

Mathematics Alumni Newsletter



Winter 2015

A Note From The Chair

Dear Friends of the Mathematics Department,

After more than a decade of building up the department following the separation from computer science, we are now working hard on increasing our national and worldwide presence. Here is a sampling of recent and future initiatives and accomplishments focused on academic outreach:



Our graduate program in mathematics is now ranked by the U.S. News and World Report, I believe for the first time. Plenty of work remains to make the ranking more respectable, but it is good to see that we have separated ourselves from the “other” category among PhD granting departments.

We are sending students as ambassadors to conferences, workshops and summer schools. In addition to the John G. Daly Endowment for Travel and Research Support, we now also use proceeds from teaching that we receive from the Dean’s Office to support undergraduate student travel. Proposals are due May 1 and November 1 every year.

The American Mathematical Society chose University of Denver and our department to host the Fall 2016 Western Sectional Meeting, an event typically attended by 400-500 mathematicians. About 8 of the special sessions at the meeting will be organized by our faculty. The meeting will take place at DU during the weekend of October 8-9, 2016. It will be a great opportunity for alumni active in math to reconnect with us.

Finally, in cooperation with the Department of Physics and Astronomy we are about to introduce Herbert Alonzo Howe lectures. Every year, these lectures are intended to bring a prominent mathematician and an astronomer to DU for a public lecture followed by a seminar for experts. We will distribute the announcement once the details are set. In the meantime, you can read about Prof. Howe and his career at DU on page three of this newsletter.

Petr Vojtěchovský

If you are thinking of donating to the department, please consider these options:

- Mike Martin Scholarship Fund (an endowed scholarship for incoming math majors)
- John R. and Mary K. Hammond Scholarship (an endowed scholarship for students pursuing a graduate degree in math)
- John G. Daly Endowment for Travel and Research Support in the Department of Mathematics (endowment that supports research-related expenses of students)
- Mathematics Gift Fund

Please contact Liane Beights (lbeights@du.edu) for more details.

Jim Hagler Retires

By Alvaro Arias



The Math Department bade farewell to Professor Jim Hagler when he officially retired from the University at the end of the 2012-2013 academic year. While Jim will certainly be missed as a full-time colleague, he has continued to teach at least one course for the math department every year since his retirement. This year, during the winter quarter, Jim is teaching one of his favorite courses, Metric Spaces.

Jim Hagler was born and raised in Denver. He earned a B.S. in mathematics at Cornell University in Ithaca, New York before moving across the country to Berkeley where he earned a master's degree and finished his PhD in 1972. From Berkeley it was back to the east coast, where Jim became a member of the math faculty at The Catholic University in Washington DC. He worked at Catholic University from 1973 to 1984 and received tenure there. Jim spent the 1983-1984 academic year as a visiting professor here at the University of Denver. An opportunity arose for Jim to return to his native Colorado and he left Catholic University (ceding his tenure in the process!) and started working permanently at the University of Denver in 1984. At DU, he received tenure again, became a full professor, and served as the interim chair of the department from 2004 to 2005, and then as chair from 2006-2008.

As his former and current students know, Jim Hagler is a superb and demanding teacher. Jim prepares his classes very carefully, he chooses meaningful and instructive problem sets, and he knows the importance of talking directly to his students. He always encourages and sometimes requires students to visit him during office hours, where he can discuss math more effectively. Jim followed this approach in all classes, from the freshman seminar to calculus to graduate courses, and as a result his office was always full of students. It is not surprising that Jim's student evaluations were always among the highest of the department.

Jim Hagler's research areas are Banach space theory and topology. His work in Banach spaces is foundational and he has a space named after him: the JH or HT space. As far as I know, Jim is the only math professor in our department with a space named after him! In his paper, Jim named the space X, a generic name. But when other researchers realized the importance of it, they renamed it JH or HT. The "J" in JH stands for Robert C. James. Jim modified James's construction and answered several questions in Banach spaces. Some of the top researchers in this area, including a Fields Medalist, have worked on the JH space.

Finally, I want to mention Jim's sense of responsibility and dedication that served our department very well. He knew that it was important for the department to have representatives on university committees, and he invested a significant amount of his time to serve on them. Perhaps because of this, Jim had a very good understanding of the University, and his comments during faculty meetings were very insightful. The department experienced rapid growth during Jim's chairmanship, including three more tenure track faculty lines.

