Division of Mathematics and Computer Science 2017 Annual Newsletter

A publication of a division of the Council on Undergraduate Research

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New for 2017-18

CUR award at SIGCSE 2018. The inaugural CUR Computer Science Student Poster Awards, at the Special Interest Group on CS Education (SIGCSE). CUR CS division representatives worked with SIGCSE organizers to develop the awards. Recipients will receive \$150 and mention in our newsletter. See our upcoming events sections for conference info.

Special Session at JMM 2018, "Open and Accessible Problems for Undergraduates," sponsored by AMS, CUR & the SIGMAA on Undergraduate Research. For more information on the recently founded Special Interest Group on UR, view the SIGMAA website.

1st year CUR booth at MathFest. Join us to discuss UR at our booth in the exhibit hall at MathFest in Denver, Colorado, August 1-4, 2018.



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Faculty Mentoring Awards

Early in 2017, the CUR Math/CS division sent out calls for faculty mentoring awards to honor faculty for their success in mentoring undergraduate students in research. We received 11 excellent applications: 5 for Early Career (0-7 years past their PhD), 3 for Mid-Career (7-15 years past their PhD) and 3 for Advanced Career (15+ years past their PhD) categories. Each of the applicants would deserve to win an award. In the end, the committee selected the following winners:

- Advanced Career: Mason Porter, Professor in the Department of Mathematics at UCLA.
- Mid-Career: Jennifer Daniel, Associate Professor in the Department of Mathematics at Lamar University.
- Early Career: Zach Abernathy, Assistant professor of Mathematics at Winthrop University.

Visit the bios section to see some highlights of their successes and accomplishments.

Nominations for the 2018 awards are due March 31st. Please see the division website or contact Kathryn Leonard for more information.

Invite CUR to conduct your Department Review

The Council on Undergraduate Research (CUR) Program Review Committee offers review services to academic departments, divisions, and colleges. The Mathematics and Computer Science Division of CUR has a pool of qualified reviewers who have experience visiting academic institutions where they listen to you and provide the help you need. If your department is looking to assess or increase its undergraduate research offerings, then you are especially encouraged to begin discussions with our CUR councilors via this review process. Please visit the CUR Program Review website for details.

CUR Councilor Elections

CUR is governed by a body of councilors, who collaborate at the forefront of national policy on Undergraduate Research. We are especially interested in increasing our division's diversity. If you are interested in becoming a councilor, we recommend that you ask your administration for a guarantee of support to attend our annual business meetings if you are elected councilor, and consider staying a few extra days for our biennial conferences. Each business meeting lasts 3 days and registration costs about \$150. On conference years this is extended by 3 days, with recent registration costs of about \$600. Registration costs may seem high but they include most pre-dinner meals and about half of the dinners. To run for election, look into the CUR website. The deadline for nominations is November 6th.

2017 MathFest CUR Student Award



Trent DeGiovanni. Through the national mathematics honor society Pi Mu Epsilon, the Division sponsors an undergraduate student award for "Best Presentation on Original Research" at the Mathematical Association of America's national MathFest conference. This year, the recipient was Trent DeGiovanni, a rising senior mathematics major at Gonzaga University (WA). The award was presented by CUR councilor Chad Awtrey during the Pi Mu Epsilon banquet on July 28, 2017. Trent's presentation, "Most Economical Common Dissection Between a Square and Equilateral Triangle," was based on work he did this past year at Gonzaga with Professors Jason Lutz and Katharine Shultis. After graduating next year, Trent hopes to pursue a doctoral degree in mathematics.

What is it like to be an Elected Councilor from Computer Science?

As a (re-) elected Councilor of the Math and Computer Science Division of CUR (thank you all!), returning for my second term, I've most enjoyed the interaction with faculty dedicated to undergraduate research from other disciplines. It has been very useful to learn from other faculty, particularly math colleagues, about the techniques they use both locally and nationally to increase student and faculty engagement in undergraduate research.

In particular, in the Math and CS Division, I learned that mathematicians have been working hard for the last decade, under the direction of Michael Dorff of BYU, to develop new generations of math faculty dedicated to undergraduate research! Which is a great idea – and one which computer science could certainly emulate, as we are not yet doing that in the systemic way Michael and his colleagues have established.

I've also met new colleagues from computer science, and we are not joined by our research or sub discipline interests, but undergraduate research. It has been exciting to learn how all the Mathematics and Computer Science Division members have succeeded at their colleges and universities and to selectively adopt new approaches I think will work at my school. Finally, the opportunity to speak with Undergraduate Research Directors from a range of colleges and universities has been illuminating. It's interesting to see how other schools are working with administrators and local industry to obtain undergraduate research funding and opportunities for their students through student research presentations.

