From the Chairman . . .

As we start a new academic year, it gives me great pleasure to highlight some of our recent successes.

Since the summer of 2001 there have been several personnel changes in our department. I am happy to report that, with the support of the college, we have overcome many of our staffing problems. We now have a complete administrative crew (Cristina Milligan—department administrator, Jennifer Dillie—administrative assistant, Amy Gibbs—office assistant, Matthew Hyclak—computer network specialist.) We have also been successful in securing new faculty positions through the college staffing process and the New Faculty Initiative. As a result, we are joined by five group I, and one group II faculty members (Vardges Melkonian, Martin Mohlenkamp, Laura Moss, Maria Rizzo, Xiaoping Shen, and Monica Hilverding.)

During the 2001-02 academic year, we paid great attention to student and outreach issues. The number of mathematics majors and mathematics Honors Tutorial students has increased. We have adopted the Arts and Sciences Computer Science majors, and reorganized their advising. At the graduate level, we received a stipend enhancement award, that will enable us to offer more competitive stipends to Ph.D. and Master’s students. Our proposal for graduate recruitment funds was also approved. Outreach activities included the organization of a Math Day for area high school students, an undergraduate Math Competition, and a Mathematics Research Laboratory, as well as the celebration of the Mathematics Awareness Month.

We continued to actively promote research and scholarship. Last year, our faculty members authored 33 research papers, and gave talks at prestigious professional meetings throughout the world. A volume edited by Nicolai Pavel and myself was also published. Dinh Huynh, Surender Jain, and Sergio Lopez-Permouth have founded a Center for Ring Theory and its Applications, with its trademark Journal of Algebra and its Applications. Jeff Connor, Winfried Just, and Todd Young have been active participants in the activities of the interdisciplinary Ohio University Quantitative Biology Institute.

On the teaching front, we supported the development of new courses, such as Voting, Political Power and Social Choice (Sergio Lopez-Permouth), Linear Models, Time Series Analysis, and Experimental Design (Vladimir Vinogradov), Chaos—An Introduction to Dynamical Systems, and Introductory Game Theory (Todd Young). In response to a request from the Civil Engineering Department, we have added a new special course (Numerical Methods for Civil Engineering) to our curriculum. Due to the efforts of Steven Chapin, Larry Snyder, and Todd Young, the use of MatLab in our calculus sequence has become a reality. Finally, the Graduate Task Force has engaged in a revision of course requirements and contents for the Master’s program.

Let me conclude this brief overview with an appeal to our alumni and friends. Our initiatives have greatly benefited from your ongoing support, and we are thankful to all of you for helping us accomplish our mission. As we face challenges in the year ahead, your continued assistance is invaluable. I hope that you will consider renewing your support of the department. Please stay in touch with us, and send us your comments and suggestions.

In Memory of Robert K. Butner (1921-2001)

Robert K. Butner, Ph.D., a professor of mathematics at Ohio University from 1952 to 1988, passed away in 2001. Dr. Butner was a fair and honest professor, devoted to the Mathematics Department and its students. He was always willing to help out and took on many departmental responsibilities. During his time at Ohio University, Dr. Butner served as chair of the Mathematics Department for six years and chaired the University Intercollegiate Athletic Conference. Dr. Butner and his wife Phyllis, have sponsored an undergraduate scholarship for American students majoring in mathematics. Robert Butner will be dearly missed.
The 2001-02 academic year has brought many faculty and staff changes for the Department of Mathematics. Professor Hari Shankar fully retired from Ohio University and is now teaching at the University of Northern Iowa. A faculty member since 1969, associate professor James Shirey has taken his first step towards retirement. As an early retiree, Dr. Shirey will continue to teach one quarter per year at Ohio University. Professor Ralph deLaubenfels, assistant professors Eyal Arian and Thomas Hogan, and instructor Teresa Fultz have left Athens to pursue other interests.

We are pleased to welcome the following new faculty members to the Department of Mathematics: Monica Hilverding, Vardges Melkonian, Martin Mohlenkamp, Laura Moss, Maria Rizzo, and Xiaoping Shen.

