



Chair's Corner

A warm hello to all alumni and friends. We have had an eventful year. Following a nationwide search, Professor Christopher McCord of the University of Cincinnati has been named dean of the College of Liberal Arts and Sciences. Professor McCord is a mathematician whose research interests include dynamical systems, algebraic topology, and celestial mechanics. We are especially pleased to welcome Dean McCord to our department as well as to the college.

Dean McCord received his bachelor's degree from Bowling Green State University, and his Ph.D. from the University of Wisconsin-Madison. After receiving his doctorate in 1986 he has spent his academic career at the University of Cincinnati, where he has been a full professor since 1998. For the last four years he has been the associate dean for graduate affairs at the McMicken College of Arts and Sciences at the University of Cincinnati, a role in which he has had extensive administrative experience.

"We landed our very top choice," remarked NIU Provost Raymond Alden. "He was the unanimous preference of the search committee." NIU President John Peters added, "Our College of Liberal Arts and Sciences is an integral part of the NIU experience, and Professor McCord will play a major role as we continue to strengthen already nationally recognized programs and develop new areas of study that meet the needs of our students and region."

In the midst of its search for the new dean, Northern received a major endowment gift. Alumnus Ray Smerge and his wife, Pat, have pledged to give \$2,000,000 to NIU to establish

the Raymond and Patricia Smerge Endowed Dean's Chair in Liberal Arts and Sciences, which, when fully endowed, will provide a significant annual income stream for the dean to use to benefit the college's teaching and research enterprises.

Professor Nader Ebrahimi of the Division of Statistics has been named one of the three NIU Presidential Research Professors for 2007. Professor Ebrahimi is an internationally recognized authority on the applications of statistics in the areas of reliability theory and survival analysis, information theory, engineering and the medical sciences. He is the author of more than 120 journal articles. "Nader has an absolutely outstanding research record and is deeply engaged in nearly every form of activity in the academic statistical profession," says Joseph Ibrahim, a distinguished professor of biostatistics at the University of North Carolina at Chapel Hill. "He is one of the foremost experts in reliability theory."

Professor Mohsen Pourahmadi of the Division of Statistics also received a major recognition this year when he was elected a fellow of the American Statistical Association. Professor Pourahmadi joins his colleague Professor Nader Ebrahimi as a recipient of this prestigious honor.

Two members of our department were honored at conferences this year. Distinguished Research Professor Biswa Nath Datta was honored in an IEEE banquet ceremony during the International Workshop on *Numerical Linear Algebra in Signal, Systems, and Control* at the Indian Institute of Technology, Kharagur, India, on January 10, 2007, for his outstanding contributions to numerical linear algebra related to control theory. Datta received a *Plaque of Honor* and a flower bouquet from Professor Kishore, president of the IEEE chapter. Professor Emeritus John L. Selfridge was honored at the *Illinois Number Theory Fest* held at the University of Illinois at

Urbana-Champaign, May 16-20, 2007. Professor Selfridge was honored on the occasion of his 80th birthday for his many important contributions to number theory. A lecture on Selfridge's work was delivered by Professor Carl Pomerance of Dartmouth College. Many colleagues and friends feted John with comments on his life and times at a banquet.

On April 29 the department honored Professor Ching Pan on the occasion of his retirement. Professor Pan has been a member of our department since 1987. Professor Pan is well known for his work in numerical linear algebra. His interests include parallel processing algorithms and signal processing. The department wishes Professor Pan a happy and productive future, which begins with an extended visit to his native China.

As has been our custom in recent years, the department hosted a Reception and Award Ceremony on a Sunday afternoon in late April in the Skyroom of Holmes Student Center. This was a festive occasion for the award recipients, their family and friends, and members of the faculty. We celebrated the accomplishments of many hard-working students while enjoying refreshments and a beautiful view of campus on a sunny, spring day. Attendance was so large that the Skyroom was filled to capacity. Again this year the May commencement ceremonies were held in the spacious new Convocation Center.

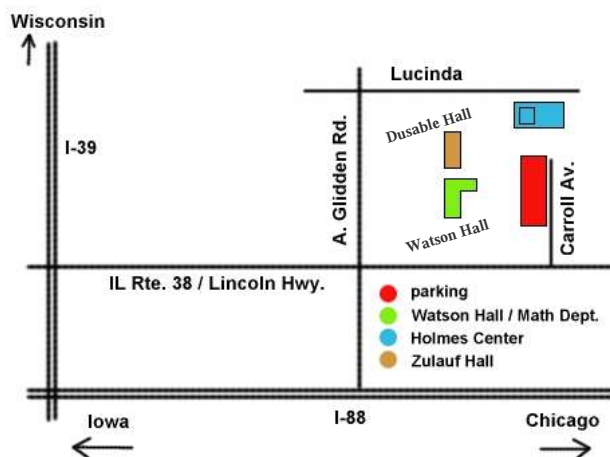
This was the 10th year in which the *Huskie Telefund* has solicited donations on behalf of the department from our alumni. We greatly appreciate your generous contributions to our scholarship funds. Each year the number of contributing alumni and the amount of their contributions have grown. We especially appreciate your support during the current times of very tight budgets. Your comments to the student callers about our department, its faculty, and its programs are passed along to us, and we find these to be encouraging and

helpful. This year Northern is embarking on *True North*, its first-ever major capital campaign. I am certain you will hear more about this in the upcoming months.

