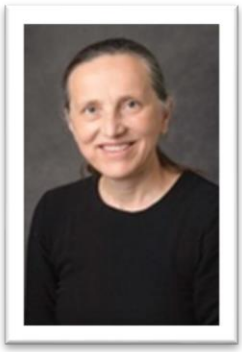
PURDUE UNIVERSITY DEPARTMENT OF MATHEMATICS NEWSLETTER

2022 MATH PUrview

Message from the Department Head



Greetings from Purdue!

Purdue and the Department of Mathematics are going strong, with big enrollments for the second consecutive year. Big enrollments at Purdue mean more students in mathematics classes. We teach about 10% of all credit hours on campus. Our largest enrollments are of course in calculus classes, but we also have growing enrollments in our more advanced courses, such as proof-writing courses.

In 2021-2022, 27 of our graduate students finished with a Ph.D. and 9 with a master's degree, and they are getting jobs. This is a strong testimony to our graduate program. Forty new graduate students will join the program in Fall 2022. We were able to increase our Graduate Stipends more than announced in the spring.

Three of the eight winners of the SIAM 2022 Inaugural Class of MGB-SIAM Early Career Fellows are our own Ph.D.'s. Congratulations to Kyle Dahlin '20, Reginald L. McGee II '15, and Joan Ponce '20 on their exemplary achievements!

Since Spring Break 2022, the pandemic conditions on campus are not requiring the use of masks in the classroom anymore. We are still prepared for the possibility of some quarantine events. Our teaching has been all in person, with very few exceptions. We cherish personal interactions that add much to our learning, discovery, the flow of information, and connections. In 2021-2022 we resumed the daily cookie hour in the library for graduate students and faculty, and we transitioned to many more in-person seminars.

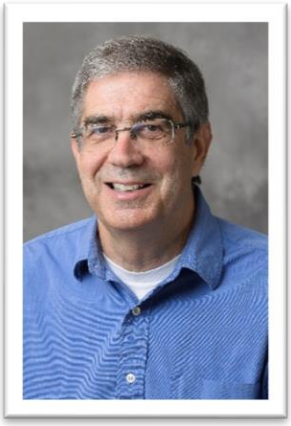
The conference of the American Mathematical Society (AMS), planned to take place at Purdue originally in April 2020 but postponed due to the pandemic to March 2022, finally took place, albeit virtually by the decision of the AMS. We are indebted to Professors Birgit Kaufmann, Ralph Kaufmann, Jie Shen, and Bernd Ulrich for their superb (and prolonged) organizing work. Of note is that one of the special sessions in the conference was dedicated to Professor William Heinzer and that one of the three plenary speakers was our Ph.D. alumna Christine Berkesch.

Irena Swanson
Professor and Head

Contents

Highlights

Actuarial Program recognized as a Center of Actuarial Excellence



In January 2022, the Society of Actuaries (SOA) recognized Purdue University as a SOA Center of Actuarial Excellence (CAE), the highest level of SOA recognition for universities. Our actuarial program is jointly administered by the Department of Mathematics and the Department of Statistics. Jeffrey Beckley (Mathematics/Statistics) has been the Director of the program since 2017 and co-director from 2009-2017 jointly with Professor Richard Penney from the Department of Mathematics. (Professor Penney took over the Actuarial Program as the director in 2000 and he retired in 2017). Jeff Beckley has won numerous teaching awards at Purdue, and he is a member of the American Academy of Actuaries. Jianxi Su, Assistant Professor in the Department of Statistics (newly promoted to Associate Professor rank), has been the Associate Director. Also teaching in the program are lecturers Dan Rubin and Sally Ray, whose appointments are evenly split between the two departments, as well as Assistant Professors Mengyi Xu and Haibo Liu, whose appointments are 25% in Mathematics and 75% in Statistics. All six faculty are Fellows of the Society of Actuaries.

To qualify for the CAE designation, university and college programs must meet eight criteria and specific requirements. These criteria include appropriate degree and curriculum offerings, graduate count, faculty composition, quality of graduates, appropriate integration with other areas of study, connection to industry, and research and professional involvement. Schools retain the CAE designation for a five-year period, renewable subject to compliance with the CAE criteria.

Our actuarial program has been growing. The number of actuarial science majors in 2017-2018 was 233, in 2018-2019 it was 284, in 2019-2020 it was 331, in 2020-21 it was 336, and in 2021-22 it was 346. A high percentage of graduates are placed in internships and are employed immediately upon graduation.

