Winter 2004

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Mathematics Alumni Newsletter

University of Denver

Inside this issue:

This newsletter is published semiannually and your submissions are welcome.

If you have an article or information that might be of interest to other alumni and you would like to have it published in the newsletter, please send it to:

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Please include your name, mailing address, and email address so we can contact you.

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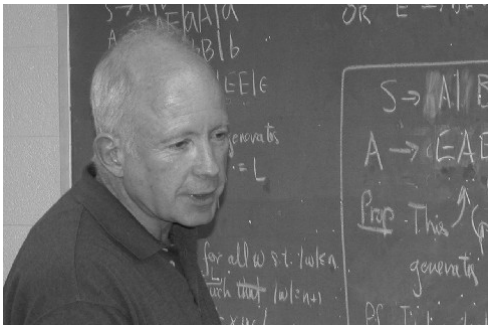
If you would prefer to receive an email notification when each edition is published rather than a printed copy, please let us know by sending an email to dopplige@du.edu.

Greetings From The Chair

Nothing is more gratifying than seeing DU students grow through their study of mathematics. The intrinsic rewards accruing to our students for their efforts are perhaps the most meaningful and they take many forms: tremendous intellectual growth with accompanying increases in confidence and curiosity, clear strides in problem-solving and creativity in all spheres of intellectual activity, and the deep joy that comes with living in the presence of some of the most beautiful ideas that western culture has to offer.



Therefore we, the faculty and staff, take special satisfaction in recognizing our best students and in making this recognition manifest by means of scholarships. The Department is privileged to administer two named scholarships. The Martin Scholarship honors mathematics professor Mike Martin, whose tragic death in a hiking accident in September, 2001, was reported in the Winter 2002 newsletter. The fund originated with the division of the scholarship monies when the Department of Mathematics separated from the Department of Computer Science in the summer of 2001. Although, at the time of its creation, the fund was half the size DU requires to administer a separate named endowment, the University made

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The Ambiance Of John Greene Hall

Simple Pleasures

These thoughts about the changing character of John Greene Hall (JGH) are provided by Liane Beights, Assistant to the Chair.

I think of the Beatles singing, "I get by with a little help from my friends", when I think about the improvements made to John Greene Hall during the past couple of years. I can honestly say it's been a pleasure to see everyone's efforts come together. While we remain the funkiest building on campus, we continue to evolve as our needs change.

The second floor of JGH saw new life in July 2001 as the Math Department found its independence and became a separate department. The suite of three offices on the north end of the building became the administrative hub of the department. Old timers that joined us for Hockey Night that year reminisced about when Bill Dorn was in what is now our Chair's office and Mike Martin was the Assistant Chair in what is now my office. Nita Johnson, Bill's assistant, was in the middle room of the suite. This now serves as a small but inviting reception area. (Nita, by the way, is in her 33rd year at DU! She's the Executive Assistant for the Dean of Arts, Humanities and Social Sciences.)

We women on the floor took special enjoyment in primping things and sprang into action. A small bookshelf in the hall became a Book Exchange and a Ladies' Room Beautification Plan took shape -- a small table, mirror, a couple of pictures and a wallpaper border appeared over time, and we continue to be amazed how the

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Greetings From The Chair *(Continued from page 1)*

an exception in this case. I am happy to report that the fund has recently received several generous donations and, if this rate of growth (and the bull market) persists, the Martin fund will soon satisfy the University's requirement. Donation queries should be directed to Liane Beights, Assistant to the Chair. The recipients of the Martin Scholarship for 2003-2004 are Liesl Becker and Julie Raffety.

The Hammond Scholarship is the legacy of Mary Hammond, a 1938 DU graduate in fine arts who was the subject of a recent article in the DU alumni magazine, as well as a short article in a recent issue of this newsletter. Her life-long love of mathematics is being perpetuated by the students who receive scholarships in her name. This year's Hammond Scholars are Kevin Bauer, Anuradha Bhatia, Caitlin Brewer, Hanfeng Cheng, Brandon Haenlein, Jacob Harper, Cy Holladay, Denis Lapitski, and Eric Williamson.