This is our 16th annual Alumni Newsletter. They have all been edited by Professor Linda Sons, and I wish to thank her for producing another superb issue.

Let us hear from you. **If you are in DeKalb, please stop by Watson Hall 320 and say hello.**

William Blair
June 1, 2007



Zaragoza Stars in True North Final Phase Kickoff

Some 500 NIU supporters came together on May 5, 2007, in the Convocation Center to enjoy an inspiring reception, dinner, and program which served as the kickoff for the final phase of the fundraising campaign *True North*. The program featured stories of NIU, and among them was that of Jose Zaragoza, for whom an endowed scholarship made his degree a reality. Jose was one of our exemplary student teachers in 2006.

Another Successful ICTM Regional High School Mathematics Contest

We are glad to report to you that, as in previous years, our department was again the host of another successful ICTM Regional High School Mathematics Contest. The contest took place on Saturday, February 18th, 2007, from 9 a.m. to 3:30 p.m. Faculty members, Math Office staff, graduate students, and undergraduate students supported our efforts.

On campus were 450 secondary school students, along with their teachers and coaches, from 16 high schools in northern Illinois. Students competed individually and in teams, in 11 mathematics events.

The participating schools were:

Antioch, Batavia, Geneva, Grayslake Central, Grayslake North, Kaneland, Lake Park, Lakes Community, Lake Zurich, Libertyville, Mundelein, Round Lake, St Charles East, St. Charles North, West Aurora, West Chicago.

We would like to acknowledge, and extend our appreciation to, all those who helped to make the ICTM math contest here at NIU an organized, rewarding, and successful event.

Many thanks go to the following:

Chris Bailey, John Beachy, Eric Behr, Harvey Blau, Richard Blecksmith, Kris Campbell, Stuart Carney, Carlos Corrales, Sien Deng, Tyler Hooker, Yoopyo Hong, Rod Jacobson, Bonnie Kersten, David Kettlestrings, Laura Kettner, Phillip Kisunzu, Ilya Krishtal, Nancy Leifheit, Henry Leonard, Cindy Stecher, Buck Stephen, Tim Sullivan, Jeff Thunder, Hongyou Wu, Zhuan Ye, Heidi Boehning, Michelle Burrows, Sean Connor, Michael Cotini, Cole Davidson, Brittany Debrauwere, John Dyer, Denise Frank, Justin Fulbright, Alberto Gonzales, Thomas Hodges, Carrie Jacobs, Kelli Krause, Chris Morton, Saif Patel, Samantha Schwartz, James Waterman, Jacob Zilliox.



New Emphasis Launched in Fall 2007

The approval process went well during the past year, and now the department is able to offer a comprehensive baccalaureate program in actuarial science. NIU actuarial majors will take special courses in statistics as well as courses in accountancy and finance. Recently hired Professor Min-Ming Wen will provide leadership for the program.

FACULTY COMINGS AND GOINGS

Five faculty members spent all or part of 2006-2007 on sabbatical leave. Professors Sudhir Gupta, Jeffrey Thunder, and Hongyou Wu were on leave for the fall semester, while Professors Ellen Hines and David Rusin were on leave for the full year.

Requested leaves were also taken by Professor Kitty Holland for the fall semester, while Professor Ching-Tsuan Pan was on personal leave for the full year.

New to the faculty for 2006-2007 was Assistant Professor Ilya Krishtal. Professor Krishtal received his Ph.D. from Voronezh State University in Russia in 2003, and was a Chauvenet Lecturer at Washington University in St. Louis, MO, from Sept. 2003 til June 2006.

Also new to the faculty for 2006-2007 was Assistant Professor Min-Ming Wen. Professor Wen earned her Ph.D. in 2005 from the University of Connecticut in risk management, insurance, corporate finance, and actuarial science. She is an associate of the Society of Actuaries and was an Assistant Professor for 2005-2006 at Tsing-Hua University in Taiwan.

A new instructor for the year 2006-2007, was Jennifer Dale, who received her masters from NIU and taught courses at a number of community colleges.

FIELD EXPERIENCE FOR THE APPLICATIONS INVOLVEMENT COMPONENT OF THE PH.D. DEGREE

Every student seeking a Ph.D. degree from NIU in mathematical sciences must spend a summer or a semester completing a field experience connecting mathematics with applications. Reports for this experience are written and presented in an ongoing seminar enabling all Ph.D. students to benefit from others' experiences as well as their own. Here is a list of those in this summer's field experience and the projects on which they are working.

