

Mathematics Alumni Newsletter



Winter 2010

Notes From The Chair

I'm pleased to let you know that the department continues to grow. From the time we became a separate department in the 2001-02 academic year when we had 16 undergraduate students and two graduate students, we have grown to 60 undergraduate and 17 graduate students.

A great deal of research activity continues and you can read about specific research areas and seminars, as well as download papers, at <http://math.du.edu/preprints.html>.

Our department continues to participate extensively in organizing, sponsoring and hosting conferences and workshops. Last summer we assisted in organizing and were the host or co-host organization for the Automated Deduction and its Application to Mathematics (ADAM 2009) Workshop, the Second Mile High Conference on Non-associative Mathematics and the Second Pingree Park Dynamics Workshop. The Nonassociative Mathematics Conference was attended by 58 researchers from 17 countries and the Pingree Park Workshop, held at the Pingree Park Campus of Colorado State University, had 36 attendees from eight countries. Nic Ormes from our department and Dan Rudolph from Colorado State University have been organizers of this event since its inception in 2008.

This coming summer, we are hosting the Great Plains Operator Symposium (GPOTS 2010). This major symposium, held on June 14 through 18, will feature a number of international speakers. More information about GPOTS 2010 can be found at www.gpots.org. We will also be assisting, along with Colorado State University, in the organization of another Pingree Park Dynamics Workshop.



Alvaro Arias

Two From Department Are Honored

The Mathematics Department was very well represented at convocation this past October as two members of our department were recognized for their service. The University Lecturer Award was presented to Rick Ball, and Don Oppliger received the Staff Advisory Council's Outstanding Service Award.

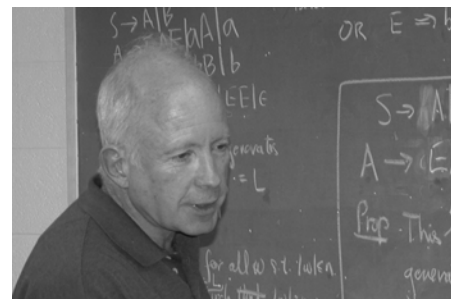
The **University Lecturer Award** recognizes "superlative creative and scholarly work. The lecturer is chosen without regard for time spent at the University or popularity as an individual or as a teacher."

Rick started teaching at DU in 1988 and held Visiting Teaching and Research Professor positions until 1991 when he joined the department as an Associate Professor. He was promoted to Professor in 1994. That year he was also awarded the Distinguished Teacher Award.

Nominations for Rick recognized him as "one of the most talented speakers I have ever met" and continued—"He is just as comfortable giving a talk to a general audience (at DU he gave a Provost's lecture and a Discoveries lecture during orientation week) or to a specialized group of mathematicians".

His productivity in the field of mathematics was particularly emphasized. It was noted that—"He served as chair of Mathematics for six years during which he maintained a very productive research record. However, since he stepped down a few years ago, he has dedicated most of his time to research and he is having the most productive time of his life! Since 2006, he has published 13 articles in excellent journals (2 more are accepted and 3 more are under review.)"

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Two From Department Are Honored

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Several previous members of the math department have received the University Lecturer Award: 1969-1970 Herbert J. Greenberg; 1982-1983 Norman Bleistein; and 1988-1989 Stanley Gudder.

The **Outstanding Service Award** is the highest honor presented each year by the Staff Advisory Council, and “recognizes a person who exemplifies the mission of the University of Denver.”

Don joined the department in 2001 when the Math and Computer Science departments were working toward their independent status. He held a joint position in both departments until the 2007-08 academic year when he came to math full time as our GTA supervisor, MATC course coordinator and our community outreach person. He also teaches the Real World Seminar every year.

The Staff Advisory Council received numerous nominations for Don from faculty and staff across campus as well as from alumni. Letters praised his character and work ethic, his availability, and his willingness to take on any task, even when it doesn't fall within his job description. He is “upbeat, friendly and fun”, and “helps keep John Greene Hall in tip-top shape”. This last comment of praise drew a chuckle from many in the crowd at convocation.