Prior to becoming an instructor at Ohio University, Monica Hilverding, taught mathematics at Washington State Community College in Marietta, Ohio. Vardges Melkonian recently received his Ph.D. from Cornell University. Dr. Melkonian has begun his Ohio University career in September as an assistant professor of computational/applied mathematics. Martin Mohlenkamp accepted our offer for an assistant professorship in computational/applied mathematics. Dr. Mohlenkamp received his Ph.D. at Yale University and previously worked in the Department of Applied Mathematics at the University of Colorado-Boulder. Laura Moss has joined our faculty this fall as an assistant professor of mathematics education. Dr. Moss received her Ph.D. from the University of Texas. Prior to coming to Ohio University, Dr. Moss was an assistant professor at Humboldt State University in Arcata, California. Maria Rizzo, formerly a lecturer for the Department of Mathematics and Statistics at Bowling Green State University, has become an assistant professor of statistics at Ohio University this fall. Dr. Rizzo received her Ph.D. in statistics from BGSU in May 2002.

Xiaoping Shen obtained her Ph.D. in applied mathematics from the University of Wisconsin-Milwaukee. In the 2001-2002 academic year she was a visiting research assistant professor/Office of Naval Research fellow at the University of California—Davis. Dr. Shen is now an assistant professor of computational/applied mathematics in our department.

Our staff experienced changes as well. Heather Krugman, department administrator, accepted a position in the Department of Physics at Ohio University. She was replaced by Cristina Milligan. Cris previously worked for the J. Warren McClure School of Communication Systems Management. Ennice Sweigart, graduate secretary, accepted a position in the Department of Physics. She was replaced by Jennifer Dillie, who joined our department last September as an administrative assistant. Prior to O.U., Jennifer was an Accounting Coordinator for the Employee Benefit Services of Ohio. Debbie Pack, office assistant, transferred to the Department of Social Work. Formerly a customer service representative at McBee Systems, Amy Gibbs, a graduate of Ohio University, joined our staff in January as our new office assistant. Scott Martin, computer network specialist, accepted a position in the School of Telecommunications. Matthew Hyclak replaced Scott in April. Matt graduated from Ohio University in 2000 and previously worked as a systems specialist in the Department of Linguistics at Ohio State University.

Riddle me this...  

1. There are 16 camels; all of them are of different heights. Is it possible to put them in the line in such a way that if any 11 of them step forward the other 5 will NOT be arranged in the order of increasing or decreasing heights?  

2. Let us assume that there is a house of 100 floors, and two glass balls. There exists a particular floor with the following property: If you fling a ball from this or a lower floor, the ball is not broken; if you fling the ball from any higher floor, the ball is broken. What is the minimal number of flings that is required to determine this floor, and what is the number of the floor?  

3. Let us assume that the Earth is a sphere. Find all points on this sphere with the following property: If you go to the north 100 miles, then turn and go to the west 100 miles and, at last, turn and go to the south 100 miles, you find yourself at the same point from where you began to move. NOTE: To go north and south means to travel along a meridian. To go west means to go along a parallel.

*Answers to all riddles will be in the next edition of the newsletter*
Faculty Activities

Sergiu Aizicovici was a Special Session speaker at the Fourth International Conference on Dynamical Systems and Differential Equations in Wilmington, North Carolina. His talk was titled “Long-time convergence of solutions to a phase-field system.”

Alexander Arhangelskii delivered the keynote address as the International Conference on Topology and Applications in Matsue, Japan.

Jeffery Connor presented “Using technology and cooperative groups to develop a ‘deep understanding’ of secondary school geometry” at the 2nd International Conference on the Teaching of Mathematics in Crete, Greece.

Barbara Grover attended the National Council of Teachers of Mathematics Meeting and the National Conference of Supervisors of Mathematics in Las Vegas, NV.

Archil Gulisashvili was an invited speaker at the International Conference on Potential Theory and Related Topics in Correze, France. The title of his talk was “Nonautonomous Kato classes and Feynman-Kac propagators.”

Dinh Van Huynh presented “On the structure of Noetherian SI-rings” at the American Mathematical Society meeting in Columbus, Ohio.

Surender Jain was invited to give the plenary address at the International Conference in Algebra and Related Topics in Hong Kong.

Winfried Just presented “Testing the sequential assessment game with computer simulations,” joint work with Xiaolu Sun, at the 5th ESMTB Conference on Mathematical Modeling and Computing in Biology and Medicine in Milan, Italy.

Sergio Lopez-Permouth presented “Modules with the internal exchange property” at the 2nd Honolulu Conference on Rings and Modules in Honolulu, Hawaii.

