

Indiana University Department of Mathematics Alumni Newsletter

Vol. 12

College of Arts & Sciences Alumni Association

Winter 2006-07

Roots — square and circular

The Euclidean Circle as the root of the Math Club

Imagine how the attendance at your next faculty or business meeting would increase if everyone who didn't show up were levied a fine. The bylaws of the Euclidean Circle, Indiana University's early math club, called for just such a measure. Absent members were fined 10 cents per meeting, so at two per month, missing meetings for the entire semester would cost \$1. That was quite an expense in the 1920s!

Reading through the minutes of the meetings of the Euclidean Circle, three things stand out: (1) the secretaries were meticulous in their descriptions of the events, (2) history was important to the members, and (3) the group constantly struggled for money.

In January 1929, a faculty member "suggested a plan of study for the Euclidean Circle consisting of the historical development of mathematics." The members were to be divided into four groups to study ancient mathematics, medieval math, modern math, and the history of math in the United States. Thelma Abell was chair of this small group.

By October 1929, the Euclidean Circle was concerned about dwindling interest; they devoted an entire meeting to a discussion of "whether the club should be continued and, if it were continued, whether some new scheme for arousing interest and

increasing attendance should be tried out." The club's history was reviewed, highlighting the fact that it was the oldest departmental club in the university, having been established in 1886 as the Mathematics and Physics Club with four members. In 1907, it was reorganized as the Euclidean Circle.

In February 1930, 40 new members were initiated, so they must have done a bang-up job of recruiting, although the meeting minutes do not address their methods. At the May meeting, a short play titled "Discord in Mathematics Land" was presented. Sadly, the text of the play was not saved.

In October 1930, Cora Hennel presented the club's history, noting that the membership originally was "limited to juniors and seniors." This became an annual event, apparently for the benefit of new members. In January 1931, a lecture was presented on "The New Planet, Pluto." In February, 25 new members were initiated, underscoring the recruiting talents of this group. However, in April, the officers of the Euclidean Circle were implored to collect unpaid dues, indicating that they were better at recruitment than at fundraising.

In October 1931, the group had a mere \$1.63 in its bank account. Members discussed "whether or not dues should be

(continued on page 2)

Dan Maki retires

Dan Maki has made superb contributions to the department in many different ways: as an outstanding teacher; a nationally recognized figure in teaching and guiding under-



Dan Maki

graduates in mathematical modeling and the applications of mathematics to problems arising in government, business, and industry; a

leader in undergraduate curriculum development and in the training and professional development of public school teachers; and a colleague who has provided years of dedicated service to the profession, especially the Mathematical Association of America.

After earning a bachelor's degree at Michigan Tech and a PhD at Michigan, Maki joined the department in 1966, and his talent for teaching was immediately recognized. That talent has been confirmed by departmental and university-wide awards and by many invitations to give colloquium talks, invited addresses, and workshops at colleges and universities throughout the country.

Possibly as a result of his early interest in engineering, in the late 1960s, Maki was a pioneer developer of courses in mathematical modeling for undergraduates. He remains one of the most visible, active, and well-known contributors in the area.

(continued on page 5)

Graduate Student Topology Conference

On April 1-2, 2006, graduate students Jennifer Franko, Prudence Heck, Cornelia Van Cott, and Adam Weyhaupt, with the support of the National Science Foundation, brought more than 110 graduate students from around the world to participate in a Bloomington Mathematics conference. Distinguished mathematician Dusa McDuff (SUNY, Stony Brook) and Fields Medalist Vaughan Jones (University of California, Berkeley) gave plenary talks, with 24 additional graduate student presentations. For more information, visit www.indiana.edu/~gstc.

Math department gains named professorship and NSF grant

On July 1, 2006, I took the helm from David Hoff and became chair of the Department of Mathematics. In addition to the usual excitement of the academic year starting, I have two news items to report.

First, Vladimir Touraev was appointed the Boucher Professor in the Department of Mathematics. This is the first named professor in the math department. This professorship was endowed by Charlotte and James Griffin in honor of Jim's high school math teacher, William Boucher. (Money donated to the IU Foundation can be earmarked to the math department and can be used for scholarships,

fellowships, or general use.) For more on our new colleague, Vladimir Touraev, see the new faculty section of the "Faculty Notes" on page 5.

Second, the Department of Mathematics, in partnership with the School of Education, received a \$499,987 Noyce NSF grant to encourage math majors to become teachers and to train math graduates as teachers. Six scholarships will be offered every year to undergraduates majoring in math in the College of Arts and Sciences. In return, the students commit themselves to teaching math in an area of high need for four years. We know that the country is in desperate need of quali-

fied math teachers.

This partnership and grant will encourage our best math students to consider teaching as a career. Professor Kent Orr, the new director of undergraduate studies, is the math department's representative on the grant. For more information, see the online news release: newsinfo.iu.edu/news/page/normal/3982.html.