Xiaofei Wang is at Toshiba Medical Research Institute in the Chicago suburbs working on sophisticated mathematical algorithms used for CAT scans.

Yang Yarong is at the Van Andel Institute (a biomedical research facility) in Michigan working on statistical methods for gene identification.

Christine Leroux is at the Atmospheric Research section of Argonne National Laboratory developing image processing techniques for automatically estimating cloud heights from radar data.

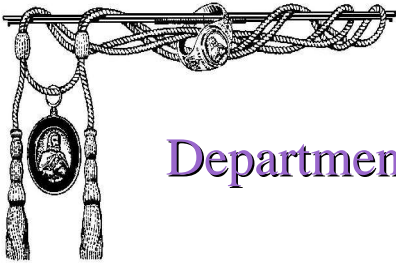
Abigail Bailey is in the Computational Biology section of Argonne National Laboratory working on mathematical methods for locating genes within DNA.

Joshua Panici is in the Center for Complex Adaptive Agent Systems Simulation at Argonne National Laboratory developing algorithms for agent based modeling.

Putnam Problems from Dec. 2006 Can you do them?

The 67th annual William Lomell Putnam Mathematical Competition was held on Saturday, December 2, 2006. Representing NIU in the contest were Caroline Jacobs and Andrew Vincent. The faculty advisers for the Putnam team were Richard Blecksmith and Y.C. Kwong. Here are some of the problems participants faced.

- 1) Find the volume of the region of points (x, y, z) such that $(x^2 + y^2 + z^2 + 8)^2 \leq 36(x^2 + y^2)$.
- 2) Alice and Bob play a game in which they take turns removing stones from a heap that initially has n stones. The number of stones removed at each turn must be one less than a prime number. The winner is the player who takes the last stone. Alice plays first. Prove that there are infinitely many n such that Bob has a winning strategy.
- 3) Let n be a positive odd integer, and let θ be a real number such that θ/π is irrational. Set $a_k = \tan(\theta + k\pi/n)$, $k=1, 2, \dots, n$. Prove that $(a_1 + a_2 + \dots + a_n)/(a_1 a_2 \dots a_n)$ is an integer, and determine its value.
- 4) Four points are chosen informally and independently at random in the interior of a given circle. Find the probability that they are the vertices of a convex quadrilateral.



Departmental Awards

The 29th annual Award Ceremony was held on April 15, 2007, in the Holmes Student Center Skyroom. At the reception, Department Chair William Blair gave out the following awards:

Chair's Award	Andrew Vincent
Director's Award	Daniel Adrian
Dean's Award	Caroline Jacobs
[Redacted]	Jody Yednock
M.M. Wheeler Scholarship Award	Cassandra Albracht
[Redacted]	Brittany Debrauwere
[Redacted]	Jeremy Hoffmann
[Redacted]	Kevin Kurz
M.M. Wheeler Teaching Award	Ronald Ballard
[Redacted]	Michael Cotini
[Redacted]	Kathryn Rosellini
[Redacted]	Julie Strachan
[Redacted]	Matthew Young
M.M. Wheeler Teaching Award-- Honorable Mention	Sara Eassa
D.R. Ostberg Award	Mark Lund
[Redacted]	Joshua Panici
[Redacted]	Xiaofei Wang
Gail Masters Gallagher Memorial Scholarship	Cassandra Albracht
[Redacted]	Emily Brake
[Redacted]	Andrew Fulks
[Redacted]	Marcus Guethle
[Redacted]	Scott Hickey
[Redacted]	Kristopher Huffman
Carol J. Felts Scholarship	Jessica Bradley
[Redacted]	Jennifer Geis

Dale G. Jungst Memorial Scholarship Award	Kevin Kurz
[Redacted]	Joseph Singleton
[Redacted]	Stephanie Wiora
Certificate of Teaching Excellence	Tyler Hooker
[Redacted]	Mark Lund
[Redacted]	Jonathan Szaukellis
Certificate of Merit (Undergraduates)	Scott Banike
[Redacted]	Brook Faulstich
[Redacted]	Margaret Kallal
[Redacted]	Kirsten Legac
[Redacted]	Kathryn Rosellini
[Redacted]	Julie Strachan
[Redacted]	Andrew Vicent
[Redacted]	Jody Yednock
Certificate of Merit (Graduates)	Abigail Bailey
[Redacted]	Kristin Ellis
[Redacted]	Daniel Frobish
[Redacted]	Tyler Hooker
[Redacted]	Sagun Manandhar
[Redacted]	Cathy Poliak
[Redacted]	Georgina Trausch
[Redacted]	Robb Watson
[Redacted]	Yan Yuan
Honorable Mention (Undergraduates)	Ronald Ballard
[Redacted]	Francis Deocampo
[Redacted]	Caroline Jacobs
[Redacted]	Eric F. Neil
[Redacted]	Nicole Nelmark
[Redacted]	Renee Straub
Honorable Mention (Graduates)	Jennifer Furuglyas
[Redacted]	Rachel Johnson
[Redacted]	Jongbum Lee
[Redacted]	Mihai Racovitan
[Redacted]	Sourav Santra
Stelford Award	Brook Faulstich
[Redacted]	Margaret Kallal
[Redacted]	Kirsten Legac
[Redacted]	Kathryn Rosellini
[Redacted]	Megan Smith

