

OFFICERS OF THE DEPARTMENT

Chair

Prof. Bernard Harris

Assistant Chair

Prof. John Wolfskill

Director of Undergraduate Studies

Prof. Qingkai Kong

Director of Graduate Studies

Prof. Jeffrey Thunder

Director of the AIC

Prof. Hamid Bellout

Director of the Division of Statistics

Prof. Alan Polansky

Coordinator of Teacher Certification

Renee Olsen

REACHING US

By mail:

Northern Illinois University
Department of Mathematical Sciences
Watson Hall 320
DeKalb, IL 60115

By fax:

815-753-1112

By phone:

815-753-0566 (Math)
815-753-6714 (Statistics)

By email:

alumni@niu.edu

On the web:

www.math.niu.edu
www.niu.edu/stat

On Facebook:

Northern Illinois University-Mathematical Sciences

Chair's Corner



The last few years have been eventful ones and the past year has been no exception to this pattern.

The university is concluding a year-long Program Prioritization Process where all of the programs at NIU are evaluated and identified as being eligible for: increased resources, maintained resources, diminished resources, reorganization, or elimination. Roughly 20% of programs were placed in each of the five categories. I am happy to report that all of the department's programs: BS, both MSs, and PhD were marked as candidates for increased resources. At a time of severe budgetary constraints, it remains to be seen what extra resources will be forthcoming, but it does represent a vote of confidence in the department and an appreciation for the quality of its programs.

As in each of the years that I have been chair, there have been a number of retirements. Tributes and appreciations appear later in this newsletter, but I note that retirements include Zhuan Ye, the former Graduate Director; Greg Ammar, also a former Graduate Director; and Sanjib Basu, the Director of the Division of Statistics. Zhuan leaves to take up the position of Mathematics Department Chair at the University of North Carolina – Wilmington, and Sanjib is moving to the University of Illinois – Chicago.

Another departure is Alex Radosaljevic, who worked with Renee Olsen in teacher certification. Alex had not worked in the department for very long, but had worked well with students and will be missed.

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Amidst the talk of departures, I am happy to welcome back three graduates of our programs. Kristin McCullough is joining the Division of Statistics as a visiting assistant professor. Kristin obtained her PhD in 2013 under the direction of Nader Ebrahimi. Kevin Sommerfield joined the department in the Spring of this year as an instructor. Mike Mutersbaugh joined us last fall.

Speaking of new arrivals, Jeff Thunder takes over from Zhuan Ye as Graduate Director. This is a challenging position and one that is essential for the smooth running of the department.

Another new arrival is Dr. José Yunier Bello Cruz who joins us in the Fall of 2016. Dr. Bello Cruz works in numerical optimization and is a new assistant professor. He is a native of Cuba and joins us from the Federal University of Goiás in Brazil where he has worked since earning his PhD at Instituto Nacional de Matemática Pura e Aplicada in Rio de Janeiro. Dr. Bello Cruz has also been a postdoctoral research fellow at the University of British Columbia.



In October, the department once again had a booth at the university's STEMfest event. This annual event is always fun and, once again, the department's exhibit was one of the most popular. The puzzles are always popular, both with visitors and with people from other stands. If you find yourself near DeKalb at the time of STEMfest, please come to the Math booth and introduce yourself; we are always happy to talk to alumni.

In March, the department again hosted the ICTM High School Math Contest and, as always, it was a huge success. This year there were 16 schools in

attendance, which made the organization of the event a huge undertaking. The organizers were up to the challenge and it ran flawlessly.

We want to stay in touch with our graduates, so please write to me with news and views. The Department also has a Facebook page, <http://www.facebook.com/pages/Northern-Illinois-University-Mathematical-Sciences/165834626819079>. Please check often and post information about your doings. --- B. Harris

AIC Activities

Consistent with the math department goal of being an integral participant in the regional high tech economy, this last summer it teamed up again with local industries. These partnerships offered students internships that provided them a meaningful learning experience and a chance to apply their knowledge and expertise to solve significant problems of interest to these industries.