Jim Davis

— *Jim Davis*

Roots

(continued from page 1)

paid," and it was decided in the affirmative. Later that year, 26 members agreed to "abide by the constitution of the Euclidean Circle" and signed their names in the logbook. The constitution calls for the payment of dues, so we can only surmise that their signatures indicated a strong commitment to increasing the club's treasury.

In February 1932, it was Dean David Rothrock's turn to review the group's history, and 24 members were added. In May, Cora Hennel addressed the club on the topic of "things one who is going to teach ought to know about the subject."

In 1932–33, the club had 63 active members, 43 of whom appeared in the club's photo in the *Arbutus*. In October, dues were reduced to 25 cents by "unanimous vote of those present." Twelve new inductees were required to speak this pledge: "I pledge my earnest support to the Euclidean Circle and will endeavor to help make it a success this year. I will always make an honest attempt to get my mathematics lesson and will never cut a mathematics class. It is my desire to better the knowledge of man's most powerful tool — mathematics."

The secretary in 1932 included more detail than preceding secretaries had. The names of all new inductees were listed, as well as the specifics of the refreshments (apple cider and pumpkin pie at the November meeting). In April 1933, an education professor spoke on "some of the foolish problems found in algebra textbooks."

In January 1934, the group voted to return the dues to 50 cents per semester. Maybe they wanted better refreshments, but at the next meeting, they received

"cocoa and wafers." At an earlier meeting, they had no refreshments because it was a national banking holiday, and all their funds were in the bank. No one planned ahead.

At the November 1934 meeting, Dean Rothrock gave an illustrated lecture on Mayan mathematics. During that year, numerous changes to the constitution were made, including rescinding the fine for missing meetings and changing the meeting frequency to once a month. Also, high school mathematics teachers were invited to become members.

In 1935–36, "dainty refreshments" were served, and a professor spoke on "Mathematical Freaks and Freaks in Mathematics."

Euclidean Circle members exchanged 10-cent Christmas gifts in 1936 at the home of Dean Agnes Wells, where the annual party had been held for many years. Although the minutes in earlier years noted that gifts were exchanged, no mention was made of the "dollar limit." (A quick check of an online consumer price index calculator indicates that 10 cents in 1936 is equivalent to \$1.38 today.) In 1941, the value of gifts was limited to 5 cents (about 68 cents today).

Throughout 1936–37, the officers encouraged members to pay dues. In April, some students participated in an "amateur hour," including a student named Nancy Young who provided an imitation of Dean Rothrock; those who did not participate "were punished by being required to work a problem."

In October 1937, Cora Hennel gave a presentation on the development of mathematics, stating that it "keeps pace with the increasing need for it, and it is a subject for everyone, not just an exceptional few." At another meeting, the group discussed "the problem of mathematics in the high

schools," noting that the "trend is toward abolishing compulsory mathematics in the high school" — a frightening concept, then and now.

Each year, the members discussed publishing the group's picture in the *Arbutus*; in the records for 1938, we discovered the cost of that photo: \$25 for a full page; \$15 for a half page. Each person paid 50 cents toward the photo's cost. In February 1939, the president reported that the club's treasury was "entirely depleted of funds" — an ongoing problem for this group.

In 1939–40, the group had a balance of about \$10 in the bank. In 1941, they had \$12.57, which was used for the celebrated *Arbutus* photo.

In March 1941, the group met in Swain Hall for a presentation on the cyclotron's mechanism and then went down to see it. (The available minutes end here.)

The minutes for every year are fairly consistent, including entries for several fall meetings, a Christmas party, several spring meetings, and the spring picnic. Each entry features references to the program, entertainment, and refreshments. Programs were described as "interesting and instructive." The minutes mention music provided by members, games, social hours, and the much-maligned slide show. Each May, the Euclidean Circle held a spring picnic. The secretaries always noted that "this was a social meeting and no business was transacted." Some traditions carry on. Today's Math Club holds bi-weekly meetings with speakers, although pizza and soda have replaced the cocoa and wafers of the 1940s. And the Department of Mathematics holds a picnic at Bryan Park each fall for faculty, staff, and students. No business is transacted then, either.

— *Gwenette Gaddis Goshert*

Around the department

Maynard Thompson takes new position with administration

Indiana University President Adam W. Herbert announced in October that Maynard Thompson would serve as his senior counselor. Thompson has previously served in several administrative capacities and will advise the president on a variety of academic matters at all IU campuses and will serve as a liaison to faculty organizations.

"I am both delighted and deeply appreciative that Maynard Thompson has agreed to serve the university as senior counselor to the president," Herbert said. "I know how much he has enjoyed teaching and writing on a full-time basis, and [I] recognize that his acceptance of this assignment is a major sacrifice."