We extend heartiest congratulations to all our scholarship winners.

Richard N. Ball

The Ambiance Of John Greene Hall *(Continued from page 1)*

live plants flourish with only the fluorescent lighting.

Things were going well. Life was good on the second floor. We had a new energy, and there was frequent chatter about what else we could do to create our identity.

In that regard, one thing was clear – we needed a mailroom more central to our office area. Space was at a premium, though, and we continued to share the combination mail/copy room with Computer Science, which had established itself in the office area of the first floor. By October 2002 a new idea was born and, with the generous support of our dean, Jim Fogleman, we worked with Facilities to convert part of a study area across from the office into a mailroom. The work was completed during winter break, and everyone in the department was delighted with the results. We were pleased to retain a portion of the study room for our students as well.

The momentum continued as the success of the Chancellor's initiative requiring laptops for all undergraduates spurred our next mission. It was now time to enhance the learning environment for our students and faculty. If we could just have more space to teach our various laptop calculus classes!

Funds from a variety of sources including the Center for Teaching and Learning, student technology fees and gifts from alumni helped support this dream, and our Operations Manager of 20 years, Don McCarthy, worked untold hours over the summer to convert two of our PC labs into smart-to-the-seat classrooms. Scott Schrage of Facilities also offered to replace the worn carpeting in several public areas. Thank you, Scott, for thinking of us.

Suddenly autumn fell upon us. The hustle and bustle of students in John Greene Hall was invigorating. These two newly renovated classrooms serviced over 260 students during this Fall quarter alone!

During the fall we also received a large donation of office furniture (desks, chairs, bookcases, computer tables, etc.) from the local office of Northrop Grumman Information Technology. Included in this donation was a large white-board that was mounted in one of our new smart-to-the-seat classrooms.

And so goes life in the Mathematics Department. We, the entire department, extend a gigantic thank you to all the friends of John Greene Hall.

Now if we could just get that copper roof!

Recent construction on the campus has resulted in a number of beautiful new buildings with unique architectural features. Below, your editor envisions John Greene Hall expanded to include a fourth and fifth story and featuring a Rose Window identical to that on the new Robert and Judi Newman Center for the Performing Arts/ Lamont School of Music.

DU Memories

We always enjoy reading our alumni's recollections of DU and hope that you do also. If you have memories you would like to share, we would be delighted to hear from you. Here are excerpts from two letters we received.

Glenn Ballard

The recent issue of the Math Newsletter included a former student's respectful and appreciative recollections of Professors Ruth Hoffman and Wolfgang Yourgrau, which sparked my own extensive and agreeable memories of these estimable teachers and singular individuals.

I attended DU part-time during 1965-67, earning an M.A. in mathematics. Because both my mathematical interests and preceding graduate studies at the University of Pittsburgh, the latter mainly in analysis and engineering-type applications, didn't have ready complements in DU's then extant programs, Dr. Hoffman designed for me and supervised some independent studies and tutorials.

Ruth Hoffman was superb. Her informed intelligence and teaching skills, both impressive, were enhanced by a pleasing personality and straightforward objectivity. I was 34, 35 years–old at the time, married and with children–hardly a schoolboy—and Dr. Hoffman treated me as a fellow student, as one who shared her own enthusiasms for mathematical knowledge, and especially for mathematical insights and elegance. And like all true teachers, she emphasized truths well beyond the particulars of the subject matter. Over the years of my working life, whenever I encountered a really vexing problem, inevitably, I would recall the two most important things I learned from Dr. Hoffman.

The first was: "Be certain that you know what the problem is before you set about trying to solve it!" Good advice for addressing any sort of problem! The second important thing—this from a justifiably exasperated Dr. Hoffman, in one of our tutorial sessions: "Glenn, yours is a sorry approach to this problem; you should be better than this; you must be better than this!"