This past election cycle increased the number of computer scientists in the Math and CS Division, and we're working to expand the reach of the Division in new ways, including the SIGCSE poster award effort, led by Kathryn Leonard and modeled after similar efforts at the annual MathFest. Additionally, a panel on undergraduate research has been proposed for SIGCSE.

Dr. Patricia Morreale, Professor of Computer Science at Kean University

Funding for Academic Year Research Groups in Mathematics through CURM

The Center for Undergraduate Research in Mathematics (CURM) calls for minigrant applications from faculty by November 15, 2017. Mini-grants provide support for pairs of research groups from two institutions in the same geographic region (preferably institutions of different type) to mentor academic year student research. Each research group will consist of 3-5 undergraduate students and a faculty mentor. Each group will receive:



- a \$3000 stipend or course credit for students
- a \$5000 stipend for each faculty member
- funding for supplies
- funding provided for professors to attend a summer workshop on best practices for research mentoring
- funding for travel to a regional meeting in spring

For more information, please visit curm.urmath.org.

13th Annual National UNCG Mathematics & Statistics Conference

The Department of Mathematics and Statistics at The University of North Carolina at Greensboro will host the 13th Annual UNCG Regional Mathematics and Statistics Conference on Friday and Saturday, November 3-4, 2017. The conference is organized by three CUR councilors - Jan Rychtář (UNCG), Chad Awtrey (Elon University), Dewey Taylor (VCU), and Hyunju Oh (Bennett College).

Dr. Talitha Washington (click here for her website), Howard University, will deliver a plenary talk "Exploring the Mathematics of the 'Hidden Figures."

This conference will feature a faculty development workshop focused on training faculty in mentoring undergraduate researchers led by Dr. Kathryn Leonard (Occidental College) and panels on careers in mathematics, prepara-

tion for graduate school, and benefits of undergraduate research.

The deadline for registration and abstract submission will be early in October 2017.

Funding for this conference is provided by the NSF (DMS - 1632179), UNCG Office of the Provost, the College of Arts and Sciences, UNCG Office of the Research and Economic Development, the Department of Mathematics and Statistics, UNCG and Elon University's Chapter of Pi Mu Epsilon.

For more information about the conference please visit the conference website.

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Upcoming Events and Deadlines of Interest to Faculty

- 1. CUR-Goldwater Scholar Faculty Mentor Award, initial nomination by President or Provost due November 6th. Nominees must have mentored at least three Goldwater Scholars during his/her career.
- 2. University of North Carolina at Greensboro Regional Mathematics and Statistics Conference, November 3-4, 2017.
- 3. Election for CUR Councilor positions, nominations may be made between October 2nd and November 6th in 2017.
- 4. The Deadline for Presentation and Poster Proposals for the summer 2018 CUR Biennial Conference is November 21, 2017.
- 5. CUR Fellow award nominations in recent years due in December or January. CUR Fellows are leaders and role models for a broad range of faculty and students. Joseph Gallian became a CUR Fellow in 2002 and is the only CUR fellow from our division.
- 6. Joint Mathematics Meeting (JMM), January 10-13, 2018 in San Diego, CA will include an AMS special session sponsored by CUR entitled Open and Accessible Problems for Undergraduate Students organized by Allison Henrich, Michael Dorff and Nick Scoville.
- 7. SPUR, CUR's new flagship journal, is now accepting submissions.
- 8. CUR Dialogues allow faculty and administrators to interact with federal agency program officers in Washington, DC, February 15-17, 2018. Registration deadline is February 1, 2018.
- 9. Special Interest Group on Computer Science Education (SIGCSE) in Baltimore, MD, February 21-24, 2018. Our division will begin this year giving awards to students for the Association for Computing Machinery (ACM) Student Research Competition.
- 10. Preparation for Industrial Careers in Mathematical Sciences (PICMath) applications will be accepted for the 2018-2019 school year with a tentative deadline in March 2018.
- 11. CUR Division Mentoring Awards Nominations, deadline in recent years in March.
- 12. The CUR institutes are multi-day meetings on a college campus to discuss an issue related to undergraduate research and faculty development. CUR experts will guide your institution's interdisciplinary team of administrators, faculty, and staff on issues related to undergraduate research and campus transformations. Deadlines vary.
- 13. CUR Annual Business Meeting for elected councilors, held in the days preceding the CUR Biennial conference: June 28-30.
- 14. The 17th annual CUR Biennial Conference will be held in Arlington, VA, July 1-3, 2018. Talk abstracts are usually due in November. Note: registration fees are high because they include most meals. This year we will have a special Preconference workshop, titled "A Research Lab Model for Student Research in Mathematics," on Saturday June 30th.
- 15. MathFest, the annual meeting of the Mathematical Association of America, will be held in Denver, CO, August 1-4, 2018. Our division will host a booth at this conference for the first time (previously at JMM).