Thompson came to IU in 1962 as a mathematics department faculty member. He subsequently held several administrative leadership positions, including department chair, associate dean of the graduate school, associate dean of the College of Arts and Sciences, dean of budgetary administration, and vice chancellor.

In 2002, he stepped down from the vice chancellor's position after 14 years



Maynard Thompson

of service to resume full-time duties as a mathematics professor.

Herbert said Thompson's background makes him uniquely qualified to serve in this senior level position in the Office of the President.

"Maynard's extensive knowledge of IU's institutional history and experience in dealing with all aspects of university operations will be of particular significance as we become a more mission-oriented and accountability-focused institution," Herbert said. "I look forward to receiving his counsel and assistance as we move the university to higher levels of distinction and distinctiveness."

Bennett I. Bertenthal appointed dean of College of Arts and Sciences

Indiana University President Adam W. Herbert announced on Sept. 1 that Bennett I. Bertenthal, a cognitive neuroscientist at the University of Chicago, has been chosen to fill the position of dean of the College of Arts and Sciences at the Bloomington campus. Bertenthal will begin his new duties on Jan. 1. Bertenthal, one of three finalists recommended by a 10-member search committee, will fill the post vacated last spring when Kumble Subbaswamy left IU to become provost of the University of Kentucky.

In making the announcement, Herbert said, "His impressive experience in fostering faculty collaboration and leading multi-disciplinary research initiatives will be especially valuable as we expand the IU research enterprise," Herbert continued. "I am very pleased that a scholar and academic administrator with such a strong commitment to excellence will lead the largest and most comprehensive academic unit on the Bloomington campus."

Bertenthal will report to Michael A. McRobbie, interim provost and vice president for academic affairs at Bloomington.

"Bennett has extensive experience in leading multidisciplinary research efforts that bridge the natural and social sciences," McRobbie said. "This experience has given him the intellectual breadth needed to serve as a strong leader and mentor of the College's extensive research efforts. As well, he has a keen appreciation and sensitivity for arts and humanities scholarship, one of our strengths on the Bloomington campus."

Bertenthal is a professor of psychology and computational neuroscience at the University of Chicago, where he has been a faculty member for almost six years. His research focuses on perceptual, motor, and cognitive development of the brain.

From 1996 through 1999, he was assistant director of the National Science Foundation with responsibility for social, behavioral, and economic sciences, science statistics, and international programs. He oversaw a staff of 145 employees, of whom more than 70 were PhDs, and a budget of \$150 million.

As part of his responsibilities, Bertenthal worked with Congress and the Office of Management and Budget to appropriate funding for social and behavioral sciences research projects throughout the nation. He also was responsible for promoting NSF

initiatives in globalization of science and international programs.

He began his academic career as a professor of psychology at the University of Virginia, where he also directed the Developmental Psychology Training Program, an interdisciplinary program involving over 40 graduate students and 25 faculty including neuroscientists, electrical engineers, computer scientists, biomechanists, and pediatric orthopedists. The program, partly funded by the National Institute of Mental Health, was consistently ranked as one of the top three in the U.S.

Bertenthal, 57, earned a BA in psychology from Brandeis University in 1971, an MA in developmental psychology from the University of Denver in 1976, and a PhD in developmental psychology from the University of Denver in 1978.

Math Club activities

The Math Club had talks almost every week in the fall semester (and also last spring) — many by faculty members, but also some by students. These are examples of talks by our own faculty: Chris Judge spoke on "The Circle Problem," Darrell Haile talked about "Fermat's Last Theorem," and Bob Glassey presented on "The Doppler Effect." Bruce Solomon talked about his research on "Skew Loops," and Michael Larsen spoke on "Quaternions, Octonions, and All That."

Howard Masur from the University of Illinois-Chicago spoke on "Billiards." Student talks have included a recent one by Joe Pacold on the number theory behind RSA public key cryptography.

Five students participated in the Indiana Collegiate Math Competition in spring 2005 in Fort Wayne, Ind., and IU's "A Team" made a strong showing, coming in fourth place. (First place went to a team from Purdue, while teams from Rose-Hulman took second and third places.)

Mathematician wins statewide distinguished teaching award

The Indiana Section of the Mathematical Association of America recently presented its Award for Distinguished College or University Teaching of Mathematics to Indiana University Bloomington's Dan Maki. The annual award recognizes the accomplishments and contributions of members who have been identified as extraordinarily successful teachers in the mathematical sciences and whose teaching effectiveness has been shown to have had an influence beyond their own institutions.

"Dan Maki has had a long and truly distinguished career in classroom teaching, curriculum development, educational outreach, and service to his department and the mathematical community."

