSED, 1995)** received her Masters of Statistics from North Carolina State University in May 2002.
- **Walter Latham, (1963)** and his wife of forty-three years, Betty, retired in June 2001. “In June 2002 we sold our Brunswick, OH home and are now full time RV’ers. We spend our winters South. Summers are spent in NE Ohio.”
- **Cynthia Lightfine, (1979)** is a Database Administrator at O.F. S. Fitel in Norcross, Georgia.
- **Joan T. Miller, (1998)** is a Master’s student and Research Assistant in the Applied Program at the University of Akron.
- **Joannie Neal, (1973)** is the Systems Director of the Private Sector Group Pensions Department at Nationwide in Columbus, Ohio.
- **Nancy J. (Peterman) Osborne, (1973)** is a Math Instructor at the AK Vocational Technical Center, in Seward, AK. She is working with putting classes online using WebCT. Nancy said she is thinking of retiring in 2004.
- **Robert Overman, (1978)** is a manager of sales, Powertrain Group for Koyo Corp of U.S.A. He writes, “Both daughters are going to college. Sales are good and I have completed twenty-four years in selling bearings.”
- **Ed Prokop, (MS, 1997)** earned his MS in Statistics from George Mason University. Currently he is with the Naval Surface Warfare Center in Dahlgren, VA. As a Mathematician, he is using statistics to model weapon effectiveness.
- **Marc Sacconi, (BS, 1995)** is a CAD Manager / Electrical Designer for Beaudin Gauze Consulting Engineers Inc., in Avon, Colorado.
- **Richard Schneider, (1972)** retired from AT&T with 27 years of service.
- **Shirley A. (Stevens) Snider, (1952)** raised five children, did some substitute teaching for Medina County Board of Education (Jr. and Sr. High School), and worked as a bookkeeper for Medina Landmark Co-op. until her retirement in 1993.
- **Robin G. Symonds, (Ph.D., 1975)** is an Associate Professor of Mathematics in the Department of Natural, Information and Mathematical Sciences at Indiana University—Kokomo.
- **Katie Marie (Uhrig) Towne, (BSED, 1998)** is a full-time substitute teacher in Glendale, Ohio. She says “Being a substitute makes everyday an adventure because I get to teach different grades and subjects each day, despite being a ‘math person.’”
- **Julia Valuyeva, (Ph.D., 1999)** is an Associate Director with USB Warburg, LLC in Stamford, Connecticut.
- **Richard Wertz, (1961)** is retired and enjoys spending his time traveling.
Mathematics & Art

The theme of the 2003 Mathematics Awareness Month was Mathematics & Art. The connection between mathematics and art goes back thousands of years. The ancient Greeks and Romans used mathematics in sculptures and to design aesthetically pleasing buildings. In the 15th century Leonardo da Vinci wrote “Let no one read me who is not a mathematician.” In the 16th century Dürer employed mathematics to introduce perspective in drawings. In the 18th and 19th centuries mathematics was extensively used in the design of Gothic cathedrals, Rose windows, mosaics and tilings. In the 20th century geometric forms were fundamental to the cubists and many abstract expressionists.

In recent decades several award winning sculptors have used topology as a basis for their pieces. The close connection between mathematics and art is most readily seen in the works of the Dutch artist M. C. Escher. Among the mathematical concepts represented in his work are: infinity, Möbius bands, tessellations, deformations, reflections, Platonic solids, spirals, and the hyperbolic plane. (mathforum.org)

Project Sustain

A $45K grant has been awarded to Barbara Grover and Art Trese, Ohio University Environmental Plant and Biology, to continue Project SUSTAIN at OHIO for the 2003-04 school year. Funded by the Ohio Board of Regents, OSI-Discovery Program, the project is designed to provide an opportunity for university and public school personnel to work together to improve the teaching and learning of mathematics and science at the high school and university levels and to provide an opportunity for these different groups to better understand each other's views and goals on this most important topic.

