

Inside

New Endowments **2**

Faculty Distinctions and Graduation **3**

Staff Awards and Summer Program **4**

Message From the Chair

by Peter Trapa



As the semester winds down, it's a perfect time to look back on the achievements of the past year. Building on a wave of outstanding new faculty arrivals (detailed in the following pages), we once again had a very successful hiring season: Stefan Patrikis will join us next year as a new Assistant Professor and Warnock Chair. Stefan's research interests are in the number theoretic aspects of the Langlands program. He is currently a Moore Instructor at MIT, and previously held postdoctoral positions at Harvard and the Institute for Advanced Study in Princeton. We're excited to welcome Stefan. Meanwhile, two ongoing searches in Scientific Computing and Statistics are moving forward, and I expect to have more good news to announce in the next edition of *Aftermath*.

Our faculty continue to win prestigious awards (also described below), and propel the research prominence of the Department. According to the latest Academic Analytics data, we now rank 18th (out of 230 Mathematics Departments nationwide) in total external funding, an exceptional achievement for a faculty of our relatively small size.

I'm also pleased to announce two new endowed positions (described in more detail below): the McMinn Presidential Endowed Chair and the Tucker Endowed Postdoctoral Fellowship. We continue to expand our development efforts with the addition of a new Development Specialist, Alison Jarrett, and look forward to more events in the next academic year.

But the real excitement at this time of year is graduation. This year we will confer nearly 100 undergraduate degrees in mathematics, a significant increase over years past and a trend that appears to be accelerating. We will honor our students (and faculty and staff) at our annual Awards Ceremony later this month. We hope to see you there (or at another department event) sometime soon!



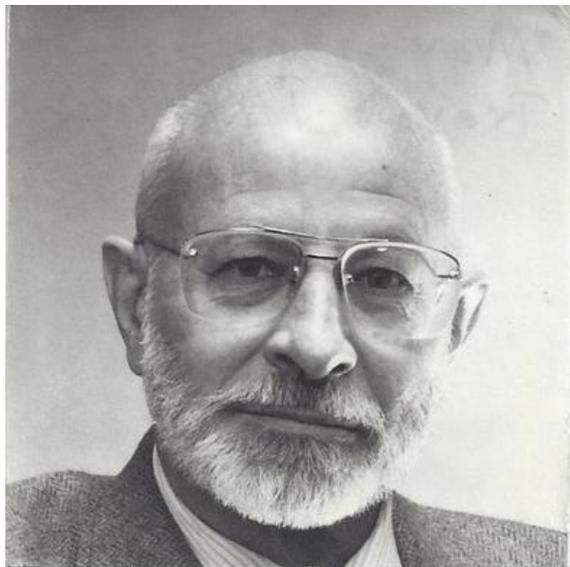
Image courtesy of the University of Utah

New Endowments

by Peter Trapa

The Trevor James McMinn Presidential Endowed Chair in Mathematical Research

As part of his exceptional legacy, Trevor James McMinn (1921-2013) donated \$1.3 million to establish an endowed chair in Mathematics. Dr. McMinn graduated from the University of Utah in 1942. He went on to receive his Ph.D. in Mathematics from University of California, Berkeley, with a specialization in Mathematical Logic under Tony Morse in 1955. His thesis is entitled *Topics in Measure Theory: I. Restricted Measurability. II. Measure Splitting and Average Measurability*. It is based on two papers, a 1948 paper in the *Bulletin of the AMS* (reviewed by Paul Halmos in *Mathematical Reviews*) and a 1954 paper in *Proceedings of the AMS*. Dr. McMinn also worked as a civilian employee in the Navy during World War II.



Trevor James McMinn

After graduating from Berkeley, Dr. McMinn took a position at the University of Washington for six years before coming to the Department of Mathematics at the University of Nevada in 1963. He retired from the University of Nevada in 1988 as Professor Emeritus.

The Chair that bears Dr. McMinn's name is a fantastic memorial to a great man. Dr. McMinn's generosity will allow the Department to recognize its absolutely top researchers. We expect that the first McMinn Chair to be named in Fall 2015.