Laura Murray, who held this position before Don, was also a recipient of the Outstanding Service Award in 1999.

Student Award Recipients

The Math Department was proud to recognize the achievements of several of our students at the 2009 Pioneer Awards Ceremony on May 14, 2009.

Abby Johnson was honored as the 2009 recipient of the **Eleanor Campbell Memorial Award**. Ms. Campbell graduated from East High School in Denver in 1935. After high school, she earned her teaching degree from DU in 1939 and taught for many years at a Denver elementary school. She passed away in January 2008 at the age of 90. Ms. Campbell's love of learning and desire to help others is perpetuated in this endowed gift, which provides recognition and encouragement to an outstanding female student every year.

Abby graduated in 2009 with a strong double major in math and physics. In addition to the rigors required by the coursework, she was a well-liked and effective math UTA. She was also active in Greek Life and served on their council. Her favorite philanthropic activities included Up 'til Dawn and other fundraisers for St. Jude's Children's Hospital. She's happy if she can carve out some “spare time” for salsa dancing and ballet.

We are lucky to have Abby continue on with us this year as a graduate student and a GTA. Ultimately, she would like to use her math skills in a government job, perhaps overseas.

William (Billy) Reynolds was named the **Herbert J. Greenberg Award** recipient for 2008-2009. This award has been around for many years and is supported by the Mathematics Department in honor of Dr. Greenberg, who created the joint Department of Mathematics and Computer Science in the 1978-1979 academic year.

Billy graduated in 2009 and was a double major in history and math with an impressive triple minor in theatre, Spanish and leadership studies. He received several academic awards including an Arts, Humanities and Social Sciences Scholarship and the Calhoun Scholarship from the History Department. Billy became interested in the sport of curling during the 2006 Winter Olympics in Torino, Italy and, with classmate Philip Harris, he co-founded DU's Curling club.

He is currently a volunteer in the math department at a local Denver middle school and is a part-time tutor. In 2011, he will do a stint as a math teacher in the Teach for America program in Baltimore. Teach for America defines itself as an American non-profit organization whose mission is to build a movement “to eliminate educational inequity by enlisting our nation's most promising future leaders in the effort.”

Other students recognized at the ceremony for their mathematics achievements included Katie Lindenbaum, Nathan McNew and Kathryn Palma.

Congratulations, again, to all of you!

Dr. Annette Locke

Annette began her career at DU as an undergraduate and even worked as a workstudy in our department in those days. When she finished her BS degree, she immediately began graduate work in our (then) Department of Mathematics and Computer Science. After finishing her Masters' degrees in both Mathematics and in Computer Science, she moved to California for several years where she worked as a systems analyst.

In 2005, Annette returned to DU to pursue a PhD degree and she chose to work in the area of functional analysis. In her dissertation, she analyzed the subspace structure of a rather complicated infinite dimensional Banach space. Without going into detail, let me just remark that the analysis of this space was made more complicated, and more interesting, by the presence of a tree with infinite branching at each node.

Dr. Locke finished and defended her dissertation in November 2009. She has done a very nice piece of mathematics and we are proud of her.

Jim Hagler



Don McCarthy

Don McCarthy, who joined the Department of Mathematics and Computer Science in 1984, announced his retirement last September. Don was the Operations Manager for the department; however, that title doesn't begin to reflect the myriad tasks that he accomplished for the department. From large undertakings such as remodeling classrooms that involved assembling and installing tables and chairs, installing network terminals and cabling, and developing projector setups to smaller frequent tasks such as solving the many problems that students had with their laptops, Don took them all on and accomplished them cheerfully and efficiently.

Perhaps less well known about Don was that he is an accomplished cyclist. Don took annual trips for lengthy bike tours in places like Arizona and even Canada. In addition to riding, Don built custom bikes and was always good for an interesting biking story.