Wolfgang Yourgrau was for me yet another meaningful DU adventure. He tutored me one summer in the philosophy of science. As was the case with Dr. Hoffman, I was the sole student in the tutorial. An extraordinary privilege. Yourgrau was, surely, among the most distinguished of the University's professors, then or since. When I met him, he was in the latter years of what had been an extraordinary academic career in Europe and the United States, during which he had made significant, original contributions to particle physics.

Professor Yourgrau was garrulous, insightful, demanding and intimidating, the latter, I soon decided, something of an act. He was altogether engaging, in any case. Not infrequently he was profane, though never vulgar. And his love of science and good thinking was inspirational.

Every tutorial began the same way: "Tell me about Whitehead, or Eddington, Schrödinger, Descartes, Pascal, … whomever he had assigned me to read up on. He sat with head in his hands in his book-walled study, impassive, and non-committal, except for a periodic "Really!", or "Are you sure about that?", or "O.K., what else?"

When I began to run out of words and ideas, or, as invariably occurred, I said something especially banal, then he would begin. "O.K. you're not far off about (whatever), but my dear boy, you are away in the deep woods on …" He was invariably excited about the topics and would talk on and on, well beyond the hour. Then he would assign the readings for the next session, usually offering such gratuitous advice as "Pay attention here; this guy's tough; you'll love this; this isn't worth your time, really, but someday someone important will ask you about him, and you have to have an opinion;" (and my favorite) "Don't be put off by the theology - Einstein believed in God, after all."

My career after DU was 31 years as school head—at the Brownell-Talbot School, Omaha: Hockaday, in Dallas; and The Kinkaid School, Houston. I count my DU days, and in particular, the tutelage of Ruth Hoffman and Wolfgang Yourgrau, as a lasting positive influence on my thinking and work.

J Paul Meyers

I received my PhD from the University of Denver Department of Mathematics and Computer Science in 1986. Since that time I have had a nice career in the Department of Computer Science at Trinity University in San Antonio. At this time my materials have been submitted for promotion to Professor; and my department and some key administrators are quite confident that I will be promoted.

But, be that as it may (there's still the non-Mathematics, non-Computer Science faculty committee to overcome), I thought that this would be a perfect time to write to you my sincere and abiding appreciation for my education at the University of Denver. And I definitely was educated there, doing what one is not "supposed" to do: A Bachelors, two Masters, and a Ph.D. – all from DU! The University was a remarkably intimate and supportive environment for me: there was a way in which the faculty made the graduate students feel to be genuine contributing members in the department.

In addition to expressing my appreciation to the University and to the (now two) departments, I would certainly like to thank some individuals as well. Of course, there is Ron Prather who guided me through dissertation and has been a great friend for many years. And, I regard as very important mentors and friends Jean-Paul Marchand, Bill Dorn and Larry Larson (Philosophy).

Quite a few other faculty, in particular, were always helpful and friendly to me in many, many ways: Jack Cohen, Mike Martin, Stan Gudder (who really facilitated my converting some older coursework into some of my PhD courses), Joel Cohen, Jimmy LaVita, Herb Greenberg, and Jim Hagler.

But, probably the most overdue, is the deep sense of thanks that I would like to express to Professor Al Ritter. If it were not for his converting me from an English major to a math major, all the above thanks would be moot! His incredible course, Introduction to Higher Mathematics (Math 306, I believe I still remember its number!), was precisely the course that led me from considering mathematics as a mere minor in my studies to desiring to major in the field. Moreover, the very mathematics taught in that course led me to a permanent interest in foundations and logic, and those, of course, led very naturally into the new field of Computer Science, where I am today. All from this one course, obviously one of the most significant experiences of my life. Of course, Professor Ritter became a good friend as well, and I profited much from many discussions with him.

Well, again I thank you all. I'm sure that you have had similar wonderful influences on other students as well. I wish you all the very best.

As a postscript to Paul's letter, we are pleased to note that he has since been promoted to Professor at Trinity University.