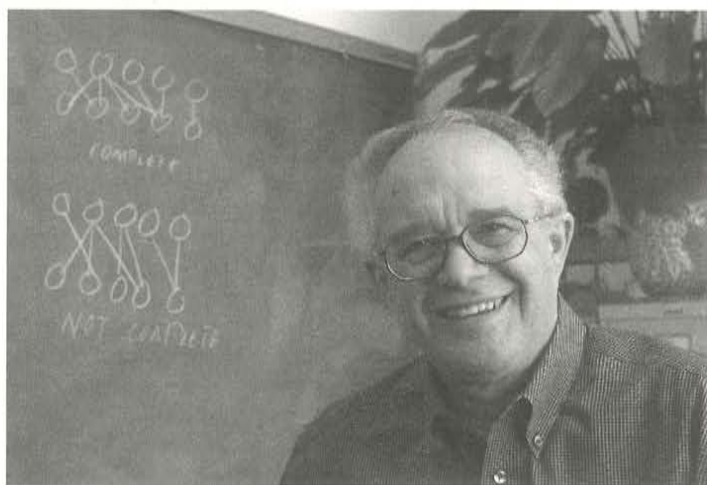
— John Lorch, chair of the
Indiana Section of the
Mathematical Association of America

"Dan Maki has had a long and truly distinguished career in classroom teaching, curriculum development, educational outreach, and service to his department and the mathematical community," said John Lorch, chair of the Indiana Section of the Mathematical Association of America. "He has

displayed excellence in teaching at all levels from freshman service courses through mainstream graduate-level mathematics courses. He has developed, organized or participated in numerous curriculum-development and outreach programs, activities which have had an enormous impact on the quality of the educational experience for students at his home institution as well as on the quality of mathematics teaching at the elementary and high school levels throughout the state of Indiana."

When students in a large mathematics course were asked what they liked most about the class, they spoke about Maki. He "is the most effective math teacher I've ever had," "has a sense of humor and knows everything about this course," "related math to everyday life very well," and "was very excited to teach and wanted everyone to understand," the students said.

In the words of one of his colleagues, Maki "has developed a cadre of very effective, high-quality faculty in secondary schools around the state that are having a significant real impact on strengthening secondary teaching, curriculum, and standards." Another colleague said he has



Professor Dan Maki

"encountered no faculty member more concerned with undergraduate teaching or who has done more to improve the undergraduate experience" than Maki. A third described Maki's role in designing and implementing an engaging cablecast television program directed at students in the finite mathematics course.

"This year's award recipient has had the positive impact upon students that all teachers hope to achieve," Lorch said at the presentation ceremony.

Mathematics

This newsletter is published by the Indiana University Alumni Association, in cooperation with the Department of Mathematics and the College of Arts and Sciences Alumni Association, to encourage alumni interest in and support for Indiana University. For activities and membership information, call (800) 824-3044 or send e-mail to ialumni@indiana.edu.

Department of Mathematics

Chair Jim Davis
Editor Gwenette Gaddis Goshert

College of Arts & Sciences

Interim Dean David Zaret
Executive Director of Development
& Alumni Programs David Ellies

IU Alumni Association

President/CEO Ken Beckley
Director of Alumni
Programs Nicki Bland
Editor for Constituent
Periodicals Julie Dales
Assistant Editor Abby Tonsing



Department works with K-12 teachers

The Department of Mathematics continues to support two programs that work with K-12 teachers of mathematics. The Advanced College Program is now directed by Professor Allan Edmonds, who succeeded Professor Daniel Maki.

The ACP works with teachers to teach the IU Bloomington calculus course for college credit in high schools. This program is more than 20 years old and has grown to include more than 40 schools. At each school, the course follows a syllabus that covers all the material in the IU course, and the students take the IU final exam, which is graded on the IU scale.

The second area of support for mathematics teachers is through the

National Science Foundation Mathematics and Science Partnership grant to IU. Through this grant, Professor Maki works with teachers and administrators in nine urban school districts in Indiana. The grant has provided workshops for K-6 and 7-12 teachers, and the program has developed a cadre of teacher leaders who help with mathematics instruction at their schools. Members of the partnership also meet with school administrators and sponsor parents' nights at the schools. These nine districts, with more than 120,000 students and 3,000 teachers, comprise the program: East Chicago, Hammond, Elkhart, Fort Wayne, Anderson, Pike, Decatur, Vigo, and Bartholomew.

Faculty notes

- **Allan Edmonds** is the new math liaison for the Advance College Project, replacing Dan Maki after his retirement.
- **New departmental leaders** — Effective July 1, 2006, **Jim Davis** is the new chair of the Department of Mathematics; **Kevin Zumbrun** is the new director of graduate studies; and **Kent Orr** is the new director of undergraduate studies.

Faculty awards, 2005

- **Rothrock Mathematics Faculty Teaching Award:** Daniel Maki
- **Trustees' Teaching Award:** Victor Goodman, Michael Larsen, Charles Livingston, and Stephen McKinley

Faculty awards, 2006

- **Rothrock Mathematics Faculty Teaching Award:** Michael Larsen
- **Trustees' Teaching Award:** Robert Glassey, Russell Lyons, and Lawrence Moss

New faculty

David Fisher received his PhD in 1999 from the University of Chicago, has held a postdoctoral position at Yale, and came to us from a faculty position at Lehman College and the CUNY Graduate Center.