Nicolae H. Pavel, Secretary General of the American Romanian Academy of Arts and Sciences, gave a talk at the 27th Annual ARA Congress at the University of Oradea, Oradea, Romania.

Vladimir Uspenskiy presented “The group of isometries of the Urysohn universal metric space,” at the Workshop in Geometric Topology and Geometric Group Theory in Gainesville, Florida.

Vladimir Vinogradov was invited to make a research presentation at the Seminar on Stochastic Processes at Princeton University.

Quoc-Phong Vu gave a presentation in Hanoi, Vietnam at the International Conference on Abstract and Applied Analysis. The presentation was titled “The spectral theory of functions and representations of locally compact Abelian groups.”

Thomas Wolf participated in the Ohio State University-Denison Conference in Granville, Ohio, and gave a talk titled “Character degrees of solvable groups and Sylow subgroups.”

Todd Young presented “Absolutely continuous invariant measures near saddle-node bifurcations,” at the Workshop on Dynamical Systems and Related Topics in State College, Pennsylvania.

Grants Received

Congratulations to the following faculty members:

Jeffery Connor, ExxonMobil Innovation Grant for the Improvement of Mathematics Education of Teachers, $3,000.

Barbara Grover, “Project SUSTAIN at OHIO,” Ohio Board of Regents, $81,000.

Quoc-Phong Vu, “eCourse Development Award,” Regents Scholars Program, $3,500.

New Publications


S.K. Jain and Sergio Lopez-Permouth are the executive editors of the Journal of Algebra and its Applications, which is being published by World Scientific. The editorial board of the new journal also includes Dinh Van Huynh.

Ph.D.’s Defended

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

- Chuan Liu, K-networks and mappings (Advisor: Alexander Arhangelskii.)
- Lewis Ludwig, Two generalizations of normality (Advisor: Alexander Arhangelskii.)
- Thanh Lan Nguyen, On the mild solutions of differential equations on Banach spaces (Advisor: Quoc-Phong Vu.)
- John Tynan, Decompositions of certain classes of nonnegative matrices (Advisor: S.K. Jain.)

Words from the wise…. 

“The art of teaching is the art of assisting discovery.” — Mark Van Doren, American writer and editor (submitted by Barbara Grover)

“The mathematician’s patterns, like the painter’s or the poet’s, must be beautiful; the ideas, like the colours or the words, must fit together in a harmonious way. Beauty is the first test: there is no permanent place in the world for ugly mathematics.” — G.H. Hardy (submitted by Sergio R. Lopez-Permouth)
2002-03 Scholarship and Award Recipients

C. PAUL AND BETH K. STOCKER SCHOLARSHIP
Mathematics
Matthew McKenney
Gilbert Patt
Tasha Preisler
Amy Shelker

Computer Science
Alex Baker
Thomas Cusick
Christopher Jackson
Erin Smith

LELA S. EWERS SCHOLARSHIP
Mathematics
Jennifer Poepelmann

Computer Science
Christina Lee

ELLERY GOLOS AWARD
James Johanson
Elijah Ray

UVA MCHARG AWARD
Katherine Moran

SARAH PARKS DEVINE SCHOLARSHIP
Jason Bates
Margaret Gosnell
Emily Meister

Shannon McDonough
Christine Offenbacher
Erica Papp
Ryan Schwiebert

OUTSTANDING GRADUATING SENIOR
Mathematics
Ryan Keith Richey

Tutorial
Nathan H. Lazar

Computer Science
Aaron Mitchell

HELEN HOOVER MEMORIAL SCHOLARSHIP
David Marich
Richard Sjamsudin

OHIO UNIVERSITY COMPUTER SCIENCE CLUB SCHOLARSHIP
Corey Shafer

KICHLAND ANDREW JUNG SCHOLARSHIP
Douglas Rehker
Kevin Shea
Joseph Winnenberg

ROBERT AND PHYLLIS BUTNER SCHOLARSHIP
Tanya Pazitny

THE SIXTY-SECOND WILLIAM LOWELL PUTNAM
MATHEMATICAL COMPETITION PARTICIPANTS
James Johanson
Gilbert Patt
Dan Wolf