Don Tucker - Now

The Don H. Tucker Postdoctoral Fellowship

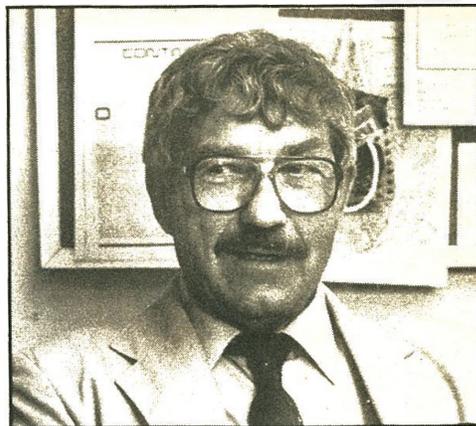
In honor of the contributions of our longest serving faculty member, Don Tucker, we are pleased to announce a new endowment that will provide research funds for outstanding postdocs in the Department. The first Tucker Assistant Professor Lecturer will be named at our annual award ceremony in April 2015, and will join our other endowed postdoctoral positions (the Burgess, Scott, and Wylie Assistant Professorships). Due to the generosity of an anonymous donor, the Tucker endowment currently stands at \$400,000, and we aim to build it in the years ahead.

Don has had an incalculable influence on the Department. Since joining the Department in 1958, legions of students have benefited from his devotion to his research and, especially, his undergraduate teaching. One of those undergraduates, Joe Taylor, returned to the U in 1965, and was the key architect in building the Department into the research powerhouse it is today.

Joe describes Don's influence on him when Joe was a freshman as the turning point of his life.

Don is showing no signs of slowing down. He recently won an MAA Intermountain Section Award for his teaching, and his office is usually filled with students.

Do you have a fond recollection of Don that you'd like to share? We'd love to hear from you. Please contact Alison Jarrett (jarrett@math.utah.edu).



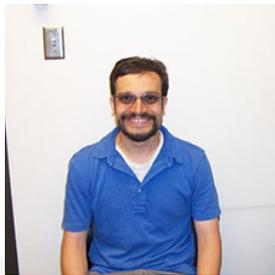
Don Tucker - 1988

Faculty Distinctions

by Nat Smale and Peter Trapa

Jon Chaika Receives Sloan Research Fellowship, NSF CAREER Award

In February, Assistant Professor (and Warnock Chair holder) Jonathan Chaika was one of about 125 young U.S. and Canadian scientists to receive a prestigious 2015 Sloan Research Fellowship, joining thirteen current and emeritus faculty members as a Sloan Fellow. The much sought-after fellowships and \$50,000 awards are meant to “honor early-career scientists and scholars whose achievements and potential identify them as rising stars, the next generation of scientific leaders,” according to the Alfred P. Sloan Foundation. Jon was also recently awarded a National Science Foundation CAREER Award, the NSF’s most prestigious award in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research.



Aaron Fogelson Appointed as Associate Dean of Research

Last summer, Aaron Fogelson was appointed the Associate Dean for Research in the College of Science. As the Associate Dean, he has a number of responsibilities, including working with the Dean and the departments to develop new research centers and programs, working with the Vice President for Research to promote cross-campus interdisciplinary research and promoting research through college outreach events. He will also be involved in developing junior faculty workshops (for grant writing, for example), as well as contributing to College of Science development efforts to enhance connections with alumni and industry leaders.



Ken Golden Selected as Fellow of the Explorers Club

Our own intrepid adventurer, Ken Golden, was selected as a Fellow of the Explorers Club. This is quite an honor as, according to the club’s statement: “Fellowship is reserved for those who have distinguished themselves by directly contributing to scientific knowledge in the field of geographical exploration or allied sciences”. Ken, of course is well known for his polar adventures to study sea ice (10 expeditions to the Arctic, and 7 to Antarctica). He joins ranks with past members of the Explorer Club such as Neil Armstrong (the first person to walk on the moon) and Sir Edmund Hillary (who first summited Mount Everest with Tenzing Norgay). The Explorers Club was founded in 1904, to encourage public interest in exploration and the sciences, and promotes scientific exploration of land, sea, air, and space, by supporting research and education in the physical, natural and biological sciences.



Christopher Hacon Awarded Distinguished Research Award

Christopher Hacon recently was awarded the Distinguished Scholarly and Creative Research Award (DSCRA), joining Herb Clemens, Ken Golden, Janos Kollar, and Joe Taylor as recipients of the award from the Math Department. The \$10,000 DSCRA is the U’s highest prize for research, and was established as a means of recognizing tenure track faculty members in all disciplines who have made significant scholarly advances in their fields. Christopher’s contributions to the minimal model program, a spectacular breakthrough in Algebraic Geometry, were highlighted in the award citation.