His research interests include rigidity in geometry and dynamics, ergodic theory of semi-simple groups, and geometric partial differential equations. His work on quasi-isometric embeddings of symmetric spaces has been described as "the state of the art," and he and his co-workers are credited with opening up the new area of "quasi-isometric superrigidity." Fisher joined the department in fall 2005 as an assistant professor.

Michael Mandell received his PhD in 1997 from the University of Chicago and has held a postdoctoral position at MIT and faculty positions at the University of Chicago and Cambridge University. He works in the general area of algebraic topology, particularly stable homotopy theory. He has to his credit what one reviewer calls the "dream theorem" of algebraic topology, which gives an understanding of the integral homotopy type of cochain complexes in terms of related algebraic structures. Mandell joined the department in fall 2005 as an associate professor.

Vladimir Touraev completed both his PhD and his doctorate at the Steklov Institute in Moscow. He comes to us from Strasbourg, France, where he was director

of research, CNRS. He is prolific, his work is highly cited, and he has received many honors, including the CRNS Silver Medal and an invited address at the International Congress of Mathematicians. He joins the math department as the Boucher Professor of Mathematics.

New postdoctoral fellows

Radu Dascalu received his PhD in 2005 from Texas A&M University and joined the department in fall 2005 as a Zorn Postdoctoral Fellow. His research interests include partial differential equations, dynamical systems, and fluid mechanics.

Michael Natapov joined us this fall as a Zorn Postdoctoral Fellow. He received his PhD at the Technion in Israel; his mathematical interests include group theory and central simple division algebras.

Constantine Onica received his PhD in 2005 from Texas A&M University and joined us in fall 2005 as a research postdoctoral fellow. His research interests include geophysical fluid dynamics and operator theory.

Stephen Pankavich also joined us in fall 2005 as a Zorn Postdoctoral Fellow. He received his PhD in 2005 from Carnegie Mellon University and works in mathematical physics, specializing in plasma dynamics and kinetic theory.

Mihai Popa joined us this fall as a Zorn Postdoctoral Fellow. He received his PhD at UCLA; his research interests include functional analysis, combinatorics, and free probability theory.

Maki retires

(continued from page 1)

In the 1980s, after a year at the Claremont Math Clinic at Harvey Mudd College, he expanded his interest to include guiding undergraduate students working on real-world projects arising in government, business, and industry. His experience with a project in speech recognition at the Claremont Clinic led to research in that field, part of it jointly with faculty in the Department of Speech and Hearing at IUB, and to a commercial venture, again with faculty colleagues from the Department of Speech and Hearing.

Maki has been very successful in attracting large amounts of external grant and contract support — primarily from NSF — for Research Experiences for Undergraduates programs, curriculum development (Math Across the Curriculum), modeling institutes for high school teachers, and the ongoing Math Science Partnership program. The confidence the funding agencies have in Maki's vision and

his administrative skill is evidenced by the breadth of the programs supported and the high level of financial support — totaling nearly \$10 million.

Finally, but by no means least, he has served the department and university in many ways: as director of graduate study, as department chair for five years, and as chair of the University Athletics Committee for one term. He has also contributed vast amounts of time and energy to the profession as MAA section chair and governor and, currently, as a member of the MAA Executive Committee.

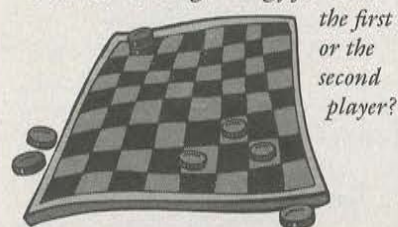
Maki takes pride in his Finnish ancestry, and he spent a year in Finland in 1968 as a Fulbright Scholar. He also has a great fondness for the UP — the upper peninsula of Michigan, for the uninitiated — and for the University of Michigan. Although his professional interests and commitments will continue, it is likely that he will find ways to spend more time at his lakeshore property, on the shore of Lake Superior, of course!

— Maynard Thompson

Puzzle ? ? ?

From Professor **Hari Bercovici**: Here is a little problem that readers may find interesting. Don't give me credit for this; I heard it from someone else.

In a game, each of two players takes a turn by occupying (with tokens) one or several squares of a chessboard. The squares occupied in each move, however, must be either all in the same row, or all in the same column. The player who cannot occupy any squares loses. Is there a winning strategy for either



the first or the second player?