Dorothy & Glen Erickson Award	Brittany Debrauwere
	Jacob Zilliox
NIU Math Contest	Marcus Guethle
	Alexander Kuzmanoff
	Christopher Mueller
Adam Slagell Scholarship	Margaret Kallal
Clarence Ethel Hardgrove Scholarship	Janae DeBartolo
	Tyler James Ellena
	Kristopher Huffman
	Michael Lofthouse
	Laura Meyer
	Elizabeth Villalobos
	Marissa Williams
	Jessica Wilmes
	Cara Wyrostek

Mathematical Intuition Gone Wrong and Pi Mu Epsilon

Giving examples of things in mathematics that you would expect to be true, but aren't, and things you would expect not to be true, but are, was the theme for Professor Dan Grubb's talk at the initiation session on April 23 for Pi Mu Epsilon.

New members of Pi Mu Epsilon are Christopher Baldwin of Rockford, Mark Covalt of Wonder Lake, Janae Debartolo of Sugar Grove, Andrew Hill of Aurora, Kristopher Huffman of DeKalb, Lisa Kasperkiewicz of Geneva, Laura Meyer of Lake In The Hills, and Steven Thomas of Trafford, PA. Warm congratulations for the interest and strong work in mathematics which led to the selection of these students!

EXEMPLARY STUDENT TEACHER AWARDS

Hearty congratulations to Kathryn Rosellini and Matthew Young, who were named exemplary student teachers this spring by the College of Liberal Arts and Sciences at NIU. Receiving a certificate of merit in the same competition was Becky Reuter. We are PROUD to have these students in our program!

Teaching Positions for Fall 2007



Fall 2006 student teachers:

- Elliot Coffey, West Aurora School District 129
- Lukasz Gotfryd, Neuqua Valley H. S.
(Indian Prairie CUSD 240 - Naperville)
- Andrew Strom, Lake Havasu H. S. (Lake Havasu, AZ)
- Amy Wicks, St. Charles North H. S.
- Kathryn Rosellini, Neuqua Valley H. S.
- Rebecca Bonk, Hille M. S. (Oak Forest)
- Ronald Ballard, Pecatonica M. S.
- Sara Eassa, Oak Lawn Community H. S.
- Rebecca Reuter, Kaneland H. S.
- Amanda Fuller, Byron H. S.
- Brandy Rito, Bolingbrook H. S.
- Arthur Trebs, Virgin Islands (H. S.)

Spring 2007 student teachers:

- Brett Bakanec, San Bernardino, CA
- Tinesha Miller, Thornridge H. S. (South Holland)
- Joseph Pluskota, Wheaton North H. S.
- Julie Strachan, Lincoln JHS in LaSalle
- Kelly Mahony, San Tan Elementary School (Gilbert, AZ)
- Brook Faulstich, Neuqua Valley H. S.
- Sean Connor, Woodstock H. S.
- Matthew Young, St. Charles East H. S.
- Renee Straub, Thayer Hill M. S. in Naperville Dist. 204

NEW DEGREE FOR TEACHERS!

Integrated Technology and Engineering to Advance Math and Science (ITEAM)

Word has just been received that a grant for \$1,000,000 over three years has been awarded to Northern Illinois University in conjunction with Harlem USD122 and West Aurora USD129 for the purpose of developing a new master's degree for teachers in engineering technologies in the CEET. Personnel on the grant include our mathematics education professor Alan Zollman along with Mansour Tahernezehadi (Assoc. Dean CEET), Promod Vohra (Dean CEET), Penny Billman (NIU Outreach), Kathy Kitts (CLAS), Sharon Smaldino (COE), Carla Shaw (COE), Cecil Smith (COE), Regina Rahn (CEET), Michael Hajishiekh (CEET), Pradip Majumdar (CEET), Andrew Otieno (CEET), and Denise Cesarotti (CEET).

The proposed master's degree program meets the endorsement requirements at the middle school level for industrial technology and at the high school level for technology education. It also should appeal to mathematics and science teachers wanting to expand their applied knowledge in the frontier technologies. The integration of pedagogy and content, the use of action research and internships with working professionals in the field, the incorporation of frontier technology and innovative instructional technology, the attention given to adolescent identity development and career pathways, the professional dissemination of the LEA teacher participants' research, the integration of CTE and college-preparation programs, as well as other components of this project should lead to enhanced teaching quality and teacher leaders.

The grant is funded through the Illinois State Board of Education from the U.S. Department of Education.