Graduation

This year nearly 100 undergraduate mathematics majors will receive a baccalaureate degree. 19 students will receive a Masters degree in Mathematics, 11 will receive the Master of Statistics degree, and 9 will receive Masters in Mathematics - Teaching. Students receiving the Ph.D. in 2014 - 2015 are:

- Kei Yuen Chan
- Omprokash Das
- Megan Gorringer Dixon
- Kenneth Jeffries
- Michal Kordy
- Ross Magi
- Cristian Martinez
- James Moore
- Robert Proctor
- Gregory Rice
- Jia Wang
- Yohsuke Watanabe
- Cheryl Zapata-Allegro
- Patrick Dylan Zwick

Congratulations to all our graduates!

Staff Awards

by Mary Levine



Victor Gabrenas 15 Years of Service

In June, Vic Gabrenas celebrated 15 years of service at the University of Utah, in the Mathematics Department. For the past 15+ years Vic has been taking care of computer

hardware (he can usually repair hardware down to component level), networking and most operating systems. He also provides wired and wireless network support, computer file system backup monitoring, equipment maintenance, classroom projection equipment problem solving, and user support for the department's faculty, staff and students. He is backup support for Pieter Bowman and Nelson Beebe and provides special support to the workstations and databases for the College of Science, Dean's Office.

Congratulations on 15 years of service, Vic. We appreciate everything you do to keep our computers running and are glad you're part of our staff.



Paula Tooman 15 Years of Service

Paula Tooman has been a vital part of our department for over 15 years and she has worn many different "hats" during her tenure in the math department.

Despite the fact that she is extremely busy and always doing several tasks at once, she has a smile on her face and is ready to assist any one she can. She moved from the front desk to the associate accountant office. She is now our Graduate Program Coordinator and we couldn't be happier.

She is fantastic in her new position and is a wonderful asset to our graduate program and students. Her caring nature is a great benefit to our graduate program. She is down-to-earth and her door is always open to everyone in the department.

Congratulations Paula on 15 years of service to the University of Utah and the Mathematics Department!! We are very fortunate to have you as a part of our staff.

Summer Math Program for High School Students by Sarah Cobb and Aryn DeJulis

Last summer, the math department hosted 20 talented high school students interested in mathematics for the annual Summer Mathematics Program for High School Students. Director Steffen Marcus, assisted by Mike Bolton, Leonard Carapezza, Sarah Cobb, Drew Ellingson and Hayden Warren, led the students through three weeks of number theory, cryptography, and computing.

The students studied topics in number theory including modular arithmetic, primality, and Fermat's Little Theorem. They applied these ideas to cryptography, learning several different methods of coding and ways to break them. They also worked on cryptography in the computer lab, writing programs to encrypt and decrypt messages.



The Summer Math Program for High School Students will continue this summer. The program is being directed by Evelyn Lamb and 20 new bright high schoolers will fill the halls in June. Evelyn Lamb and Aryn DeJulis were able to secure a generous grant for this year from American Mathematical Society Epsilon Fund, making it possible to offer the program at no cost to the participants!

More information about the Summer Mathematics Program for High School Students can be found on our webpage: www.math.utah.edu/outreach/hsp



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People Who Joined the Department 2014-2015



Srikanth Iyengar



Karl Schwede

Srikanth Iyengar - Professor

Ph.D. Purdue University
Interested in commutative algebra

Karl Schwede - Associate Professor

Ph.D. University of Washington
Interested in algebraic geometry & commutative algebra



Tom Alberts



Braxton Osting

Tom Alberts - Assistant Professor

Ph.D. New York University
Interested in probability theory and stochastic processes

Braxton Osting - Assistant Professor

Ph.D. University of Washington
Interested in applied mathematics, partial differential equations, optimization and control, graph theory, and machine learning

Assistant Professor (Lecturer)



Maxence Cassier
Ph.D. Ecole Polytechnique
Partial Differential Equations



Sayonita Ghosh Hajra
Ph.D. University of Georgia
Algebraic Topology and Math Education



Ioannis Konstantoulas
Ph.D. University of Illinois, Urbana-Champaign
Dynamical Systems Ergodic Theory