See the Division of Mathematics and Computer Science webpage for a PDF version of this newsletter with weblinks.

Preconference workshop: A Research Lab Model for UR in Mathematics

On June 30th, between the CUR Annual Business Meeting and the CUR Biennial Conference, we will hold our first divisional workshop. A model will be demonstrated in which multiple students work together on projects over multiple years, allowing for senior students to mentor students just embarking on research. Techniques will be discussed for reformulating single-student research projects as collaborative ones, developing healthy collaborative relationships among students, promoting meaningful contributions by each student, and organizing the logistics of a larger group. As this workshop is separate from the other CUR events, a modest registration fee will be required for participation.

SPUR seeks Math & Computer Science Submissions

Scholarship and Practice of Undergraduate Research (SPUR), the flagship journal of CUR, receives only a couple of submissions per year in math and computer science. SPUR publishes articles relating to all aspects of undergraduate research that are of interest to a broad readership. Articles regarding the effects of the research experience on the development and subsequent endeavors of students, and how to initiate, support, or sustain undergraduate research programs are appropriate for this journal. Please urge your colleagues to submit articles, or submit one yourself. For more information, visit the SPUR website.

AWM in discussions to begin SIAM Annual Meeting Undergraduate Research Session

The Association for Women in Mathematics (AWM) is working with the Society for Industrial and Applied Mathematics (SIAM) to develop a session for undergraduates to present their work at the SIAM Annual Meeting. Stay tuned for more details about this exciting opportunity.



New Councilor from a Two-Year College

As a new CUR Councilor I was excited to attend the meeting and visit NAU. As a community college instructor, I was a bit apprehensive at first, but the friendly CUR community calmed my nerves. University faculty welcomed me, and I even had the opportunity to meet other CUR councilors who teach community college. I immediately got involved in the Student Programs Task Force, and I quickly found out why they won the "Task Force/Committee of the Year" with the group's energetic efforts to launch effective initiatives for students. I was also happy to learn that our division was looking for a new Webmaster, a personal passion of mine, and I am looking forward to serving in this position for the coming term. Overall, I am eager to be here, especially to help bridge CUR outreach and activities with community colleges!

Kristin Lassonde, Assistant Professor at Contra Costa College

Online Statistical Support for Students

Statstutor is an online statistical support center created and maintained by academics from Loughborough and Coventry Universities in the UK, with support from the Royal Statistical Society's Centre for Statistical Education. The list of topics for which help is available includes most basic statistical procedures including analysis of variance, chi square and other basic nonparametric tests, correlation and regression, and areas on probability, sampling, power, and more. The site offers several kinds of material, including case study videos, video tutorials, self-teaching resources, and resources posted by academics at participating universities. Case study videos show how particular statistical procedures have been used in projects with real data, video tutorials demonstrate how to do statistical procedures and interpret the output, and self-teaching resources includes a range of printed material and guides. Faculty who are supervising students will be happy to know that there are many resources for guiding students through particular statistical procedures in SPSS and R. The overall quality of the resources provided to students and other users is impressive. For basic statistical concepts and methods, Statstutor can be a useful resource for student researchers and their faculty advisors.

CUR Resources

What can CUR do for you?

- 1. CUR Department / Program Reviews
- 2. CUR publications about Undergraduate Research
- **3.** CUR resources on the benefits of Undergraduate Research

What has CUR done for you and is still doing for you?

- 1. Addressing future trends in UR: assessment, UR in curriculum, big collaborations in UR, etc.
- 2. Access to CUR programs: POH (Posters on the Hill), NCUR, Institutes, Biennial conference, etc.
- 3. Networking with and learning about effective practices used in other disciplines
- 4. Access to CUR publications that address issues not addressed by the MAA (e.g., Accessing the effectiveness of UR)
- 5. Advocacy for UR: NSF REUs resulted from CUR advocacy, the Goldwater/CUR award, the founding of the MAA SIGMAA on UR, etc.
- 6. Help in instituting activities that promote UR at your college or university (e.g., teaching credit for faculty who are doing UR, UR being valued in Promotion and Tenure, etc.). Organizations like CUR that have members from multiple disciplines and administrators are more effective than disciplinary organizations.