Colloquium Speakers in 2006-2007

Speakers from outside NIU provide intellectual stimulation for faculty and advanced students. Students are exposed to other experts in fields of faculty interest and hear about current research activities. This year's list with the speaker's home institution and talk title follows.

Moody Chu, North Carolina State University, "Total Decoupling of a Complex System: Structure Preserving Isospectral flows for Quadratic Pencils"

Paul-Hermann Zeischang, University of Texas at Brownsville, "Association Schemes All Elements of Which Have Valency 1 or 2"

Bao Qin Li, Florida International University, "On Equations Over Function Fields"

Amanda Knecht, Rice University, "Interpolation on Rational Surfaces"

Eduard Kirr, University of Illinois, "Soliton Dynamics in Nonintegrable Schroedinger Equation"

Chung-Chun Yang, The University of Hong Kong, "On The Existence of Meromorphic Solutions of $P(z, f, g) = 0$ "

Jorge Nocedal, Northwestern University, "Numerical Optimization, Equilibrium and Games"

Tuen Wai Ng, The University of Hong Kong, "Solving Non-linear Differential Equations by Nevanlinna Theory"

Vadim Olshevsky, University of Connecticut, "Quadiseparable Matrices and Polynomials"

John R. Graef, University of Tennessee at Chattanooga, "A Boundary Value Problem for a Wing in an Air Flow"

Doug Arnold, Director, Institute for Math and Its Applications, "The Geometrical Basis of Numerical Stability"



22nd annual NIU MATH CONTEST

The 22nd annual Northern Illinois University Mathematics Contest was held on March 21, 2007. Marcus Guethle, a senior mechanical engineering and mathematical sciences (applied math) double major from North Aurora, took first place. Guethle finished third in the 2006 competition. Alex Kuzmanoff, a senior mathematical sciences (applied math) major from Grayslake, came in second; and Christopher Mueller, a junior mathematical Sciences (math education) major from Franklin Park, was third. Awards of \$75, \$50, and \$25, for first, second, and third place, respectively, were recognized at the Department of Mathematical Sciences' Awards Ceremony and Reception in April.

As in previous years, the contest exam was open to all full-time undergraduates at NIU. Each contestant turned in solutions to a choice of six out of 11 problems. Freshmen and sophomores had fewer restrictions on their choices than did juniors and seniors.

Professors Harvey Blau and Gleb Sirotkin supervised the contest. Problems on the exam ranged from high school level to linear algebra, differential equations, and advanced calculus.



**CALLING ALL
MATH
TEACHERS!!!**

Under the theme "Math Everywhere", the 58th Annual Meeting and Conference of the Illinois Council of Teachers of Mathematics is to be held October 18-20, 2007, in Peoria, Illinois. NOW is the time to aim to attend, so that you may grow professionally-sharing ideas with other teachers, making new friends, and renewing acquaintances with "old" classmates (like those you knew in Math 410 and Math 412). See you there?

Sriraman Earns Early Career Scholar Award!

Bharath Sriraman (Ph.D., 2002) has been named the School Science and Mathematics Association's Outstanding Early Career Scholar Award Recipient for 2007. The School Science and Mathematics Association (SSMA) began in Chicago in 1901 and is dedicated to improving instruction at all levels in and between science and mathematics relating to (1) teacher education, (2) research, and (3) K-12 teachers. Its primary work and publications address the needs of all of those involved in the science and mathematics teaching and learning processes.

Since earning his degree, Bharath's scholarly work has been very prolific and includes numerous refereed journal articles, papers in conference proceedings, major book reviews, chapters in research handbooks, and editorial work for journal issues and research monographs. And yes, he does have a family and a full-time position in the mathematics department at the University of Montana. Currently, he is also the associate editor of *The Handbook of International Research in Mathematics Education, 2nd Edition*, and the editor of the *International Journal on Mathematics Education* [formerly *Zentralblatt fur Didaktik der Mathematik*].

Professor Alan Zollman (a co-chair of Bharath's dissertation committee with Professors Robert Wheeler and Harvey Switzsky) writes: "When Bharath was my graduate student, I viewed him as extremely gifted. But I worried that he had no U.S. public school experience. How could he research and write about mathematics and science learning credibly if he never was a classroom teacher? So, Bharath moved his family to a small rural school district in Ottawa, Illinois, and taught high school mathematics for two years, while writing his grounded-in-theory dissertation. When Bharath graduated, I worried that he may become an "ivory tower" professor—one only caring about his research niche. I am pleased that Bharath not only publishes research, but also practitioner articles for teachers. I particularly am pleased he has taken on the position of editor for *The Montana Mathematics Enthusiast*, the official journal of the Montana Council of Teachers of Mathematics, as a service to the teachers in his adopted state."

NEW MASTER'S DEGREE FOR MIDDLE SCHOOL TEACHERS!