Ashley Johnson
Elijah Ray
Baixi Su

Nathan Lazar

CARL H. DENBOW FUND FOR
GRADUATE STUDY IN MATHEMATICS
Anthony Beres

DISTINGUISHED PROFESSOR SCHOLARSHIP
Noyan Er

YING-CHIEN CHANG GRADUATE SCHOLARSHIP
Elena Constantin

COLLEGE OF ARTS AND SCIENCES
OUTSTANDING TEACHING ASSISTANT
Tufail Malik

Math Competition

On March 2, 2002, the Mathematics Department hosted a math contest for Ohio University undergraduate students. The competition was organized by Ivan Yaschenko, Director of the Moscow Center for Continuous Mathematics Education (Moscow, Russia), and a visiting Ohio University professor of mathematics, with the assistance of Alexander Arhangelskii. The participating students were from the Colleges of Arts and Sciences, Business, Education, and Engineering and Technology. Various prizes and honorable mention certificates were awarded.

Alexander Arhangelskii has initiated an undergraduate seminar series (research laboratory) for students interested in getting involved in mathematical research at an early stage of their career. The seminar focused on topics in set theory, continuity and convergence, and enabled the students to develop their mathematical creativity through problem solving and in-class presentations.

Mathematics Research Laboratory

We are pleased to welcome the following visitors in 2002-2003:

- Yong Uk Cho, Silla University, Pusan, Korea
- Moses Klein, University of Wisconsin-Madison
- Jose Raul Martinez, National University of Cordoba, Argentina
- Shoji Morimoto, Hagi, Japan
- Costica Morosanu, University of Iasi, Romania
- Ivan Yaschenko, Moscow Center for Continuing Mathematics Education, Moscow, Russia
- Alexander Zaslavski, Israel Institute of Technology, Haifa, Israel.
Project Sustain Update

Project SUSTAIN was started three years ago at Ohio University and is a collaborative effort among the College of Education, College of Arts and Sciences, Southeastern Ohio Regional Professional Development Center, Appalachian Rural Systemic Initiative, and local area school districts. The goal of SUSTAIN is to promote partnership among experienced teachers and university personnel to improve teacher preparation programs at the university level and to enhance the mathematics and science programs in Southeastern Ohio public schools.

One specific goal pursued by Project SUSTAIN this past year was to build a stronger partnership between Ohio University students/faculty and local area mathematics and science teachers. Associate professors Bonnie Beach, Barbara Grover, Colleen Sexton and Art Trese, and professors James Schultz and Al Cote, Director of Appalachian Rural Systemic Initiative, led summer workshops for middle school and high school teachers eager to deepen their understanding of topics in their discipline and improve their teaching methods.

SUSTAIN is also aiming at developing an inter-disciplinary Master’s program for practicing mathematics and science teachers. Art Trese, associate professor in Environmental and Plant Biology, and Barbara Grover will coordinate a meeting with interested faculty from the College of Arts and Sciences and the College of Education in late October.

Dr. Grover gave two presentations about Project SUSTAIN this past year. She spoke at the Ohio Council of Teachers of Mathematics (OCTM) Conference and the Ohio Mathematics Educational Leadership Council last October. She and two teachers from the project will give another presentation at the annual OCTM meeting this fall in Cincinnati, OH.

ALUMNI NEWS

- **Yuqing Chen** (Ph.D., 2000) is a professor of mathematics at Foshan University in China. He recently attended the first Korea-Japan joint Conference on Nonlinear Functional Analysis in Korea and the International Congress of Mathematicians Satellite Conference on Nonlinear Analysis in Taiyuan, China.

- **Todd Edwards** (MS, 1995) completed a Ph.D. in Mathematics Education at Ohio State University, and is currently an assistant professor at John Carroll University in Cleveland, Ohio. He presented a paper at the 2nd International Conference on the Teaching of Mathematics in Crete, Greece.

- **Ioan Hrinca** (Ph.D., 1996) is an associate professor at Otterbein College in Westerville, Ohio. He will be on leave in the fall of 2002 working on the development of a new geometry course.

- **Jeannette Kline** (Ph.D., 1995) has recently been promoted to associate professor with tenure at Washington and Jefferson College in Washington, Pennsylvania.

- **Lewis Ludwig** (Ph.D., 2001) has accepted a tenure track position at Denison University in Granville, Ohio.

- **Mark McKibben** (Ph.D., 1999) is an assistant professor of mathematics at Goucher College in Baltimore, Maryland. He presented a paper at the 4th International Conference on Dynamical Systems and Differential Equations in Wilmington, North Carolina.

- **Thanh Lan Nguyen** (Ph.D., 2002) has accepted an assistant professorship at Western Kentucky University in Bowling Green, Kentucky.