The Purdue Actuarial Science Program is one of the most preeminent Actuarial Science programs in the United States and has been highly ranked by a number of external organizations. To name but only a few, our program was ranked

- Number 1 best Actuarial Science Degree in 2022 by CollegeChoice.Net
- Number 5 best Actuarial Science Program in 2022 College Gazette

More about our actuarial program is at Purdue University: Department of Mathematics: Actuarial Science Program

Rodrigo Bañuelos receives the 2022 AMS Award for Distinguished Public Service

Professor Rodrigo Bañuelos received the 2022 AMS Award for Distinguished Public Service. The honor recognizes his exceptional service to the profession, his extensive educational and professional mentoring, and his prolific activities that have advanced diversity, equity, and inclusion at all levels of the mathematical sciences community. Only one award is given every other year. Congratulations, Professor Bañuelos, on this much-deserved award! The following is taken from the AMS website:

Bañuelos' service to the profession goes well beyond that expected of a research mathematician. In addition to his tenure as head of the Purdue University Department of Mathematics (2007-2011), he has served on many boards and committees of national importance, including at the Institute for Pure and Applied Mathematics (IPAM), the Mathematical Sciences Research Institute (MSRI), the National Science Foundation (NSF), and the Simons Foundation. He also has been an influential member of many AMS committees. In all of these capacities, he has been a tireless, unwavering, and fervent advocate for mathematicians from historically underrepresented groups. As an influential faculty member at Purdue, he has helped recruit a large number of underrepresented faculty to that prestigious institution. Bañuelos' career combines exceptional service with an internationally recognized research program at the interface of probability, harmonic analysis, and spectral theory. He has more than 100 research publications and has advised 12 PhD students and several postdocs who have gone on to successful careers. He remains a popular teacher and mentor to students at all levels of mathematics and has served as a mentor to many young faculty members at Purdue and at other institutions.

Professor Jie Shen ranked #170 among Top Scientists for 2022

Professor Jie Shen is ranked #170 in the world ranking and #91 in United States on the list of top mathematicians for 2022 that was released in early 2022 by Research.com, one of the major websites for Mathematics research offering credible data on scientific contributions since 2014. The full listing of top 1000 mathematicians is at https://research.com/scientists-rankings/mathematics. The ranking is based on the H-index metric provided by Microsoft Academic and includes only leading scientists with an H-index of at least 30 for academic publications made in the area of Mathematics. In addition, in another much-publicized ranking of World's top 2% scientists last November by a Stanford team, Professor Shen is ranked in the field of Numerical and Computational Mathematics as #4 in the world for the single-year impact (2020) and as #10 in the world for career impact. More information is on the site https://ecebm.com/2021/10/26/stanford-university-names-worlds-top-2-scientists-2021/, from where you can click on the link for the 2021 updated version and open the first two data sets.

Dr. Johnny Brown and Dr. Isaac Harris among 2022 Black Mathematician Honorees

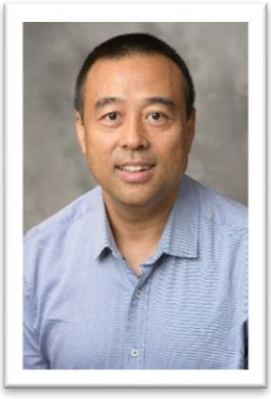
Mathematically Gifted and Black, a website which features the accomplishments of Black Scholars in the Mathematical Sciences, has honored both Professor Johnny Brown and Professor Isaac Harris as 2022 Black Mathematician Honorees.

Professor Brown earned his Ph.D. in 1979 from University of Michigan under the direction of Peter Duren. He joined Purdue in the same year as Assistant Professor. He was promoted to Associate Professor in 1985 and to (Full) Professor in 1990. He has received numerous teaching awards at Purdue, including the Charles B. Murphy Outstanding Undergraduate Teaching Award in 1999, induction into the Book of Great Teachers in 1999, Top Ten Outstanding Teachers of Undergraduates in the College of Science in 2006, and Favorite Faculty Award in 2016, 2017 and 2021. In the Fall 2021 he taught an exceptionally large Calculus I class, with 1400 students and 18 TAs to manage, which was a tremendous undertaking, and which garnered him yet again excellent reviews from his students.