Specifically:

1. Sarah Wesley and Suvo Chatterjee are interning at a marketing/research company, Inte Q. During their internship, they will participate in analyzing so called "Big Data". Inte Q's motto is 'We Create Customer Love'. Their goal is to help make that happen.
2. Scott Rexford is collaborating with Professor Bela Erdelyi from the NIU Physics department.
3. Tatiana Dmitrieva is interning at IMO (Intelligent Medical Objects), which is a company in the medical informatics field. Their motto is 'IMO Makes Sense Out of Complicated Clinical Information'. Tatiana will bring in her expertise and knowledge to contribute towards that goal and she

will learn from the many experts at IMO how to apply her knowledge to concrete situations.

Our Newest PhDs

Steven Kifowit (August, 2015) wrote his dissertation, *A Divide-and-Conquer Split Schur Algorithm*, under the direction of Professor Greg Ammar. He now holds a position at Prairie State College in Chicago Heights, Illinois.

Tyler Mitchell (August, 2015) wrote his dissertation, *Fusion Rings with Degrees 1 and 4*, under the direction of Professor Harvey Blau. He now holds a position at Muhlenberg College in Allentown, Pennsylvania.

Herman Schaumburg (August, 2015) wrote his dissertation, *Combinatorial Interpretations of Continued Fractions with Multiple Limit Points*, under the direction of Professor Doug Bowman. He now holds a position at Piedmont Community College in Roxboro, North Carolina.

Benjamin Wallis (May, 2016) wrote his dissertation, *The Almost Invariant Halfspace Problem*, under the direction of Professor Gleb Sirotkin. He was awarded a PIMS Postdoctoral Fellowship.

The 31st Annual NIU Math Contest

April 7, 2016

Press Release: Winners Announced for the 31st Annual NIU Math Contest

Four students competing for the first time were the winners in the 2016 Northern Illinois University

Mathematics Contest, held on March 2. Rebecca Dziubla, a junior **Mathematical Sciences (Mathematics Education)** major from Roselle took the \$100 first prize. Heidi Zipoy, a junior **Mathematical Sciences (Mathematics Education)** major from Elgin, was second, and won \$75. There was a tie for third place between Jordan Rucinski, a junior **Mathematical Sciences (Applied Mathematics)** major from Esmond, and Gregory Solomon, a sophomore **Mechanical Engineering** major from Bartlett. They will each receive \$50. The winners will be recognized at the Department of Mathematical Sciences' Awards Ceremony and Reception on April 17.

The annual Northern Illinois University Mathematics Contest has a format where freshmen and sophomores have a fair chance to compete with juniors and seniors. The underclassmen have fewer restrictions on their choice of problems to attempt. The contest is open to all full-time undergraduates at NIU. Each contestant turns in solutions to a choice of six out of eleven problems. Topics this year ranged from logic puzzles, algebra, and geometry, through calculus and linear algebra. Professors Harvey Blau, Y.C. Kwong, Deepak Naidu, and Gleb Sirotkin supervised the competition.

The following logic brainteaser was a popular choice among the contestants:

Arlo, Bruno, and Carlo took their girlfriends to a dance. At one time, Elsa was dancing with Arlo, Dakota was dancing with Fiona's boyfriend, Bruno was dancing with Carlo's girlfriend, and Carlo was dancing with Arlo's girlfriend. Find who was dancing with whom and match up each girlfriend and boyfriend. Explain your answer.

Here is a problem that combined calculus and geometry:

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Let $f(t)$ and $g(t)$ be differentiable functions such that (derivatives) $f'(t) = 2g(t)$ and $g'(t) = -3f(t)$ for all real numbers t . Show that for all t , the points $(f(t), g(t))$ lie on an ellipse.

For more information, contact
Harvey Blau (815-753-6772) hblau@niu.edu

New Hires

The department welcomed two new instructors during the past year:

Michael Mutersbaugh is a graduate of the department's MS program. He has taught classes in the CHANCE program, together with trigonometry and calculus.

Kevin Sommerfield returns to the department after getting his MS in 1998 and teaching at a number of colleges in the region. Kevin has taught in the CHANCE program and calculus.

The department is very proud of the new arrivals and wishes them well.

New Roles

Jeff Thunder takes charge of the department's graduate program as the new graduate director. Jeff joined the department in 1998 and brings a wealth of experience to the position.