Upon his retirement, Jim was named Professor Emeritus and we are lucky to have him teaching the occasional course and that he maintains an interest in seminars and departmental events.

Did you know that this newsletter may be read online at www.math.du.edu? Just check the Alumni page!

Want to go green? 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 jason.myers@du.edu.

We always like to get news about our alumni. Send us a paragraph or two and let us know what you have been doing. Send information to: Jason Myers, DU Math Dept., 2280 S. Vine St, Denver, CO 80208 or email to: jason.myers@du.edu

News and Notes

Teaching Professors

The Board of Trustees recently approved a new version of guidelines for Appointment, Promotion and Tenure which will come into effect in Fall 2015. Consequently, the lecturer position will change substantially.

Lecturers will receive the title Teaching Professor and will be eligible for promotions from the Assistant to Associate and Full levels, in analogy with tenure line professors. Teaching Professors will not receive tenure but they will be offered longer term contracts: up to 3 years at the assistant level, 5 years at the associate level, and 7 years at the full professor level.

Knudson Hall: Our future home

As you recall from previous newsletters, our department is temporarily housed in Aspen Hall, which is a converted graduate student dormitory. Once the new building for the Ritchie School of Engineering and Computer Science is completed, we will relocate to the current engineering building, Knudson Hall.

According to preliminary plans, the university will invest nearly \$3 million into a remodel of Knudson Hall. The math department should be the sole occupant of the building. The move is tentatively planned for December 2016.

Liane Beights received NSM Staff Award

It is our pleasure to announce that Liane Beights received the 2014 Natural Sciences and Mathematics Staff Award. Her dedication to the department is exemplary and she has been a major factor in attracting and retaining math majors. Congratulations Liane!

Alumni Hockey Night Recap

In an attempt to avenge last year's loss, hockey night this past fall once again revolved around the contest between DU and Western Michigan University. The tight 1-0 defeat last year was no indicator for the 2015 bout. On Friday night the Pioneers had defeated the Broncos from Kalamazoo 5-4. Riding high on the momentum another victory was in sight, but a clean sweep of the weekend ultimately fell short. Despite the cheers of DU fans and alums, the Pioneers dropped the back half of their weekend series with Western Michigan by a score of 6-3. At the time the loss dropped the Pioneers' record to 5-3, but since that time the team has played well, amassing a regular season record of 20-12-2 and a top 10 ranking in the polls.

Keep your eyes on the Pios as they continue their march toward the playoffs this year. Keep an eye on your email too as we plan to host another game next year. (Note: Hockey night fliers will only be sent out via email so make sure yours is up to date. You can contact either the department directly or Alumni Relations to do so.)

Due to space issues in our temporary home of Aspen Hall, we didn't have the ability to host our usual pre-game reception. However, we plan to bring that back as soon as we are settled into our new home in Knudson Hall.

Let your voice be heard! We've put together an online survey so you can tell us what is working and what isn't. The direct link for the survey is: https://udenver.qualtrics.com/SE/?SID=SV_5zrTTW06DU9SagN. Don't feel like typing all of that? We don't blame you. A link to the survey is also available on our Alumni page.

<http://www.du.edu/nsm/departments/mathematics/students/alumni.html>

Solution to the previous puzzler:

Make a pile by taking the top 17 cards of the pile and flipping them over. Now, you have two piles: the flipped 17-card pile (pile A), and the untouched 35-card pile (pile B). No matter the original state of the deck, these piles have the same number of faceup cards! To see this, use N to denote the number of face-up cards in the top 17 cards before you flipped them. Then, before flipping, these 17 cards contained $17-N$ face-down cards, which become $17-N$ face-up cards in pile A. Pile B must also have $17-N$ face-up cards; the original 17 face-up cards in the deck, minus the N face-up cards in the top 17 that you removed to make pile A.)

New puzzler: There are many possible ways to write 2015 as the sum of a set of positive integers, such as $500 + 515 + 1000$. What is the maximum possible product of such a set of integers? (For instance, the product would be $500 * 515 * 1000$ in the previous example.)

Send your puzzler answers to Ronnie Pavlov at Rpavlov@du.edu.