Professor Harris earned his Ph.D. in 2015 at the University of Delaware under the direction of Fioralba Cakoni. He was a Visiting Assistant Professor at Texas A&M University 2015-2018 before he joined Purdue as tenure-track Assistant Professor. His research area is partial differential equations, and more specifically in applied analysis. He has authored and co-authored 26 publications, he has many more in the pipeline, and he is active in advising postdocs and graduate students.

The interview with Professor Brown can be found at https://mathematicallygiftedandblack.com/honorees/johnny-brown/ and that with Professor Harris can be found at https://mathematicallygiftedandblack.com/honorees/isaac-harris/.

Data-driven causal model discovery and personalized prediction in Alzheimer's disease



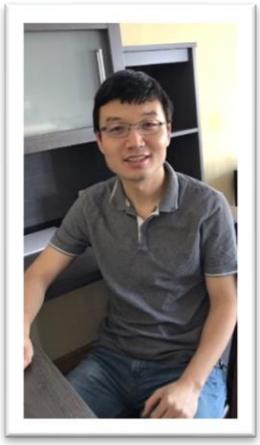
Professor Guang Lin and his collaborators developed a data-driven causal model to describe the biomarker dynamics for all eligible subjects in ADNI-1 database and make personalized predictions for patients who provide enough longitudinal biomarker data points. This work hopes to benefit Alzheimer's disease early diagnosis and personalized predictions. This work was accepted to be published in the prestigious journal Nature Digital Medicine is a prestigious journal with an impact factor of 11.65. It publishes the highest quality research relevant to all aspects of digital medicine and health.

Gary Cunningham and Botong Wang awarded in the 2022 Distinguished Science Alumni Awards

Two Purdue Mathematics Alumni were recognized in the 2022 Distinguished Science Alumni Awards at an in-person celebration in April.

Gary Cunningham was honored as a Distinguished Science Alumnus for providing significant leadership and for noteworthy professional accomplishments that reflect favorably on the College of Science, Purdue University, and society. He was a mathematics major at Purdue, he was active in theater, and he was inducted into the Phi Beta Kappa honor society. After undergraduate school, Gary earned his law degree from the University of Illinois College of Law magna cum laude and was a member of the Order of the Coif. After practicing briefly in Chicago and Atlanta, Gary practiced law as a civil litigator for the Minnesota Attorney General's office for 27 years. A tenor, Gary was for years a member of the Minnesota Chorale, the chorus for the Minnesota Orchestra.

In 2014, Gary was appointed General Counsel for Minnesota State Colleges and Universities ("Minnesota State"), the third largest system of state colleges and universities in the United States and the largest in state with 30 colleges, 7 universities and 54 campuses. Minnesota State serves 340,000 students each year, with more Black and indigenous, as well as students of color, attending the college and universities than all other higher education providers in Minnesota combined. As General Counsel, he leads and coordinates the legal affairs of the system, advises the Board of Trustees, the Chancellor and Presidents and provides legal counsel and litigation coordination.



Botong Wang, with a Ph.D. from the department in 2012, was honored with the Early Career Scientist Award, which is designated for an alumnae/alumnus who has graduated within the last 10 years and has the promise of becoming a leader among professional peers. In 2002, Dr. Wang received an International Mathematics Olympiad Gold Medal with a perfect score. During his time at Purdue, Dr. Wang earned the Ross Fellowship and a Purdue Research Foundation Research Grant. He is an Associate Professor in the Department of Mathematics at the University of Wisconsin-Madison. He has a broad interest in several different subjects in mathematics, including combinatorics, algebraic geometry and topology. His research has been acknowledged by several awards from the National Science Foundation and by the Sloan Foundation. While publishing in numerous academic publications, Dr. Wang is a well-traveled speaker, mentor, and advisor. Dr. Wang was in a joint paper with June Huh, one of the 2022 Fields Medalists, where they used methods of algebraic geometry to solve conjecture of Dowling and Wilson in combinatorics that had been open since the 1970s.

2022 Purdue Undergraduate Research Conference Awards

Every year, the Purdue Undergraduate Research Conference provides a forum for student researchers to showcase their research with the public. Additionally, faculty members from across the university judge oral presentations and posters based on their content and presentation of their research. The top students from each unit receive awards for their efforts.