Alan Polansky takes over the Division of Statistics as interim director while a search is conducted for a new permanent director.

Dan Grubb has assumed the role of technical director for the department's Linux-based

computers. Dan is also the resource person for computers in general in the department.

Paul Dawkins who works in Mathematics Education, has been promoted from assistant professor to associate professor with tenure effective August 16, 2016.

Ilya Krishtal has been promoted to full professor with effect August 16. Ilya came to the department in 2006 as an assistant professor and has quickly established himself as an active and successful researcher.

Zhuan Ye Retires

Professor Zhuan Ye retired in June 2016. Zhuan came to NIU upon receiving his PhD in 1992 from Purdue University. He became a full professor in 2003. During his 24 years on staff, he served a 3-year term as Director of Undergraduate



Studies and has just completed six years as Director of Graduate Studies (DGS). Zhuan directed three PhD dissertations and served on five dissertation committees prior to the huge number of such committees on which he served as DGS. He served a three-year term on the Board of Directors for the Illinois Section of the Mathematical Association of America during which he was program chair for one year. Zhuan's first-rate teaching was recognized when he was nominated by the College of Liberal Arts and Sciences for the NIU Excellence in Undergraduate Teaching Award.

Zhuan's happy smile, upbeat attitude, research expertise, and teaching presence will all be missed, but his retirement will not begin by lying on the

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beach! On August 1, he takes over as chair of the mathematics department at the University of North Carolina at Wilmington (an undergraduate state school near the Atlantic Ocean). Many NIU students and faculty have benefited from Zhuan's work at NIU and wish him happy days in the years ahead.

Greg Ammar Retires

Professor Greg Ammar retired from the department in December of 2015. He came to NIU in 1985 after a PhD at Case Western under the supervision of Clyde Martin and a visiting position at the University of Kentucky. Greg was graduate director from 1997 to 2000.



Greg worked in numerical linear algebra; specifically on problems related to Hessenberg Matrices and on algorithms for solving Toeplitz systems of linear equations.

Sanjib Basu Retires

Professor Sanjib Basu came to NIU in 1996. He served as the director of the division of statistics between 2015 and 2016 and had been director of graduate and undergraduate studies in the division. His research was often



supported through external funding and during his time at NIU he became a fellow of the American Statistical Association and a Presidential Research Professor. Sanjib leaves to take up a position at UIC.

News From You

Kristina Brown (nee Hauch) (BS '06) and her husband, Ryan, announce the adoption of their daughter, Cora Jane, on June 18, 2015.

Wei Chen (MS '13) obtained his PhD in Economics from NIU in 2014 and is now an assistant professor at Lewis University in Romeoville, Illinois.

Andrew Cordell (BS '08) is a past winner of the MM Wheeler Teaching Award and is a high school math department chair in Milwaukee, Wisconsin.

Jerry Lee Hathaway (MS '59) retired from teaching in 2006 and now owns a construction company and is chairman of four scholarship committees. He recently celebrated his 50th wedding anniversary.

Patricia Ann Miller (nee Dugas) (BS '84) was an MD at White Plains Hospital in New York and moved to Columbus, Georgia, after retirement.

Miguel Valdivia (BS '06) was promoted to the rank of Master Sergeant in the Army Reserves and works as a claims and appeals adjuster for Veterans' Affairs.

Happy Events

The newsletter is happy to report on three births and one wedding in the department during the past year.

Mr. Jon Kugel and his wife Danielle announce the birth of their third daughter, Carina Marie Kugel, on May 31, 2016.

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Professor James Benson and his wife Corinna announced the birth of their fourth son, Finn David Stanley Benson, on January 3, 2016.

Mrs. Jeanne Padilla and her husband Eric announced the birth of their son, Damon John Padilla, on July 6, 2016.

The wedding was between Professor Alastair Fletcher and Katherine Plikuhn who obtained her MS in the department in 2015. They wed on March 12, 2016.

Congratulations to all!

The 36th Annual ICTM High School Math Contest

February 25, 2016

Press Release: NIU to hold math contest for high school students

The NIU Department of Mathematical Sciences will host a regional mathematics competition from 9 a.m. to 3 p.m. Saturday, Feb. 27 at DuSable Hall and the Altgeld Auditorium.