Read more about our faculty. Visit us on the Web at
www.indiana.edu/~math



Student notes

Graduate awards, 2005

- **Robert E. Weber Memorial Award:** Jan-Li Lin and Giorgi Shonia
- **James P. Williams Memorial Award:** Kevin Hung Yip Li, LiHuei Liu, and Rebecca I. Swanson
- **William B. Wilcox Mathematics Award:** Jayoung Nam, Mohammadreza Raoofi, Jason T. Shaw, and Adam Timar
- **Hazel King Thompson Summer Fellowship:** Kelly J. Steinmetz
- **Glenn Schober Memorial Travel Award:** Wael Abu-Shammala, Saleh Aliyari, Peter Connor, Yesem Kurt, Jason Shaw, Adam Timar, and Eun-Kyung You
- **First-year Research Fellowship:** Jan-Li Lin

- **McNair Fellowship:** Michelle Hackman
- **College of Arts and Sciences Graduate Fellowship:** Yukie Goto
- **Vertical Integration of Research and Education in the Mathematical Sciences Award:** Shawn A. Alsbaugh, Jonathan C. Boggess, Peter M. Connor, Lee D. Cox, Tobias J. Hagge, Prudence T. Heck, Jiho Kim, Christine J. Larson, Kevin H. Li, Jason W. Lingle-Martin, Justin D. Mazur, David C. Meyer, Lisa M. O'Rourke, Rebecca I. Swanson, Cornelia Van Cott, Christopher J. Wilson, Eric N. Wilson, and Jonathan T. Yazinski

Graduate awards, 2006

- **Robert E. Weber Memorial Award:** Neeraj R. Kashyap and Liheng Xu
- **James P. Williams Memorial Award:** Matthew Drury and Kuo-Chiang Tan
- **William B. Wilcox Mathematics Award:** Jesse Blaine Crawford, Chang-Yeol Jung, and Frederic Picard
- **Hazel King Thompson Fellowship:** Frederic Picard and Onur Yavuz
- **Joseph and Frances Morgan Swain Fellowship:** Samuel Lee Vaughn
- **Glenn Schober Memorial Travel Award:** Wael Abu-Shammala, Daniel Jordan, Yun-Hui Kim, Yun-Su Kim, Chung-Min Lee, Seunghwan Lee, Soyeon Lee, Tien-Tsan Shieh, Adam Weyhaupt, Eric Wilson, and Onur Yavuz
- **McNair Fellowship:** Michelle Hackman
- **College of Arts and Sciences Graduate Fellowship:** Catherine Clare Erbes, Yaxian Li, and Mary Kate Kearney
- **VIGRE Award:** Michael Bateman, Jonathan C. Boggess, Peter M. Connor, Lee D. Cox, Matthew Drury, Patricia Garmirian, Tobias J. Hagge, Prudence T. Heck, Charles Hoffman, Jiho Kim, Kevin H. Li, Jason W. Lingle-Martin, Justin D. Mazur, Lisa M. O'Rourke, Peter Ranken-

Elizabeth Adams named Goldwater Scholar

Indiana University Bloomington junior Elizabeth "Betsy" Adams has been named a Goldwater Scholar for the 2006–07 academic year. Adams was among 323 scholars selected by the Goldwater Foundation from a field of 1,081 mathematics, science, and engineering students nationwide.

Adams, who is from LaPorte, Ind., is a junior pursuing bachelor of science degrees in astronomy/astrophysics and mathematics. She has been a participant in the IU Science, Technology, and Research Scholars Program since her freshman year at IU; her current area of research is in dwarf irregular galaxies. At IU, Adams has worked under the guidance of professors Caty Pilachowski and Liese van Zee. During time spent studying in Australia, Adams conducted research at Mt. Stromlo Observatory, examining binary star systems. She plans to continue studying astronomy and astrophysics in a PhD program.

Throughout its 18-year history, the Goldwater Scholars Program has garnered the attention of postgraduate fellowship programs. Recent Goldwater Scholars have been awarded 63 Rhodes Scholarships and 80 Marshall Awards. Eight of the 40 Marshall Awards given in 2006 were to Goldwater Scholars.

burg, Kelly Steinmetz, Rebecca I. Swanson, Christopher Thornhill, Cornelia Van Cott, Adam Weyhaupt, Christopher J. Wilson, and Jonathan T. Yazinski

AI awards

- **2005 Rothrock Teaching Award:** Wael Abu-Shammala, Nusret Balci, Nicole D. Bolus, Jennifer M. Franko, Chung-Min Lee, Jiexiang Li, Annapoorna Sengupta, and Cornelia A. Van Cott
- **2006 Rothrock Teaching Award:** Benjamin Edward Eggleston, Yukie Goto, Meghan Postlewaite Kiernan, Yun-Hui Kim, Sarah Mackenzie Klueber, Olivia Mo-chong Mah, Jayoung Nam, John Edward O'Connell, Jason Cecil Quinley, Noah Salvaterra, and Zhixu Su