This year, A. Meenakshi McNamara won 2nd place in the College of Science Academic Unit for their poster titled Bounds on Quantum Chromatic Number for Lexicographical Products of Graphs. Quantum colorings are defined in terms of strategies for non-local games with entanglement. This work touches on subjects in Operator Algebras, Non-Commutative Geometry, Quantum Information Theory, and Graph Theory. Meenakshi's poster discusses existing bounds on quantum chromatic numbers and expands upon these bounds to lexicographic product of quantum graphs. For all recipients read https://www.purdue.edu/undergrad-research/conferences/spring/archive/past-winners.php.

In addition, the same week, the department organized its first Undergraduate Research Presentations. The students presented on their work with their faculty mentors:

Caroline Henson worked with Professor Alexandria Volkening on a project about Making Simulated Patters Look Real: Image-Processing for Zebrafish

Ryan Branstetter and Manas Paranjape worked with Professor Alexandria Volkening on a project about Election Forecasting

Mahimna Vyas worked with Professor Yuan Gao on a project about Macroscopic Behavior of Chemical Reactions: Hamilton Dynamics and Energy Landscape

Colton Griffin, Roy Araiza, and Aneesh Khilnani worked with Professor Thomas Sinclair on a project about Approximating Projections by Quantum Operations

Zijin Liu worked with Professor Jing Wang on a project about Brownian Motion on Sub-Riemannian Models

Meenakshi McNamara worked with Professor Rolando de Santiago on a project about Bounds on Quantum Chromatic Numbers for Lexicographic Products of Graphs

For more information regarding Undergraduate REU opportunities please visit Purdue University: Department of Mathematics: Purdue REU Opportunities

Faculty and Staff Changes

New Assistant Professors

Dr. Lvzhou (Joe) Chen (not to be confused with Dr. Joe Chen!) joined the Department of Mathematics as a tenure-track assistant professor in August 2022. He earned his Ph.D. in 2020 from the University of Chicago under the supervision of Danny Calegari. In the last two years he was an R. H. Bing Instructor at the University of Texas at Austin.

He specializes in geometry, topology, and dynamics in low dimensions, with an emphasis on stable commutator lengths and mapping class groups of infinite type surface.

Dr. Takumi Murayama joined the Department of Mathematics as a new tenure-track assistant professor in August 2022. He earned his Ph.D. in mathematics in 2019 from the University of Michigan under the supervision of Mircea Mustata. Since 2019 he has been a Postdoctoral Research Fellow in the Department of Mathematics at Princeton University, and since 2020 he has been a Lecturer at Princeton as well. He has held a Mathematical Sciences Postdoctoral Research Fellowship from the National Science Foundation since 2019.

His research interests lie in algebraic geometry and commutative algebra, and more specifically in singularities, birational geometry, positivity of line bundles, and positive characteristic methods.

Dr. Matthew Novack joined the Department of Mathematics as a tenure-track assistant professor in August 2022. He earned his Ph.D. at University of Texas at Austin in 2019 under the direction of Alexis Vasseur. His most recent position was as a member of the Institute of Advanced Study in 2021-2022, and prior to that he was a Della Pietra Endowed Postdoctoral Fellow for the spring semester 2021 at the Mathematical Sciences Research Institute, a Joseph B. Keller Postdoctoral Fellow at the Courant Institute of Mathematical Sciences in 2020-2021, and a Courant Instructor in 2019-2020 and 2020-2021.

His research interests lie in partial differential equations.

Dr. Eric Samperton joined the Departments of Mathematics and Computer Science as a new tenure-track assistant professor in August 2022. His appointment is 75% in Mathematics and 25% in Computer Science. He earned his Ph.D. in 2018 at University of California at Davis under the supervision of Greg Kuperberg. In 2018-2019 he was a Visiting Assistant Professor at University of California in Santa Barbara, and in 2019-2022 he was a J. L. Doob Research Assistant Professor at University of Illinois at Urbana-Champaign.

His research interests include computational complexity and invariants in low-dimensional topology, quantum algebra, quantum topology, quantum computing, geometric group theory and dynamics.

Professors of Practice

Dr. Mahesh Sunkula joined the Department as an Assistant Professor of Practice in August 2021. He earned his Ph.D. in Mathematics in 2019 at University of Oklahoma. Until joining Purdue he was a Visiting Assistant Professor at University of California at Riverside. In 2021 he was awarded the Outstanding Visiting Assistant Professor title for excellence in teaching there. He has taught a variety of courses and has much experience in mentoring undergraduates.