More than 400 students from 16 high schools will participate in the Illinois Council of Teachers of Mathematics (ICTM) Regional High School Mathematics Contest.

Individual and team competitions will be held in a number of subject areas, including algebra, geometry, and pre-calculus. Prizes will be awarded to both individuals and teams in each subject, and also to the best all-around performing schools. Winners will then compete in the statewide competition later this spring.

Participating high schools include: Antioch, Crystal Lake Central, Crystal Lake South, Grant Community, Grayslake Central, Grayslake North, Kaneland, Lakes Community, Metea Valley, Neuquea Valley, Oswego, Oswego East, St. Charles East, St. Charles North, Waubonsie Valley, and West Aurora High School.

This will be the 36th year of the ICTM High School Mathematics Contest, and NIU has hosted all but one of these ICTM events.

“It is an honor for us to host this event. The participating teams represent close to 40,000 high school students,” says Anders Linnér, director of the ICTM contest hosted by the Department of Mathematical Sciences. “They invest a lot of time in preparation for this contest throughout the academic year, and now they have a chance to measure their skills against a large number of equally talented students across the region.”

As is tradition, the chair of the Department of Mathematical Sciences, Bernard Harris, will be handing out the awards at the end of the ceremony scheduled to start at 2:00 p.m. at Altgeld Auditorium.

Alumni of
25 Years



Congratulations on the 25th anniversary of the class of 1991. Here is a listing of the class and their current hometowns. If you can update any information, we would appreciate your help.

Ms. Lisa A. Barsotti, Addison, IL
Mrs. Amy Bokowy, Marengo, IL
Mr. Peter R. Ceresa, Naperville, IL
Mr. William Chow, Hoffman Estates, IL
Mrs. Bethany S. Church, Decatur, IL
Mr. Steven D. Creech, Hoffman Estates, IL
Mrs. Kathy K. Durham, Battle Creek, MI
Mr. Michael W. Dworak, Greendale, WI
Mr. William E. Eschman, Crystal Lake, IL
Mr. Robert S. Fabris, Ottawa, IL
Ms. Lauren S. Fern, Stevensville, MT
Mrs. Linda S. Flisk, Tinley Park, IL
Mr. Sanford P. Gayle, Raleigh, NC
Mrs. Barbara L. Genovese Johnson, Bloomington, IL
Mr. Barry M. Goldufsky, Vernon Hills, IL
Mr. Michael J. Grady, Rockford, IL
Ms. Jodi A. Grant, Cary, IL
Dr. Wenge Hao, Plano, TX
Mr. James J. Heimlich, Orland Park, IL
Mr. Gregory R. Held, Hinsdale, IL
Ms. Beth A. Higdon, Richardson, TX
Ms. Denise Hill, Genoa, IL
Mr. David M. Hostman, Cary, IL
Mrs. Cathryn D. Krull, North Aurora, IL
Mr. Steven M. Kuduk, Andover, NJ
Mrs. Amy L. Landolt, Evanston, IL
Mr. William R. Luebke, West Chicago, IL
Mrs. Lisa D. Luna, Orland Park, IL
Mr. Jeffrey S. Luteyn, Elgin, IL
Mrs. Jocylene Macaisa, Inverness, FL

Mrs. Denise R. McEntee, Apex, NC
Mrs. Amy McNulty, Neenah, WI
Ms. Laura A. Middaugh, Crystal Lake, IL
Ms. Eilene J. Mika, Streamwood, IL
Mrs. Lisa Marie Mitchell, Winnebago, IL
Ms. Katherine L. Morrison, Apopka, FL
Mr. Russell A. Ogle, Saint Charles, IL
Mr. Geoffrey S. Peterson, Bolingbrook, IL
Ms. Jodi F. Pressendo, Orland Park, IL
Mr. John P. Pripusich, Downers Grove, IL
Mr. James M. Raclaw, Chicago, IL
Mr. David J. Rapinchuk, Downers Grove, IL
Ms. Julie Ann Satterfield, Kenosha, WI
Dr. Vicki J. Schell, Pensacola, FL
Mr. Zhenming Shun, Bridgewater, NJ
Mr. Charles T. Sloka, Buffalo Grove, IL
Mr. Gregory G. Smith, Skokie, IL
Mr. Scott E. Smith, Downers Grove, IL
Mrs. Jolanda Staten, South Elgin, IL
Mr. Jason W. Stedl, Antioch, IL
Mr. Jon Sundberg, Gurnee, IL
Mr. John W. Temple, Florissant, MO
Mr. Benjamin J. Thielen, Machesney Park, IL
Mr. John P. Thomas, Gurnee, IL
Ms. Jane Turnbull, Atlanta, GA
Mrs. Darcy D. Ullman, Carol Stream, IL
Mrs. Janet Vollmert, Lake In The Hills, IL
Ms. Kathleen M. Vrba, Cary, IL
Mrs. Donna M. Wescoe, North Wales, PA
Mrs. Lanette M. Wolf, Annawan, IL