Professor Helen Khoury and Professor Mary Shafer, mathematics educators in the Department of Mathematical Sciences at Northern Illinois University, have recently been awarded a grant through the Illinois State Board of Education from the United States Department of Education for nearly \$1,000,000 over four years. Entitled Excellence in the Middle: Enhancing Mathematics Pedagogy with Connections in Science and Engineering, the grant is a Mathematics and Science Partnership with the Rockford School District. In this project, Professors Khoury and Shafer will develop and implement a master's degree program for middle school mathematics teachers that will include professional leadership experiences and lessons with focus on frontier mathematics, science, and technology.



Alumni of 25 Years

Congratulations on the 25th anniversary of the class of 1982. Here is a listing of the class of 1982 and their current hometowns. If you can update some of the information, we would appreciate your help.

Mr. Byron Justin Anderson, Lake Zurich, IL
Mr. Vernon C. Begitschke, Crystal Lake, IL
Ms. Valerie Bell, Haddonfield, NJ
Mrs. Anita M. Bernard, Edinburg, TX
Mr. Jonathan R. Dudman, Glen Ellyn, IL
Mr. Thomas B. Foulkes, Simpsonville, SC
Mrs. Patricia Jane French, Montgomery, IL
Mrs. Shirley Ann Gibson, Louisville, OH
Mr. William S. Grzelak, Schaumburg, IL
Mr. Mohd Nasir Hashim, Norwalk, CT
Mr. Khalid Abu Hassan, Houston, TX
Mr. E. Gregory Higgins, Albuquerque, NM
Mr. Jeffrey C. Kallenbach, Adrian, MI
Mr. Robert Edward Kelly, State College, PA
Ms. Deborah D. Kimminau, Downers Grove, IL
Mr. Jerrold M. Losch, Round Lake, IL
Ms. Zurina Mahmood, Scituate, MA
Ms. Cyndee D. Margules, Lemont, IL
Mr. Peter G. McMahon, Crystal Lake, IL
Mr. Albert Natian, Glendale, CA
Mr. John Eric Nelson, Oswego, IL
Mrs. Linda Normann, Carol Stream, IL
Mrs. Nancy Lee Oliver, Elgin, IL
Ms. Lynda M. Pack, Seattle, WA
Dr. Daniel John Pierce, Woodinville, WA
Mr. Barry Alan Poll, Naperville, IL
Mr. John Louis Reno, Albuquerque, NM
Mr. Raymond C. Ruhl, North Aurora, IL
Mrs. Charlene Hubbard Ryan, Elburn, IL
Mrs. Christy Lee Schilling, Dillon Beach, CA
Ms. Tammi Sieder, Torrance, CA
Mr. Robert P. Stackhouse, Saint Charles, IL
Mrs. Nancy Lee Stapp, Tinley Park, IL
Mr. Raymond Paul Szewczyk, Cary, IL
Mr. Bruce Alan Thornquist, Downers Grove, IL
Mr. John Joseph Wuich, Gurnee, IL
Ms. Debora Jean Zanon, Cypress, CA

Officers of the Department of Mathematical Sciences

Chair



Professor William Blair

Assistant Chair



Professor John
Wolfskill

Director of Undergraduate Studies



Professor Zhuan (John)
Ye

Director of Graduate Studies



Professor Bernard
Harris

Coordinator of Applications Involvement

Professor Hamid Bellout

Director of the Division of Statistics



Professor Rama
Lingham

Coordinator of Teacher Certification



Cindy Stecher

Systems Manager

Eric Behr

2007 ABEL PRIZE

The Abel Prize, the mathematician's version of a Nobel Award, was awarded in Oslo on May 22, 2007, by King Harald of Norway to Srinivasa S. R. Varadhan. The Norwegian Academy of Science and Letters cited Professor Varadhan "for his fundamental contributions to probability theory and in particular for creating a unified theory of large deviations." Professor Varadhan is on the mathematics faculty of the Courant Institute of Mathematical Sciences, New York University, where he started as a postdoctoral fellow from 1963 to 1966. He was born in Madras (Chennai), India, and received his B.Sc. and M.A. from Madras University. His Ph.D. from the Indian Statistical Institute, Calcutta, was obtained with the distinguished Indian statistician C. R. Rao as his thesis adviser. The Abel Prize carries a cash award of about \$875,000.



Srinivasa S. R. Varadhan, winner of the 2007 Abel prize. Image © Cheryl Sylvant/The Abel Prize/The Norwegian Academy of Science and Letters.

April 15th and Euler



Leonhard Euler (1707-1783)

Everyone who has received a mathematics degree recognizes the name of Euler (even if they badly mispronounce it). Leonhard Euler was truly one of the greatest mathematicians of all time—one whose stature is to be compared with people like Newton, Einstein, and Galileo. April 15, 2007, marked his 300th birthday, and celebrations have been going on all year. Euler was born in Basel and lived and worked for many years in St. Petersburg. Basel had a month-long celebration in May/June, and St. Petersburg had a special Festival in his honor June 10-12, 2007, but has also had many celebratory events in May and June in recognition of his work. ALL the major mathematics professional organizations have had or will be having major events to mark Euler's influence. During his life Euler published some 560 books and papers and left many unpublished manuscripts at his death in 1783. As Dirk Struik's book notes, "He made signal contributions in every field of mathematics which existed in his day." The Math. Association of America has just published FIVE new books on Euler, which can be ordered through www.maa.org.