During 2003-04, the activities will continue to build strong relationships between public school and university faculty. A university faculty member teaching a mathematics or science course required of students seeking licensure to teach mathematics or science in grades 4-9 or 7-12 will work with a middle or high school teacher. The pair will plan and implement one lesson for the high school class and one lesson/lab for the university class. Implemented lessons will be videotaped and the written descriptions of the lessons will be consistent with the Ohio Resource Center lesson format. The project will pay stipends to the participants and pay for substitute teachers so public school teachers can visit the university classes. A general kickoff meeting will be held in mid November and a culminating meeting to share lessons will be held in May or June. Through these activities, instruction in the public schools will be enhanced and university teacher preparation courses will be improved.

Project SUSTAIN is also developing an intercollegiate Masters program for teachers. In December 2002, a retreat was held to discuss the development and structure of this program. Mathematics and science faculty from the College of Arts and Sciences, faculty from the College of Education, and public school teachers attended the retreat. Plans were formulated but were put on hold until funding was approved in June 2003. This fall, work on the Masters program continues. For more information, contact Barbara W. Grover at bgrover@math.ohiou.edu

In Memory of Larry Irwin

Larry E. Irwin was a professor of mathematics and computer science at Ohio University. Born October 19, 1935, in Atwater, he was the son of the late Leslie Hewitt and Helen Gertrude Kinkead Irwin. He was a graduate of Athens High School and Ohio University, where he received a Masters degree. He retired from the Ohio University Department of Computer Science and was a U.S. Navy veteran.

He is survived by his wife, Peggy; four children, Larry Michael Irwin of West Palm Beach, Florida, Kimberly Jeanne (Randy) Lapp of New England, David Kent (Sheila) Irwin of Medina and Stephen Todd (Cari) Irwin of Gainesville, Georgia; nine grandchildren; a great-granddaughter; a sister, Carole E. Walker of San Diego, California; a brother, William (Barbara) Irwin of Athens; and a half brother, Earl Irwin of Austintown.

In Memory of Ray Spring

Ray F. Spring, Professor Emeritus of Mathematics, died January 15, 2003, at the age of 77. Dr. Spring was born in Cincinnati, attended Walnut Hills High School, graduated from the University of Cincinnati with a Bachelors degree in Chemical Engineering and received a Ph.D. in Mathematics at the University of Illinois. He was a lifetime member of the U.S. Chess Association, an avid coin collector and sang in the choir at Athens First Presbyterian Church. Ray was appointed to the Department of Mathematics at Ohio University in 1955, and retired in 1985 after 30 years of service.

Dr. Spring’s major interest was in the undergraduate program. He often taught courses on modern algebra, matrix theory, and linear algebra. He was an exemplary teacher and also served as advisor for exploratory students in the University College. Additionally, he taught in the summer program for high school teachers sponsored by the National Science Foundation. Ray was an excellent chess player and for a time served as faculty advisor of the Ohio University Chess Club.

He remained in Athens until 1999 when he moved to Huntsville, AL to be closer to his family. He leaves to cherish his memory his son, David Spring; daughter, JoAnne Hake; and three grandchildren.
INFORMATION FORM

Name: _______________________________________     Graduation Date/Degree: ____________________
Maiden Name (if applicable): _________________________________________________________________
Home Address:______________________________________________________________________________
______________________________________________________________________________
Home Phone: ______________________________________________
Company:__________________________________________________________________________________
Title:  ______________________________________________________________________________________
Work Address: ______________________________________________________________________________
______________________________________________________________________________
Work Phone:_________________________________  Work Fax:______________________________
Preferred E-Mail Address:_____________________________________________________________________

Do you want to be in the e-mail directory?  □ Yes       □ No

What's new on the home front?

What's new on the job?

Help us keep track of you! Fill out this form and return to:  Department of Mathematics
Ohio University
321 Morton Hall
Athens, OH 45701

Fax: 740-593-9805
Email: milligan@ohiou.edu
WANTED: MISSING IN ACTION ALUMNI

We are in need of your help! Currently I am in the process of updating our alumni database. Please help us out by completing the form on page 7 and returning it to our office.

Also, if you work or keep in touch with other Mathematics alumni, encourage them to update their information and/or send me a quick email letting us know where we can find our MIAs. My email address is milligan@ohiou.edu

Your help is greatly appreciated!

- Cris Milligan
  Department Administrator