Arjun Krishnan, (Wylie)
Ph.D. New York University
Probability Theory and Stochastic Processes



Jyothsna Sainath, (Scott)
Ph.D. University of Nebraska - Lincoln
Statistics



Varun Shankar
Ph.D. University of Utah
Numerical Analysis

Research Assistant Professor



Sean Lawley
Ph.D. Duke University
Probability Theory and Stochastic Processes



Owen Lewis
Ph.D. University of California, Davis
Fluid Mechanics



Daniel Studenmund
Ph.D. University of Chicago
Group Theory



Yu-Chao Tu
Ph.D. Princeton University
Algebraic Geometry



Emily Witt
Ph.D. University of Michigan
Commutative Algebra

NSF Postdoctoral Fellow



Tiankai Liu, (Hacon)
Ph.D. Massachusetts Institute of Technology
Algebraic Geometry

Graduate Students

This year we welcomed 29 new graduate students into our department:

Hanna Astephan (U. of Michigan), Xuesong Bai (Beijing Normal U.), Andrew Bydlon (Pennsylvania State U.), Leonard Carapezza (U. of Utah), Yuhang Chen (Nanyang Technological U., Singapore), Huy Dinh (U. of Houston), Pinches Dirnfeld (Columbia U.), James Farre (U. of Texas - Austin), Stefana Filipazzi (Humboldt U.), Redi Haderi (KOC U., Turkey), Lifeng Han (U. of California - Davis), Benjamin Hartman

(John Hopkins U.), Samantha Hill (Pomona Coll.), John Hull (Georgia State U.), Iuliia Inozemtseva (Georgia Southern U.), Ethan Levien (Wheaton Coll.), Haydee Lindo (U. of Nebraska), Erin Linebarger (Smith Coll.), Katie Link (North Carolina State U.), Anna Nelson (Boise State U.), Marcus Robinson (Reed Coll.), Franco Rota (U. of Pavia), Loren Santana (Smith Coll.), Matthew Smith (Colorado State U.), Kiersten Utsey (Carroll Coll.), Andrew Watson (U. of North Carolina), Daniel Zavitz (Colorado State U.), Ziwen Zhu (Fudan U., China).

Staff



Tiffany Mendenhall Accountant

Tiffany started working in the math department in May 2014 as our department accountant. Before joining our ranks she worked as the accountant for a non-profit. Her responsibilities with us

include: accountant for the department accounts, payroll reporter, and supervisor of the hourly staff.

Tiffany grew up in American Fork, and currently lives in Lehi, UT. She is the youngest of 4 kids in her family, by 1 minute. She has a twin sister, so be sure to take a close look when you're talking to her to make sure it's actually Tiffany! She has crazy little boy, Ethan, who is 8 that she loves to death. Tiffany got married in November, and in addition to welcoming a new husband she also has two new step children she has been thrilled to add to her family.

In her spare time Tiffany enjoys running - she has participated in Ragnar and done a few half marathons. Someday she wants to complete a full marathon, but just once! She also enjoys sports and spending time outdoors and has even coached her son's soccer team. With family and friends she enjoys hiking, camping, and traveling.

Tiffany has jumped into her new role enthusiastically, and has been a pleasure to work with. She is enjoying getting to know the new people and loves the atmosphere on campus. Welcome, Tiffany!

Alison Jarrett Program Assistant

Many of us already know Alison, she has been working for CSME with Math for America and the Masters of Science for Secondary School Teachers (MSSST) program. On September 2, she transitioned to a new staff position in the math department. She is continuing her work as a program assistant for Math for America, and she is also responsible for scholarships, development & alumni relations, and gift donations along with other administrative staff duties.

Alison grew up in Midway, Utah. She went to Southern Utah University for her undergraduate education and is now working on a graduate degree in Educational Leadership and Policy, with an emphasis in Student Affairs - a study that works great with her current work with students in higher education. She is the youngest of 5 children, with 3 sisters and 1 brother. She has been married to her husband, Travis, for 7 years. She and her husband welcomed their first child, a baby girl named Atley in December 2014.

Right now her spare time is filled with sleep and homework, but she also enjoys yoga and scrapbooking. A lot of time is spent hanging out with her husband, which means lots of time watching sports!

The transition from CSME has been smooth and easy. She enjoys that her work continues to be involved with MfA, something she already knows, and has enjoyed getting to know more members of the math department.