Coming soon: Center for Middle Level Education

Professor Helen Khoury of the Department of Mathematical Sciences and Professor Carla Shaw of the Department of Teaching and Learning in the College of Education devoted major professional time this past spring as co-chairs of a Middle School Task Force. Arising from their efforts will soon be a Center for Middle Level Education at NIU, which should be a great resource for middle school educators in the northern Illinois region.

NUMB3RS Wins Award

The popular television series NUMB3RS, said to be watched each Friday night by nearly 12 million viewers, has received recognition by the National Science Board. The board has cited the show and its creators, Cheryl Heuton and Nick Falacci, for "their contributions toward increasing scientific and mathematical literacy on a broad scale" and granted them this year's group Public Service Award.



Congratulations to our Newest Ph.D.s

Somewhat belated, but most sincere, congratulations to Geof Apel on completion of his Ph.D. Geof's dissertation, "Triple and Quintriples Product Identities," was written under the direction of Professor Richard Blecksmith. Professor John Brillhart of the University of Arizona served as external examiner. Geof is now on the faculty at Aurora University.

Congratulations to Dan Frobish, who completed his Ph.D. under the direction of Professor Nader Ebrahimi. The external examiner for Dan's dissertation, "Estimation of Change Points in Recurrent Events Models," was Syed Kirmani at the University of Northern Iowa. Dan is a faculty member at Grand Valley State University in Allendale, Michigan.

Hearty congratulations to Sanjoy Brahma on completing his Ph.D. dissertation under Professor B. N. Datta. Sanjoy's work, entitled "Robust and minimum norm partial quadratic eigenvalue assignment problems: theory and computations," was reviewed by Professor S. P. Bhattacharyya of Texas A & M as external examiner.

Warm congratulations go also to Robert Hein for his dissertation, "P-Polynomial Table Algebras and Distance Regular Graphs," written under the direction of Professor Harvey Blau. External examiner for Bob's work was Professor Paul Terwilliger from the University of Wisconsin at Madison. Bob has a faculty position at the University of Wisconsin-Rock County.

Jeff Kallenbach wrote his Ph.D. dissertation under the direction of Professor Bernard Harris. Congratulations go to Jeff for his work, "Spectral Concentration in the Sturm-Liouville Differential Equation," for which Professor Daphne Gilbert of the Dublin Institute of Technology served as external examiner. Jeff has a faculty position at Siena Heights University in Adrian, Michigan.

Congratulations to Sourav Santra, who completed his dissertation under the direction of Professor Sudhir Gupta. His Ph.D. work, entitled "Some contributions to the design and analysis of crossover experiments," had Professor Subir Ghosh of the University of California at Riverside as external examiner. Sourav has taken up an appointment at Bristol-Myers-Squibb in New Jersey.

Finally, we have two students who defended their dissertations in the first half of the summer of 2007: Cathy Poliak completed her dissertation, "Observed Confidence Intervals for Regression Parameters," under the direction of Professor Alan Polansky. Michael Ernst of St. Cloud State University served as external examiner. Best wishes to Cathy as she takes up an appointment at the University of Wisconsin-Milwaukee. Robert Cappetta's dissertation, "Reflective Abstraction and the Concept of Limit: An Experimental Study to Improve Student Performance in College Calculus by Promoting Reflective Abstraction through Individual, Peer, Instructor and Curriculum Initiatives," was written under the direction of Professor Alan Zollman. External examiner for Bob's dissertation was Professor Patrick Thompson of Arizona State University. Warm congratulations to Bob as he continues his appointment at the College of DuPage.

MATH CLUB/MAA STUDENT CHAPTER

Officers for this year's club were Carrie Jacobs (president), Andrew Vincent (vice president), and Brittany Debrauwere (secretary).

A variety of activities were held throughout the year with weekly meetings on Monday nights at 6 p.m. Once again the panel of former student teachers was presented in conjunction with the Math 412 course. Also, a panel discussing aspects of applying for graduate schools brought interesting information. Movie nights, including the viewing of "Proof," drew interest, and there were some puzzle nights. Attendance at the annual meeting of the ISMAA, this year held at Western Illinois University in Macomb, was a highlight for the year; the group who drove down together stayed at a motel near Macomb and enjoyed participating in the student mathematics contest and pizza party. MAA President Joe Gallian's talk on "Using Groups and Graphs to Create Symmetry Patterns" was a special treat, but also enjoyed were the talks by Jean Pedersen of Santa Clara University on "Role of Paper-Folding in Number Theory" and by Joan Hutchinson of Macalester College on "Art Gallery Theorems." Professor Richard Blecksmith continues to work as an adviser to the club/chapter.