JGH Lounge

If you saw it in the last 10 years but not very recently, you wouldn't recognize the lounge in JGH. Here is a picture to show you what it looks like now.

Mathematical Wanderings

The Internet and the World Wide Web have brought a lot of information to modern society—some very worthwhile, some downright questionable. There is, however, an abundance of mathematical material out there. This ranges from serious mathematical papers to math trivia. In this issue, we provide you with something that seems to fall in the middle ground.

The Monty Hall Problem (sometimes called the Let's Make A Deal Problem) has long been a source of controversy and confusion both within the world of mathematics and among the general public. If you're not familiar with the problem, Wikipedia has a lengthy entry at en.wikipedia.org/wiki/Monty_Hall_problem.

It turns out that there is an online Applet that will let you run a simulation of the problem. You can run it as many times as you like and it will aggregate the results. That Applet can be found at www.stat.sc.edu/~west/javahtml/LetsMakeaDeal.html.

If you happen to be one of the many (like your editor) who accepts the answer to the problem posed but still has trouble wrapping your brain around the whole thing, it's nice to see simulation-produced evidence for what seems to be a very non-intuitive answer.

Tea At The Greene

We want to let you know that our tradition of Friday afternoon tea continues. This is an opportunity for faculty, staff and students to gather in a relaxed atmosphere at the end of the week. In the past, a number of alumni have dropped in to say hello and to share tea and their memories of DU and the math department with us.

These teas are preceded at 2:00 by a graduate colloquium. These colloquia consist of student reports on their current research or research interests or of faculty or visitors' lectures on topics in pure and applied mathematics. Alumni are welcome to attend these colloquia. You can find more information by visiting the math Web site at www.math.du.edu, clicking on Departmental Life, and then the Graduate Colloquium link.



Photo courtesy of the Brown Palace Hotel

We would be pleased to have you join us for tea on a Friday afternoon at 3:00 in the John Greene Hall lounge or also at the preceding colloquium. Although no advance notice is required, you might want to contact Liane Beights at (303) 871-3344 to confirm that neither has been postponed due to a conflicting event. We look forward to seeing you and to having you bring us up to date on what you're doing.



Math Puzzler

The previous puzzler posed the following problem:

You've just moved into a new house and know that one of the three switches on the panel by the front door turns on the light in the loft, but which switch? You don't want to keep climbing the four flights of stairs to the loft, so how can you determine which switch turns on that light while only making one visit to the loft?

Solution: For this puzzle you need to remember something about light bulbs: they get warm after being turned on for a while. So turn on two of the switches, say the first two. If one of these two turns on the loft light, the light is on and getting warm. If the light is controlled by the third switch it will still be off and cold.

After leaving enough time for the bulb to heat up, turn off one of the switches - the second one, say - and run up the stairs to the loft. If the light is on, it must be controlled by the first switch; if it is off but the bulb is still warm, it must be controlled by the second switch; and if it is off and cold, it must be controlled by the third switch.

The following folks submitted solutions to this puzzler: M. Dean Briggs (BA, 1952), Bill Clayton (BS, 1969), Kathy Dean Vermilion (BA, 1971), Clayton Ferner (PhD, 1997), Paul E. Williams (BA, 1952) and Clark Bond (BA, 1960).

The above puzzler and many others may be found at the Web site <http://plus.maths.org>.

For the next puzzler, consider the following:

What 5-digit number has the following features: If we put the numeral 1 at the beginning, we get a number three times smaller than if we put the numeral 1 at the end of the number. [e. g., (_ _ _ _ _ 1)=(1 _ _ _ _ _)*3]

Send your solutions to Sharon Bütz - sbutz@du.edu



DU Hockey

Unfortunately, due to budget considerations, we were not able to sponsor our Hockey Night for Math Alumni, Faculty and Staff this year. We regret having to make this decision and wish to assure you that we are looking at the possibility of future hockey nights as well as other potential events that we can share with our alumni.