His research interests lie in applied mathematics, especially in wave scattering, inverse problems, optimal control, mathematical modeling, and quantization.

Associate Professor

Professor Mireille (Mimi) Boutin joined the department as Associate Professor in January 2022, with 75% appointment in Mathematics and 25% in the Elmore School of Electrical Engineering. She has had strong connections with the department for years, including advising and hiring Ph.D. students, designing new courses in data science, and serving on departmental committees.

Her research interests are in invariant theory of discrete objects, signal processing, machine learning, data science, inverse problems in medical nutrition.

We also hired:

Golomb Visiting Assistant Professors: Heejin Lee, Ayan Maiti, Michelle Michelle, Emanoel Souza, Yiran Wan and Yilong Zhang.

(Continuing) Lecturers: Jennifer Fitch and Susitha Karunaratne.

Visiting Assistant Professors: Seongjun Choi, Christian Moya Calderon, Khrishnendu Khan, Vaibhav Pandey, Yevgeniya Tarasova, Ke Wu(re-hired), Siamak Yassemi and Luming Zhao.

Mathematics is the most beautiful and most powerful creation of the human spirit.

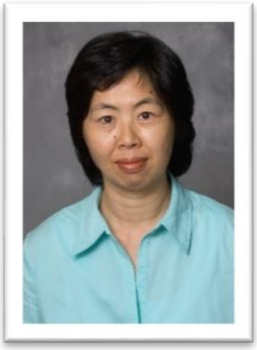
Stefan Banach

Faculty Promotions

Giulio Caviglia was promoted from Associate Professor to Professor effective Fall 2022. Professor Caviglia earned his Ph.D. from University of Kansas in 2004 under the direction of Craig Huneke. He was a Charles B. Morrey J. Assistant Professor at University of California in Berkeley from 2005 until he joined Purdue in 2007 as an Assistant Professor. His research focuses on commutative algebra.

Haizhao Yang was promoted from Assistant Professor to Associate Professor effective Fall 2022. In February 2022 he was awarded the 2022 Young Investigators Award from the Office of Naval Research. Dr. Yang joined the department in 2019 and is leaving us for solving a two-body problem. We wish him the best in his future endeavors.

Prof. Zhilan (Julie) Feng was elected a 2022 Fellow of the American Mathematical Society. Prof. Feng earned her Ph.D. in Mathematics in 1994 at Arizona State University, was a postdoctoral associate at Cornell University from 1994 to 1996, and has been at Purdue since 1996, with the exceptions of one semester at Princeton in 1998 and being on leave from Purdue since 2019 as the Program Director for DMS-Math Biology at the NSF. This summer she retired from Purdue University and is transitioning to a permanent position as the Program Director in the Division of Mathematical Sciences at the National Science Foundation. We wish her the best in her new role.

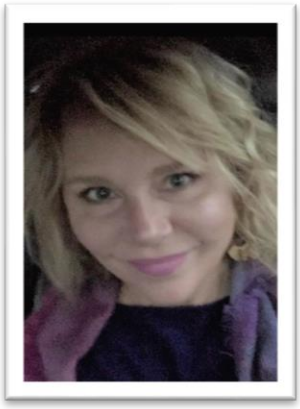


Math is the only place where truth and beauty mean the same thing.

Danica McKellar

New Staff Additions

Nichole Baker joined the department on 1 November 2021 as the Executive Assistant to the Head. Nichole quickly understood the many tasks if the position and has been a great addition to the department.



Casey McDonald joined the department in August 2022 as our new Undergraduate Coordinator in office 626. Casey will be working alongside Stephanie Foster to assist in Undergrad Services.

Sarah Wentland joined the department in July 2022 in the Main Office as our new Administrative Assistant. Sarah will be taking over the website, room reservations, and department purchasing.

Fun Fact

In 1961, the Department of Mathematics was placed into the Schools of Engineering, at least in part for the University President to circumvent the Dean of the School of Science, Education, and Humanities, who rejected a proposal for math to grow in the areas of applied math, statistics, and computer and information science.