Undergraduate awards, 2005

- **Outstanding first-year students:** Daniel Barron (*Cora B. Hennel Memorial Scholarship*); Adam Benitoui (*Cora B. Hennel Memorial Scholarship*); Carl Engelke (*Cora B. Hennel Memorial Scholarship*); Emmi Hilger (*Marie S. Wilcox Scholarship*); Khai-Ern Ooi (*Marie S. Wilcox Scholarship*); Jamil Ortoleva (*Cora B. Hennel Memorial Scholarship*); and Joe Pacold (*Cora B. Hennel Memorial Scholarship and Ciprian Foias Prize*)
- **Outstanding second-year students:** Aaron Cantrell (*Thelma Abell Prize*); Stephanie Lampe (*Trula Hardy Sidwell Scholarship*); and Bradford Paul (*Marie S. Wilcox Scholarship*)
- **Outstanding third-year students:** Betsey Adams (*Thelma Abell Prize*); Sarah Bass (*Marie S. Wilcox Scholarship*); Krista Bredenkamp (*Marie S. Wilcox Scholarship*); Megan Greischar (*Thelma Abell Prize*); Jeremy Karnowski (*Thelma Abell Prize*); Joanna Leathers (*Thelma Abell Prize and M118 Undergraduate Intern Award*); and LeMai

Nguyen (*Marie S. Wilcox Scholarship*)

- **Outstanding fourth-year students:** Daniel Budreau (*Thelma Abell Prize*); Marc Conrad (*Thelma Abell Prize*); Erica Isaacson (*Rainard Benton Robbins Prize and Ruth E. Gilliatt Memorial Scholarship*); and Jennifer Vollrath (*Thelma Abell Prize*)

Undergraduate awards, 2006

- **Outstanding first-year students:** Robert Shea Bracco (*Marie S. Wilcox Scholarship*); John Richard Ullman (*Marie S. Wilcox Scholarship*); and Yun William Yu (*Marie S. Wilcox Scholarship*)
- **Outstanding second-year students:** Daniel Vincent Barron (*Ruth E. Gilliatt Memorial Scholarship*); Joseph Ross Biberstine (*Ruth E. Gilliatt Memorial Scholarship*); Christopher L. Durden (*Marie S. Wilcox Scholarship*); Jamil P. Ortoleva (*Ciprian Foias Prize*); Joseph Ivan Pacold (*Trula Sidwell Hardy Scholarship*); and Daniel Joseph Salvat (*Marie S. Wilcox Scholarship*)
- **Outstanding third-year students:** Jayce Leeann Eifler (*Thelma Abell Prize*); Dov J. Rhodes (*Cora B. Hennel Memorial Scholarship*); David A. Schnee (*Thelma Abell Prize*); and Kelliemarie Ebetino Sorg (*Thelma Abell Prize*)
- **Outstanding fourth-year students:** Brian Michael Adams (*Cora B. Hennel Memorial Scholarship*); Marc Hildebrandt Conrad (*Marie S. Wilcox Scholarship*); Shaun Ray Deaton (*Cora B. Hennel Memorial Scholarship*); Jason Thomas Gustafson (*Cora B. Hennel Memorial Scholarship*); Erica Amy Isaacson (*Marie S. Wilcox Scholarship and Rainard Benton Robbins Prize*); Jeremy Benjamin Karnowski (*Thelma Abell Prize*); Nhan Le (*Thelma Abell Prize*); Erika Marie Robertson (*Marie S. Wilcox Scholarship*); and John Michael Tuley (*Cora B. Hennel Memorial Scholarship*)

Alumni notebook

1970s

Former media industry executive James B. Shaffer, MBA'70, is the dean of the University of Southern Maine School of Business in Portland. Shaffer and his wife, Lynn (Eitzen), MAT'70, an architect, have two adult sons, Derek and Ryan, and live in Cape Elizabeth, Maine. James is the son of Robert H. Shaffer, LLD'85, former dean of students at IU Bloomington.

Judith Ann Ricke McGlothlin, BA'72, just finished serving as president of the board of the Henry County (Ind.) Community Foundation. Her address is amcglathlin@yahoo.com. She writes, "For the past five years I have been involved in pottery thanks to Ellen Flynn Cornelius, BS'77." McGlothlin and her husband, Wyllie, MD'76, live in New Castle. They have two sons, Patrick, and Andy, an IU student.

1980s

John W. Marshall, BA'80, reports that he has been promoted to the rank of captain of Airbus A300 and A310 for Federal Express. Marshall lives in Mooresville, N.C.

1990s

Michael S. Stephens, BS'91, is an editor in the reference division at Thomas Nelson Publishers in Nashville, Tenn., and an adjunct professor of church history at Asbury Theological Seminary. He received a PhD in American religious history from Vanderbilt University in December 2004. Stephens and his wife, Heather Harriss, have been married for 10 years and are the parents of Daniel, 5, and Emma Anne, born in June 2004.