NEWS ACCORDING TO YOU

Michael A. Stueben ('72) reports living in Falls Church, VA, and having received an MAA 2006 Edyth May Sliffe Award for Distinguished Teaching of Mathematics. He is the author of an MAA 1998 publication, "Twenty Years before the Blackboard." Also he relates that he is married to Diane Sandford, a former math. dept. secretary, who is director of operations for the Washington, D.C., law firm of Fried, Frank, Harris, Shriver & Jacobson LLP. Mike advises all to read Whitehead's "Aims of Education."

Michael Timm (M.S. '99) married Alicia Stephens in August 2006 and reports a Carol Stream address. He reports fond memories of two years at NIU as an instructor 1999-2000 and 2000-2001 and sends special greetings to all.



Kristina (Tina) Hauch Brown ('06) lives in Rockford, having married 2006 graduate in Spanish Ryan Brown in December 2005. She accepted a full-time position with Rockford Area Young Life, an international youth outreach ministry.

Our deepest sympathy extends to Kevin Sommerfield ('98) whose wife passed away in April from injuries received in an auto accident. Tara Lee Dirst was married to Kevin in 1998, and they lived in DeKalb, where Tara worked at the NIU Library. Their daughter Kiera Jaye also survives.

Annettee Preis Johnson Dasko ('79) and daughter Kathleen stopped for a visit in April. Annette, her husband, and children now reside in Westmont.

Mary Dever (Ph.D. '83) has become a trend analyst for Caremark, a pharmacy benefit manager in the Chicago area. She provides analytical support to account teams and works directly with clients.

Susan Talarico (Ph.D. '89) is an assistant professor of mathematics at the University of Wisconsin-Stevens Point, where she coordinates the Math Help Room. In spring 2006 she was awarded an NSF grant with which she started a GEMS Club (Girls Engaged In Math & Science). Son Nicholas received his B.S. in broadcast journalism from the Univ. of Illinois in Champaign and took up a full-time position at the TV station there. Susan also has daughters Anya (aged 12) and Lenora (aged 10).

Jane Turnbull (Vallejo) ('91) now resides in Atlanta, GA. She was recently promoted to assistant vice president of consumer solutions at Equifax. She manages a team of statisticians that builds credit scoring models for a large number of financial services companies. She and her husband, Kris, have three children--Matthew (5), Laura (3), and Christine (3).

James F. Ulrich ('43) of Arlington Heights, IL, writes of his surprise to still know names of some persons appearing in our last newsletter. He also notes that two of his four children graduated from NIU. As Lawrence Welk used to say--wonderful, wonderful!

Jill Horn ('87) sent a note telling us that she is a high school math teacher at the Christian Academy of Guatemala in Guatemala City. She also was the featured person in a video related to her work put out by the Lutheran Church Charities Fund.

Matthias Weiss (Ph.D. '00) recently accepted an offer by the Hotchkiss School in Connecticut. Hotchkiss, a prep school, seeks to expand its upper-end math program for students who have completed calculus in the 10th grade. Matt is also likely to coach field hockey there!

John Diamantopoulos (Ph.D. '96) has just become a tenured associate professor in the Dept. of Mathematics and Computer Science at Northeastern State Univ. in Tahlequah, OK. As first vice-chair of his MAA Section, John had the joy of hosting and running the spring section meeting. Now he has become chair of the OK-AR MAA Section!

Professor Zhuan Ye was pleasantly greeted by a number of NIU graduates when he joined the

Advanced Placement Calculus grading team in June 2007. Among them were John Diamantopoulos (noted above), Keith Chavey (B.S. '85), who is on the faculty at the University of Wisconsin at River Falls, and Kevin Haerten (Ph.D. '04) and Jason Thrun (Ph.D. '96), both of whom are on the faculty at the University of Wisconsin at Platteville.

Sheryl Wills (Ph.D. '89) is currently mathematics department chair at the University of Wisconsin at Platteville.

David Klanderman (Ph.D. '93) is now a full professor in the mathematics department at Trinity Christian, Palos Heights, IL.

Jody Yednock ('07) was recognized by *ESPN the Magazine* to the 15-member First Team Academic All-American, an NIU first. In her senior year, gymnast Jody was awarded a \$1,000 Bob James Memorial Scholarship from the MAC. Way to go, Jody!

Website address for your professional organizations:

American Mathematical Society
e-math.ams.org/

The Mathematical Association of America
www.maa.org/

Society for Industrial and Applied Mathematics
www.siam.org/

American Statistical Association
www.amstat.org/

National Council of Teachers of Mathematics
www.nctm.org/

Illinois Council of Teachers of Mathematics
www.ictm.org/

Web Page

Look for announcements regarding the latest department activities at the website



www.math.niu.edu

Also full of useful information is the statistics division page at

www.math.niu.edu/StatDiv



If you would like to see the newsletter in color, please visit:

www.math.niu.edu/alumni/