Awards and Scholarships

2021-22 Spira Awards

These awards are made possible by a generous donation by Ruth and Joel Spira and have been established for excellence in mathematics teaching at Purdue. The 2021-2022 winners are:

Manuel Rivera: Graduate Teaching and Graduate Mentoring

Trevor Wooley: Graduate Teaching

Joe Chen: Undergraduate Teaching and Administrative Support

Brooke Max: Undergraduate Service Teaching

Ethan Brady, Meenakshi McNamara, and Colton Griffin Awarded Goldwater Scholarships

Congratulations to Undergraduate students Ethan Brady, Meenakshi McNamara, and Colton Griffin on being among those awarded highly competitive Goldwater Scholarships. This program is one of the oldest and most prestigious scholarships in the United States, with a focus in the natural sciences, engineering, and mathematics.

More information about the award can be found: https://goldwater.scholarsapply.org/.

Go down deep enough into anything and you will find Mathematics.

Dean Schlicer

Department of Mathematics Awards

Every April the Department holds a reception to honor students earning scholarships and awards. This year's event was held in person on 20 April 2022. The following students were recognized!

Congratulations to the following Students!!

MATHEMATICS AWARDS

Michael Golomb Math Award
Joseph Veltri

Eugene V. Schenkman Memorial Award
Ethan Brady, Adam Clay

Jerison Memorial Award in Analysis
Meenakshi McNamara, Kevin Wu

Putnam Exam Award
Zijin Lui, Joseph Veltri

Merrill E. Shanks Memorial Award
Tiffany Collins, Sydney Douglass, Tamara Johnson

Spira Math Teaching Award
Adam Clay

Senior Achievement Award
Juliet Aygun, Grace Bowling, Aidan Casey, Justin Copenhaver, Daniel Lense, Richard Li, Zijin Lui, Jacob Moore, Joseph Veltri

College of Science Outstanding Senior
Juliet Aygun

College of Science Outstanding Junior
Sterling Saint Rain

College of Science Outstanding Sophomore
Samantha DePoy

College of Science Outstanding Freshman
Caden Matthews

College of Science Spira Undergraduate Research Award
Adam Clay

Fun Fact

In 240BC, Eratosthenes estimated the Earth's Circumference using math, without ever leaving Egypt, and he was accurate to within 2%.

MATHEMATICS SCHOLARSHIPS

Gerald R. MacLane Outstanding Undergraduate Memorial Award
Colton Griffin, Brian Morton, Madhuri Vempati

Thomas Arai Scholarship
Ethan Brady

Leonard D. & Anna W. Berkovitz Scholarship
Baoxuan Tao

Mark Hoppy Memorial Scholarship
Alan Garcia

Virginia Mashin Scholarship
Parker Alford, Chiara Travesset, Han Thai Truong

Alton & Juanita S. Andrews
Colton Griffin, Brian Morton, Madhuri Vempati

Arthur Rosenthal Scholarship
Ethan Brady, Logan Knight, Meenakashi McNamara, Sterling Saint Rain

Jean Rubin Scholarship
Sergio Alvarez, Junseo Cho, Jason Gong, Ethan Smith, Katherine Wilson, Daniel Young

Helen Clark Wight Scholarship
Samantha DePoy, Bradley Duda, Megan Hernly, Dayoon Suh, Runlin Wang

Walter B. Curtis Memorial Scholarship
Ethan Gottschalk, Krish Gupta, Josephine Haydock, Caden Matthews

Andris A. Zoltners Scholarship
Aaron Boes

Undergraduate Memorial Award
Undergraduate Memorial Award
Kamala Richardson

Gordon L. Walker Scholarship
Gonger Wang, Dianping Yang

Craig Wilson Scholarship
Changsheng Jiang

GRADUATE AWARDS

Abhyankar Award for Algebraic Geometry
Joseph Knight

Abhyankar Award for Commutative Algebra
Cheng Meng

Carl C. Cowen Scholarship
Leah Bruck, Milana Golich, Govanni Granados

Excellence in Teaching TA Award
Josiah Banks, Alejandra Gaitan Montejo, John Haug, Alexander Hazeltine, Daniel Slonim, My Van Vo

Certificate of Merit for TA Teaching
Govanni Granados, Scott Hiatt, Alexandros Kafkas, Anna-Rose Wolff

Excellence in Service TA Award
Sofia Martinez Alberga, Anna-Rose Wolff

T.T. Moh Graduate Scholarship
Alexander Hazeltine, Che-Hung Huang, Yifu Wang

Mervin L. Keedy Scholarship
Justin Katz

Pure Mathematics is in its way the poetry of logical ideas.