To learn more, see our top $2^3 + 2$ reasons to join CUR.



Submission by CUR Councilor Evan Blaine.

Posters on the Hill

CUR's 20th annual Poster on the Hill (POH) was held on April 26, 2017 in the Rayburn Building, Washington, DC. This program was designed to give members of U.S. Congress an opportunity to interact with student researchers about their research. This enables members of Congress to see the effect of funding undergraduate research in the lives of students.

This year, 60 posters were selected from hundreds of applications. The students selected to represent the Mathematics and Computer Science Division were:

Eric B. Vignola and Arunpreet Sandhu, American University, (Advisor: Dr. Joshua McCoy), "Tools for Creating Interactive Storytelling Experiences" Jesuye T. David, Bowie

Annual Appeal for Donations to the Math & Computer Science Division of CUR

In recent years we have been scaling up our efforts to reach new audiences in both computer science and mathematics. Our presentation awards inspire students, our travel awards encourage participation, and our mentoring awards inspire faculty. Please consider donating funds earmarked to the Mathematics and Computer Science Division. Companies may also support the work of CUR by joining as an affiliate member. While donations are accepted at anytime, the maximum potential will be realized for gifts within the range of July 2017 to January 2018. Please visit the CUR donations website to contribute, or the membership site to join as an affiliate member. Back to Contents

State University, (Advisor: Dr. Soo-Yeon Ji), "Designing a Computational Method for Identifying Abnormal Behaviors on Smartphones"



Natalie S. Wellen, Worcester Polytechnic Institute, (Advisor: Dr. Stephan Sturm), "Modeling Over-the-Counter Derivative Exchanges with and Without Central Clearing Parties" Congratulations to the above students and their advisors. As one might expect, reviewers were impressed by the overall quality of the applications and the research being conducted by undergraduates. The Posters on the Hill event is held annually, typically during the month of April. If you are mentoring undergraduate students this summer or know someone who is. please keep this program in mind and encourage your undergraduate students to apply. More information about this program can be found here. Each fall we seek reviewers for Posters on the Hill submissions from across our division; a solicitation for reviewers will go out this fall.

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Upcoming Events and Deadlines of Interest to Students

- 1. Posters on the Hill in Washington DC, usually in April. Submissions Accepted from September 6th through November 1st.
- 2. University of North Carolina at Greensboro Regional Mathematics and Statistics Conference, November 3-4, 2017. This student focused conference features contributed research talks by undergraduate and graduate students, and includes panels about careers in mathematics and preparation for graduate school, as well as a plenary talk.
- 3. Joint Mathematics Meetings Undergraduate Poster Session, JMM is scheduled for January 10-13, 2018 in San Diego.
- 4. Research Experiences for Undergraduates (REUs) in Mathematics and Computer Science. Deadlines range from December to April.
- 5. Special Interest Group on Computer Science Education (SIGCSE) in Baltimore, MD, February 21-24, 2018. Deadline for student submissions to their Association for Computing Machinery (ACM) Student Research Competition is October 13th.
- 6. National Conference on Undergraduate Research (NCUR) at the University of Central Oklahoma, April 4-7, 2018. Abstracts due December 5, 2017. Our division has a limited amount of travel support for participants who register for the conference; there is no need to apply, as we will review all submissions for funding.
- 7. MathFest in Denver, CO, August 1-4, 2018. Deadline for student submissions is usually in early June. Our division sponsors one prize in the Pi Mu Epsilon student speaker session.

See the Division of Mathematics and Computer Science webpage for a PDF version of this newsletter with links to each of the above.

Faculty Mentoring Award Bios

Advance Career: Mason Porter is a Professor in the Department of Mathematics at UCLA in Los Angeles, California. His research focuses on theory, methods, and applications of nonlinear and complex systems (especially networks). Porter's desire to mentor undergraduate students in research arose from his own research experiences as an undergrad at Caltech. Starting as a graduate student and continuing ever since, Porter has mentored or co-mentored more than 60 undergraduate students on research projects, and he has coauthored more than 20 peer-reviewed articles and one piece of software with them. Porter's students have presented their results at conferences such as Dynamics Days, the Ohio State Young Mathematicians Conference, and the Joint Mathematics Meetings. His students' awards include two Goldwater Fellowships, an NDSEG Fellowship, and an NSF Graduate Fellowship.

Porter's previous students have earned doctoral degrees from numerous prestigious universities (including Oxford, Cambridge, ETH Zurich, Harvard, Stanford, University of Chicago, and many others) and have received postdoctoral positions at universities



such Harvard University and UC Berkeley. One of Porter's former undergraduate research students is now an Assistant Professor of Civil and Environmental Engineering at National University of Singapore.