- **Jamal Tartir** (Ph.D., 1998) is an assistant professor at Youngstown State University in Youngstown, Ohio. He is an active participant in the departmental Analysis and Topology seminar.

- **John Tynan** (Ph.D., 2002) has accepted a tenure track position at Marietta College in Marietta, Ohio.

On behalf of the students, staff, and faculty of the Department of Mathematics, we offer our appreciation for your generous donations. We want you to know that we truly appreciate your support. It gives us great pleasure to inform the University of your generosity and support for our program. We were able to provide a number of scholarships for our students as a result of your generosity. We feel fortunate to have support such as yours.
Get your calculators ready for MATH DAY

On October 3, 2001 over 50 high school students from Federal Hocking and Marietta High Schools came to Ohio University for its first Math Day.

The purpose of Math Day is to encourage interested high school students to become not only mathematics majors but also math majors at Ohio University. The event was aimed at providing students with information about careers in math and helping them become familiar with the programs offered to math majors at OU.

The Office of Admissions treated visiting high school students to tours of OU’s campus and an OU Jeopardy game. Each student was given a calculator and a notebook containing information about the mathematics program at Ohio University, compliments of the Mathematics Department. Door prizes consisting of t-shirts, sweatshirts, tote bags, and mouse pads were also given away to lucky students.

The event was organized by the Outreach Committee under the leadership of Barbara Grover. The event kicked off at 8:30 am and lasted until 1:30 pm. Students were provided lunch and refreshments during the day.

Activities for the visiting students included presentations by Gene Kaufman and Sergio Lopez-Permouth. Each conducted activities reflecting the curriculum taught in Ohio University math classrooms. The goal of the presentations was not only to entertain the students but also give them a small sense of what happens in a college math course. Dr. Kaufman used activities from his 306 course while Dr. Lopez-Permouth’s presentation was related to his new Voting, Political Power and Social Choice course. Students also attended a panel discussion featuring faculty and students from the Ohio University Mathematics Department.

Due to the overwhelming success of this event, the Outreach Committee is planning another Math Day, to be held in Spring 2003.

Students from Federal Hocking and Marietta High Schools intently watch Sergio Lopez-Permouth’s presentation in Morton Hall. Dr. Lopez-Permouth was among a number of Math Department faculty members who participated in the activities for the first Math Day at Ohio University.

Dear Barbara,

I would say that by the excitement in the voices of my students that Math Day was a rousing success! It just thrilled me to hear them enthusiastically discussing math. I asked them what they liked best about the day. My students really enjoyed sharing lunch with Jim Schultz. He sent them off determined to prove a hypothesis that they had made in class and also looking for a pattern in a geometric problem that in turn would lead them to a formula. I was drilled in the bus on the way back to school. The proof was on the board before they went home. They are still working on the formula. They also enjoyed their classes. I was in the one with Professor Lopez-Permouth. The students responded very favorably to him. They were very interested in the mathematics and continued to talk about the session. They also mentioned the career talks. I was thrilled with what the students had to say about their experience. I hope it will affect the way my students apply themselves. Then there was Jeopardy. They loved it and learned a lot about the college application process and college life. Bravo to OU! Our investment of the day was well worth it! We also appreciated the refreshments, lunch, and prizes. It was also very sweet of you to pull some Federal Hocking tickets so that a couple of our kids “won the big prizes.” Thank you again for your investment in the day, in all the forms that investment was made.

Sincerely,

Karen Nobel
(Federal Hocking High School AP Calculus teacher)

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Karen Nobel
(Federal Hocking High School AP Calculus teacher)

Mathematics to Have Nobel Equivalent: Abel Prize

The Norwegian Government has created a $22 million fund for an annual prize in mathematics. The first prize will be awarded in 2003, during the 200th anniversary of the birth of Norwegian mathematician Niels Abel. The Abel Prize will be worth approximately $500,000.

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Mathematics Awareness Month

In recent years, April has been recognized throughout the United States as the Mathematics Awareness Month. In 2002, the Mathematics Awareness Month focused on the contributions of mathematics to the understanding of the human genome. On April 5, 2002, the Mathematics Department sponsored a public lecture by Winfried Just on this topic. The lecture, titled “Mathematics and the Genome” attracted numerous Ohio University faculty and students.
INFORMATION FORM

Name: _______________________________________     Graduation Date: __________________________

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