Distinction in Comps

The highest academic honor that the department faculty have the ability to award is distinction in comps. We reserve that honor only for those students whose work on comps rises to a level of professionalism, commitment, and achievement well beyond our high expectations. This year the department has voted to honor the following seven seniors: Joe Lindner, David Lonoff, Daniel McDonald, Tyler Mitchell, Khanh Nguyen, Haggai Nuchi, Yuan Tian. Please join us in congratulating these students for their hard work and accomplishment.

A Job Well Done

Thank you to Hannah Breckbill for her work in editing the Goodsell Gazette. She has done a great job of getting you the department news this year!

The Galovich Prize

Steven P. Galovich taught mathematics in this department for twenty years, after a short stint in the Dean’s Office he left Carleton in 1994 to become the Dean of Lake Forest College in Illinois. He died in December 2006. William Lang graduated from Carleton with a degree in mathematics in 1974 and recently gave the department a gift to honor the memory of his teacher, Steve Galovich. The department faculty have used that gift to endow the Steven P. Galovich Prize in Mathematics. The prize will be awarded each year to that graduating senior who best embodies the qualities that made Steve so special to us—his enthusiasm for mathematics, his love of people, his zest for life and, not least, his sense of humor. The first annual Galovich Prize will be awarded this year at Honors Convocation to Max Olivier. Congratulations, Max!

Amazing Comps Talk Attendance

One of the requirements for the math major is to attend colloquia by visiting mathematicians and comps talks by our fellow students. We would like to honor Ted Kuhn for being the most avid attendee of comps talks this year!

Senior Snapshots

We would like to congratulate all the seniors for their successes over these past four years, and we encourage them to keep it up. Here are the plans and words of wisdom from [most math majors of] the class of 2009.

Hannah Breckbill

The best problems I ever solved were with the second graders I worked with for my comps project, or the ones that my little brother brings to me to work through with him—though there have been plenty of pleasurable higher-math problems in my day. In the short term, I will be training to be a member of Christian Peacemaker Teams and interning on an organic farm, which leads to my life goal: to actively fight the spiral-out-of-control that our planet and our humanity is heading towards. I sound like a crazy. So I suppose these are my words of wisdom: do what you believe in (and don’t do what you don’t believe in), even if other people think you’re a silly idealist.
Jeremiah Chung
The best problem I ever solved was the last problem from abstract algebra take-home exam, which was the last obstacle before I was set free for spring break.

Short-term plans: Currently residing in my home country Korea.

Life Goal: To live happily ever after.

Words of wisdom: Do math when you want to do math.

Chrissy Donovan
Best Math Department Memory: Barb Jenkins asking me, “Have you seen the duck?” She was the former administrative assistant in the department. She kept candy inside a glass duck.

Short-Term Plans: Return home. Enjoy the parade in my honor. Decide what to do next while I am cleaning up the confetti.

Life Goal: To do something useful with the help of math.

Words of Wisdom: Just do a proof by contradiction.

Kyle Drake
The best department memories I have: Both the Set and Blokus tournaments were fun. Encouraging math majors to socialize with one another.

Short-term plans: Find a job. Really, the world is not very fun outside of Carleton. Hopefully some insurance company will pity me.

Life Goal: I really don’t have a very well-defined life goal. Be happy and be successful I guess. I just hope I choose the path that will allow me to be the happiest.

Words of wisdom: Do not forget to play. Play around with ideas you have or whims you suddenly feel like acting upon. They’re usually pretty fun.

Michael Feinberg
What I like about math: There exists a (unique) correct answer with high probability.

Short-term plans: To figure out my life goal.

Life Goal: To do something fun with math.

Words of wisdom: Go to Budapest, and take as much math as possible, the sciences aren’t worth it.

David Guild
Josh Davis’s exam question about tormenting a museum curator is my favorite problem ever. If anyone ever needs to hang a painting using N nails, let me help!

Short-term plans: Studying computer science at UW-Madison.

Life Goal: Be happy and be rich, in that order.

Words of wisdom: Never trust a statistician who claims to have an unbiased coin; it’s probably double-headed. Also, the more math you study, the more interesting it gets.
possible with my intellectual ability, then I will move on to earn as much money as possible to make a prize named after me?
Words of wisdom: Nothing ventured, nothing gained. But if at first you don’t succeed, find another one.

Joe Lindner
*Best math department memory:* I once saw Katie St. Clair at the Chipotle in Burnsville.
*Short-term plans:* Find employment.
*Life Goal:* To do something I enjoy.
*Words of wisdom:* “Don’t live in fear,” GHC.

David Lonoff
*What I like about math:* I am glad that there are true statements which cannot be proven. If all true things were provable, then I think it would diminish the value of the things we are able to prove.
*Short term plans:* Math PhD at The University of Pennsylvania.
*Life goal:* Seeking fame and fortune by teaching math at a small liberal arts college not unlike Carleton.
*Words of wisdom:* “Stop trying to fill your head with science—for to fill your heart with love is enough.” -Richard Feynman

Daniel McDonald
*Best math department memory:* Helping to free my future comps partner’s arm from Nate Williams’s mighty clutches
*Short-term plans:* University of Illinois at Urbana-Champaign math PhD program, specializing in combinatorics or logic.
*Life Goal:* popcorn baron.
*Words of wisdom:* Every answer on the GRE Math Subject Test is ‘C’ during the last test date of prime-numbered years.