Albert Einstein

ACTUARIAL SCIENCE AWARDS AND SCHOLARSHIPS

Outstanding Freshman in Actuarial Science
Grace Zhang

Outstanding Sophomore in Actuarial Science
Samuel Chilson

Outstanding Junior in Actuarial Science
Eve Smith

Outstanding Senior in Actuarial Science
Lauren Sturges

Distinguished Undergraduate Researcher Award
Shuyu Zhu

OneAmerica Actuarial Science Service Award
Laura Hayes

Milliman Awards
Marygrace Fagan, Eric Lai, Eric Schaeflein, Trevor Morgan, Kyle Stowe

Milliman Diversity Award
Tanya Yanez, Precious Baker

Swiss Re Awards
David Gohmann, Alexandra De Luca, Jacob Alvey, Heidi Marg, Qingyi Olivia Tan

Aegon Scholarship
William Bach

Bill & Marilyn Chen Scholarship
Luke Cooley

Christine Bell Heim Award
Sofia Lalani

Actuarial Science Scholarship

Andrew Deuschle	Samuel Muir	Bianca Chan	Megan Janke	Andrew George
Mark Baker	Lucas Embrey	Julia Hopper	Colin Mackenzie	Seth Thompson
Evan Voris	Elissa Haake	Michael Bellars		

Fun Fact

As early as 1958, the math department taught some sections of calculus by closed-circuit TV.

Keep Us Up to Date

Dr. Radha Mohan received her Ph.D.in Commutative Algebra from Purdue University in 1995 under the guidance of Professor William Heinzer. Following this she returned to India and did a post-doc at the Institute of Mathematical Sciences, Chennai. She then moved to St. Stephen's College, Delhi which is a premier Arts and Science college in Delhi. She is currently Associate Professor at St. Stephen's College.

She served as the Chair of the Mathematics Department in St. Stephen's College for 3 years from 2017 to 2020. Her research interests continue to be in Commutative Algebra. She has collaborated with Professor Vijay Kodiyalam of the Institute of Mathematical Sciences, Chennai (a Purdue Math alumnus and student of Bill Heinzer) in the past and currently.

She has one Ph.D. student who is currently finishing up his thesis.

Radha cherishes the years spent at the Purdue Math Department, the very active Commutative Algebra group and the friendships and associations of the graduate school years.

Dr. David Moser was a Ph.D. student in West Lafayette 1989 – 1991 and then wrote his thesis in Graph Theory in 1993 under the direction of Lowell Beineke at Ft. Wayne. After a brief 3-year position at Manchester University, he joined Lincoln Life as an actuary, a position he still holds. He is a Fellow of the Society of Actuaries and is currently studying to earn his Chartered Financial Analyst designation. His primary duties at Lincoln are setting interest rates for $23 billion of Stable Value Funds.

Dr. Moser and his wife Sheri (another Purdue Grad) have been married for 28 years. They have two daughters (Olivia and Gretchen) who are married to two brothers (Josiah and Aaron (another Purdue Grad)) and have a son (Reuben) who is a Junior at Purdue in Ft Wayne (majoring in Mathematics and Physics). David and Sheri also are the proud grandparents of two granddaughters (Gwyneth & Aidel) and are expecting a grandson this summer.

When David is not working or studying for exams, he enjoys studying the Bible, doing crossword puzzles, reading mystery novels, listening to music, and playing the piano.

Dr. Skip Garibaldi was a naive computer science major at Purdue University when he was lured into mathematics by doing the Problem of the Week in the Exponent, and, of course, by the math. His moment of clarity came in the Math Library: "I must have subconsciously already decided to focus on math, because there I was, reading a book that wasn't required for class and it was a math book."

Dr. Skip Garibaldi ended his time at Purdue with majors in mathematics and computer science. The two subjects fit together well, and he credits the breadth of courses and experiences available at Purdue as setting him up for later success.

He then obtained a Ph.D. in mathematics from the University of California, San Diego, in 1998. Since graduating, he has been a chaired professor; talked about math on national TV programs such as 20/20 and ABC World News; and served on the US Air Force Scientific Advisory Board. Since 2017, he has been director of the IDA Center for Communications Research-La Jolla, a research institute in southern California.

Send your post-graduation news to mathexec@purdue.edu

Alumni and Friends, help us keep in touch with you by e-mailing your contact information to mathexec@purdue.edu.

Keep up to date on our department all year by visiting http://www.math.purdue.edu/news. Learn more about supporting Mathematics at Purdue at http://www.math.purdue.edu/giving

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