Two IU alumni were featured in an April 21 *The Indianapolis Star* article titled "Academic All-Stars: Looking back and forward, '87 graduates tell where their lives and aspirations have taken them." **Stacy E. Maugans**, BA/BM'92, DM'00, teaches saxophone, woodwind chamber music, musicianship, and humanities at Valparaiso University in Indiana and is an assistant dean for its College of Arts and Sciences. **Alan R. Meiss**, '96, is a civilian employee at Wright-Patterson Air Force Base in Dayton, Ohio, where he began working in 1999.

Elizabeth S. Fields, BA'95, of Brentwood, Tenn., is a pension benefit compen-

sation manager at ClarCor, in Franklin, Tenn. Her parents, B. Joan Jenkin Fields, BA'55, MBA'58, and James E. Fields, BA'57, MBA'58, LLB'61, celebrated 50 years of marriage on June 9. He is a solo practicing attorney in Evansville, Ind. She is a retired associate scientist at Mead Johnson Nutritionals, a Bristol-Myers Squibb company, in Evansville.

In November 2005, **Melissa A. Busovsky-McNeal**, BS'97, MD'01, a captain in the Army National Guard, wrote that she was taking four months' leave from a pediatric cardiology fellowship at Yale University to deploy to Iraq as a medical officer with the U.S. Army. Her address is drbus2001@sbcglobal.net.

Andrea Yun Marttila, BA/BME'97, MM'99, of Fenton, Mich., got married on July 22. She teaches in the Okemos Public Schools.

2000s

Sarah A. Meyer, BA'05, is a math teacher at Perry Meridian High School on the south side of Indianapolis. She recently ran her first half marathon in 1:38.

Announcing IUAlumniCareers.com



The IU Alumni Association's new online career services center, **IUAlumniCareers.com**, is officially open! This Web site provides online career and mentoring services for IU alumni. Register at **IUAlumniCareers.com** to search for jobs posted by employers, post your résumé for review by employers, or search for an alumni mentor for career advice.

IU alumni are invited to register as mentors to give career advice to their fellow alumni. As a mentor, you may choose how often and in what manner you wish to be contacted, and you may opt out of the mentor program at any time.

Employers are invited to register to post job openings at no charge.

Only IUAA members may search for jobs and mentors, so activate your membership today!

Contact the IUAA membership department at iuaamemb@indiana.edu or (800) 824-3044.



Indiana University's network of alumni chapters in major metropolitan areas around the world provides stimulating, enriching, and exciting activities to keep members of the IU family connected to the university — lifelong and worldwide. With programs such as faculty presentations, cultural events, career networking forums, and activities to recharge your Hoosier spirit, IU alumni chapters provide a lifetime of opportunities to keep you connected, wherever you live. To find an alumni chapter in your area, call (800) 824-3044, send e-mail to iualumni@indiana.edu, or visit www.alumni.indiana.edu.

Have tag, will travel



Send us your business card — or just your business information — and we'll send it back to you laminated and attached to a strap, perfect for your traveling pleasure. (One tag per graduate, please.)

Your luggage tag will show that you are proud of your connection to the College of Arts & Sciences at IU and will improve our alumni database.

Mail your card or information to Luggage Tags, College of Arts & Sciences, Kirkwood Hall 208, 130 S. Woodlawn, Bloomington, IN 47405.

INDIANA UNIVERSITY
ALUMNI ASSOCIATION

Virgil T. DeVault Alumni Center
1000 East 17th Street
Bloomington, Indiana 47408-1521

Nonprofit Org.
Postage
PAID
Indiana University
Alumni Association

Printed on recycled paper in U.S.A.

What's new with you?

The IU Alumni Association is charged with maintaining records for all IU alumni. Please print as much of the following information as you wish. Its purpose, in addition to providing us with your class note, is to keep IU's alumni records accurate and up to date. To verify and update your information online, visit our online alumni directory at www.alumni.indiana.edu/directory.

Publication carrying this form: Mathematics Department Alumni Newsletter Date _____

Name _____

Preferred Name _____

Last name while at IU _____ IU Degree(s)/Yr(s) _____

University ID # (PeopleSoft) or last four digits of Soc. Sec. # _____

Home address _____ Phone _____

City _____ State _____ Zip _____

Business title _____ Company/Institution _____

Company address _____ Phone _____

City _____ State _____ Zip _____

E-mail _____ Home page URL _____

Mailing address preference: ☐ Home ☐ Business

Spouse name _____ Last name while at IU _____

IU Degree(s)/Yr(s) _____

Your news: _____

☐ Please send me information about IU Alumni Association membership.

IUAA membership supports and includes membership in the College of Arts and Sciences Alumni Association and your local alumni chapter. You may join online at www.alumni.indiana.edu or call (800) 824-3044.

Attach additional pages if necessary. Please mail to the address above, or fax to (812) 855-8266.