We would be happy to hear from more of you. Send a paragraph or two and let us know what you have been doing. Send information to: Don Oppliger, DU Math Dept., 2360 S. Gaylord, Denver, CO 80208. or email to: dopplige@du.edu

Tea At The Greene

Photo courtesy of the Brown Palace Hotel

As another year begins, we continue the tradition of Friday afternoon tea. 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 share tea and their memories of DU and the math department with us.

We would be pleased to have you join us for tea on a Friday afternoon in the John Greene Hall lounge. Although no advance notice is required, you might want to contact Liane Beights at (303) 871-3344 to confirm that tea hasn't been postponed due to a conflicting event. We'll look forward to seeing you there.

Hockey Night 2004

Hockey Night 2004 is set for Saturday, February 28, 2004 at 7:05 and tickets are available to math alumni for the discounted prices of $5.00 for the first two tickets and $11.00 each for additional tickets. The DU Pioneers are scheduled to play the University of Minnesota Golden Gophers.

Flyers, with a form for ordering tickets, were sent to alumni in the Colorado Front Range for whom we have addresses. Last year we had over 90 alumni, faculty, staff, and guests. Just prior to the game, alumni pick up tickets and join us for refreshments in John Greene Hall. It's a wonderful opportunity to see old friends and make new acquaintances. If you haven't received a flyer, but would like to attend the game, please contact Don Oppliger at (303) 871-3072 or by email at dopplige@du.edu by February 16. Act now! Tickets go quickly.

PhD In Mathematics

The Department of Mathematics is pleased to announce a restored PhD degree program in mathematics. This program offers a greater level of flexibility for students. Where the previous combined degree in math and computer science required a significant amount of coursework in both disciplines, the new degree allows students an option. They may choose to seek additional depth and breadth in an area of pure math that interests them or they may pursue additional interests in other allied fields not limited to computer science. For example, mathematics students often have interests in statistics, operations research, genetics, finance, or physics, and this degree opens that arena for them.

The Department of Computer Science now offers a Ph.D. in computer science as well, and the combined degree is no longer available to students that enroll after January, 2004.

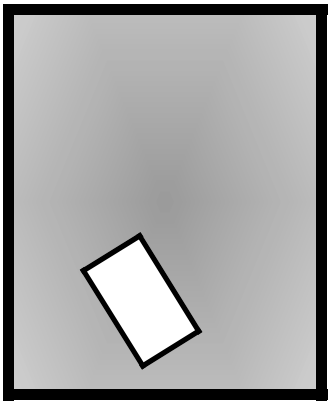
Research Activities

Our Mathematics Department faculty members have many active research projects and collaborate with one other and with researchers from around the world. From the "RESEARCH" link on our department's home Web page (www.math.du.edu) you can find information about seminars, research areas, and preprints. Faculty seminars are held every Tuesday and graduate student seminars on most Fridays followed by Tea At The Greene in the John Greene Hall lounge. If you wish to attend any of these seminars we would be happy to see you. Check the department Web site for details regarding scheduled seminar topics and dates.

The Web pages include an overview of the main research areas of the department (some of them are still under construction) and we also have a "preprint series". This series was started last October and consists of the papers sent to refereed journals by faculty or students. They are posted in PDF format and can be downloaded.

Math Puzzler

A Problem In Fair Division



Moe and Larry, college roommates, order a Chicago-style rectangular pizza for delivery. The pizza delivery person arrives while they are out of their room. Curly, their helpful engineering major suitemate, pays for the pizza in their absence. Ever the practical joker, Curly cuts a rectangular piece from the interior of the pizza. When Moe and Larry return shortly, they are upset! Their chagrin stems less from the loss of pizza than from their need to figure out how to fairly divide the remaining pizza into two equal shares. Quick-thinking math majors that they are, they determine a solution with a minimum number of cuts before the pizza gets cold. Can you?

Send solutions to sbutz@math.du.edu.