Tyler Mitchell
*What I like best about math:* Math is a great subject for idealists.
*Short-term plans:* Go back home and attend grad school at Northern Illinois University.
*Life goal:* Pick a peck of pickled peppers.
*Words of wisdom:* Live peacefully.

Sammy Morin
I will be moving to Boston this summer to begin work as an analyst at an economic consulting firm, Analysis Group. After a year or two, I plan to return to school to get a Master’s/PhD in a yet-to-be-decided field and then return to the private sector. While I will be glad to not have the stress of math homework hanging over my head, I will definitely miss the math department. The professors here are amazing, and I hope that the people I will work with and the grad school professors I will have in the future will be able to compare. To all those majors still at Carleton -- take advantage of them while you still can!

Khanh Nguyen
*What you like about math:* Math makes me say “how can he/she even think of this!” all the time!
*Short-term plans:* Work for Brattle Group in DC for a few years.
*Life Goal:* still looking for a generating function for this.
*Words of wisdom:* finish (and pass) comps by winter term of senior year.

Haggai Nuchi
*What I like about math* is the different mental pictures I have of different kinds of mathematical structures. A vector space is a bunch of arrows, a topological space is a big blob with smaller blobs (read: open sets) inside of it, a group is something like a bunch of differently sized interlocking gears.
These pictures will probably get revised as I continue on to grad school in pure math at U Penn next year and as I continue on after that to a career as a research mathematician.
*My advice?* Whenever anyone asks you about what advanced math is like, take advantage of the opportunity and tell them more than they ever wanted to know.

Max Olivier
*What I Like Best About the Department:* Everyone in the department is friendly, welcoming, and thoughtful. I feel fortunate to have had the chance to meet, work with, and learn from all of them.
Short Term Plans: Move to Kansas City, Missouri, work, eat barbecue, and run a marathon.

Life Goals: Play a pickup soccer game on every continent (and ideally in every country), work to make sure that every person in the world can live the best life possible, teach high school math, and learn as much as I can.

Words of Wisdom: “The place you are called is the place where your deep gladness and the world’s deep hunger meet.” - Frederick Buechner

Matching Game!

Ryan Smith  What you like about math
Progress  Life Goal
Job  Short-term plans
Fun  Words of wisdom
Have Fun  Name

Emma Turetsky

The thing I like most about math is the fact that you can be really bad at basic arithmetic and still be fine once you get into the higher levels.

Short-term plans: I’m going to graduate school at the University of Wisconsin, Madison, for Computer Science.

(unrealistic) Life goal: Use my liberal arts education to become filthy rich.

Words of wisdom: I’m not very wise, so anything I say should be taken with a grain of salt.

Others graduating this spring: Elissa Brown, Aparna Dua, Luke Hankins, Peter Jamieson, Charles Noneman, Bassirou Sarr, Yuan Tian, Robert Trettin. Congratulations all!

PROBLEMS OF THE WEEK

1. Let \( ABCD \) be a convex quadrilateral (in the plane). Define \( P \) to be the point which is equidistant to \( B, C, \) and \( D \); similarly, let \( Q \) be equidistant to \( A, C, \) and \( D \), let \( R \) be equidistant to \( A, B, \) and \( D \), and let \( S \) be equidistant to \( A, B, \) and \( C \). Assuming that these four new points are all different, they form a new quadrilateral \( PQRS \). How are the angles of this new quadrilateral related to the angles of the original one?

2. Suppose you start with the number 1 and go through a series of steps, where at each step you add a (positive integer) divisor of the number you have to that number to get a new number. For instance, the first step is forced; you have to take \( 1 + 1 \), so the new number is 2. Now you have two choices; the next number could be \( 2 + 1 = 3 \) or \( 2 + 2 = 4 \). If you choose 4, the next step after that could take you to 5, 6, or 8. Find the least number of steps needed to get from your starting number 1 to the number 2009 (and explain why your answer is correct).

The Big Box of Prizes has, not for the first time, received a wonderful gift from Hugh Maynard ’71, who donated several very attractive books. Unless there’s someone out there who hasn’t yet claimed an earlier prize, the first new potential beneficiary of Hugh’s generosity is Bjorn Linder, who essentially solved last week’s first problem. Although this is the last Gazette of the term, solutions that come in by the end of the term to the new problems and to earlier unsolved ones are still eligible for prizes; any winners will be notified directly.

As you may have noticed, despite my best intentions I’m once again way behind on posting solutions. However, solutions should start going up again soon, and I hope to have solutions for all problems posed this term posted by the beginning of exam period; it should definitely happen before the seniors graduate. Good luck on exams and such, have a great summer and/or a great life, and see you next winter if you’re here! (I’ll be on leave in the fall.)

- Mark Krusemeyer

Editors: Deanna Haunsperger
Hannah Breckbill

Problems of the Week: Mark Krusemeyer

Subscriptions & Web: Sue Jandro