2015 Departmental Awards



The 38th annual Award ceremony was held on April 17, 2016, in the Holmes Student Center Skyroom. At the reception, Department Chair Bernard Harris and Director of Statistics Sanjib Basu presented the following awards and scholarships.

Incoming Freshman Scholarship

Matthew Swed

Clarence Ethel Hardgrove Scholarship

Guillermo Benitez	Rebecca Dziubla
John Gross	Taz Kuster
Cassandra Mohr	Sinong Ou
Melissa Peisker	Sean Smart
Marium Yousuf	

Joseph C. and Marion E. Huber Memorial Scholarship

Christine Anderson	Michael Scott
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Michael J. Krowka Scholarship

Brett Speiser

Tatsuji & Mami Kambayashi Scholarship

Isaac Truckenbrod

Gail Masters Gallagher Memorial Scholarship

Atakora Agoro	Kevin Bates
Jacob Kelzer	Qijing Yu

Dale G. Jungst Memorial Scholarship

Jaclyn Fowler	Dana Kallas
Jacob Kelzer	Nicholas Kristofer
Dana Lebrecht	Samuel Meier

Carol J. Feltz Scholarship

Jie Wang

Allstate Actuarial Scholarship

Courtney Hansen	Isaac Truckenbrod
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NIU Math Contest

Rebecca Dziubla 1 st Place	Heidi Zipoy 2 nd Place
Jordan Rucinski 3 rd Place	Gregory Solomon 3 rd Place

M.M. Wheeler Scholarship

Alexandra Elias	Jaclyn Fowler
Dana Kallas	Samuel Meier
Brett Speiser	David Steffens

M.M. Wheeler Teaching Award

Elysia Galvan	Andrew Hagberg
William Iwans	Angelika Krawiec
Tori Letizia	Mackenzie Lewis

Dorothy & Glenn Erickson Scholarship

Evelyn Youel

Donald R. Ostberg Award

Tatiana Dmitrieva	Sarah Wesley
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Certificate of Teaching Excellence

Glenn Harris

Outstanding Graduate Student Award

Rexford Akakpo	Sougata Dhar
Kaitlyn Monteer	

Honorable Mention Undergraduates

Andrew Cosmas	Ashley Cramer
William Iwans	Robert Jones
Russell Krause	Tori Letizia
Mackenzie Lewis	Ivan Ortiz
Shumaila Patel	Alexis Pleasant
James Stacey	

Honorable Mention Graduates

Rexford Akakpo	Todd Buretz
Saptarshi Chatterjee	Kristina Elliott
Nairita Ghosal	Alec Hub
Arnab Maity	Can Meng
Erina Paul	Scott Rexford

Certificate of Merit Undergraduates

Alec Krueger	Nicholas Ledonne
Joshua Nehnevaj	Alison Peisker
Jake Springer	Joseph Steinke

Certificate of Merit Graduates

Tatiana Dmitrieva	Philippe Dovoedo
Doug MacClure	Robert Marks
Kaitlyn Monteer	Daniel Stoertz
Benjamin Wallis	Yiqing Wang
Sarah Wesley	

Norma K. Stelford Memorial Scholarship

Steven Gorski	Luke Lacy
James Waterman	

Chair's Award

James Waterman

Director's Award

Robert Marks

Dean's Award

Robert Jones (Statistics)	Dana Kallas (Mathematics)
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