Porter's mentoring style is an outgrowth of both his rigorous undergraduate training at Caltech and his interdisciplinary scientific focus. Caltech undergraduates are expected to drink from the firehose of knowledge, and Porter tries to give the same opportunities to his students. To convey an appreciation for science, it is extremely important to impart not only knowledge that is directly germane to a project and how to attack it but also to illustrate just how many ideas there are to study and some of the places where a student's particular research problem fits into the big picture. Porter's mentorship of undergraduates also extends far beyond research supervision. As the Tutor in Applied Mathematics at Somerville College in Oxford, he had the opportunity to work closely with numerous students both academically and personally. Porter developed an outreach program to teach the science of networks to students ages 13-16 throughout the UK (making a point to involve undergraduates), and he was part of a team that developed a handbook (now available in 19 languages) of essential concepts and core ideas about networks.

In addition to his mentorship activities, Porter is also an accomplished researcher. Porter holds a B.S. degree (1998) in applied mathematics from California Institute of Technology and M.S. (2001) and Ph.D. (2002) degrees from the Center for Applied Mathematics at Cornell University. He has held postdoctoral positions at Georgia Institute of Technology, Mathematical Sciences Research Institute, and California Institute of Technology. He joined the faculty of the Mathematical Institute at University of Oxford (and simultaneously became the Tutorial Fellow in Applied Mathematics at Somerville College) in Fall 2007 and was named Professor of Nonlinear and Complex Systems in 2014. He moved to UCLA in 2016. Porter's honors include a Project NEXT Fellowship in 2003-2004 (so he is a "Sky Dot"), the 2014 Erdős-Rényi Prize in network science, a Whitehead Prize (London Mathematical Society) in 2015, the Young Scientist Award for Socio- and Econophysics (German Physical Society) in 2016, and teaching awards from University of Oxford in recognition of his lecturing and student mentorship. In recognition of his research accomplishments, Porter was named a Fellow of the American Physical Society in October 2016.

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Mid-Career: Jennifer Daniel is an Associate Professor in the Department of Mathematics at Lamar University (LU), where she has been teaching since 2003. Her current research interests include Lie algebras, Lie groups, Symmetric Spaces, Matrix Decompositions and applications in Quantum Computing and Data Analysis. She obtained her PhD in Mathematics from North Carolina State University (NCSU). While at NSCU she volunteered as a mentor with the Association of Women in Mathematics (AWM), trained incoming teaching assistants, and participated as an instructor in Summer Bridge programs and Expanding Your Horizons conferences to encourage women and minorities in STEM.

Since joining Lamar University in 2003, Dr. Daniel has had the opportunity to participate in the Mathematical Association of America's (MAA) Project NExT (New Experiences in Teaching) program. This program provided her with the knowledge and direction to begin an undergraduate research program. She has mentored over 30 students in funded undergraduate research. Initially her focus was on using undergraduate

research as a recruitment and retention tool to increase the number of females obtaining degrees in mathematics. Over the years, this vision has evolved to include underrepresented minorities in STEM and any other marginalized group that is traditionally underserved in STEM.

In 2007, Dr. Daniel partnered with other STEM faculty on the LU campus to include more STEM students and more STEM disciplines, to combine outreach efforts, and to grow respective programs together. This is the genesis of the STAIRSTEP program. Dr. Daniel served as associate director of the program since its inception in 2009 and recently (2016) became director of the program. STAIRSTEP received a 2013 Texas Star Award from the Texas Higher Education Coordinating Board for making significant contributions to closing the gaps in student participation, student success, academic excellence, and research in higher education.

Students have worked on undergraduate research projects with Dr. Daniel in varied areas such as elliptic curve cryptography, graph theory and procedural content generation, linear algebra and graph theory in video games, quantum computing, and graph clustering just to name a few. Her graduates are in graduate school, working in industry, or teaching in the local school districts, and many continue to work with Dr. Daniel on research, recruitment, retention, and outreach efforts.

Dr. Daniel teaches her students to question everything and everyone - including her. She teaches them to advocate for themselves and for others. She believes that mathematics and activism go hand in hand in that given a set of tools to apply to a specific problem, one may use these tools to construct a logical, rational argument. She does not teach regurgitation, and encourages constructive, critical thinking in all areas of life. As an underserved student herself - low-income, first generation, female - Dr. Daniel understands the value of support and continues to champion her students in all their endeavors.



Early Career: Zach Abernathy is an assistant professor of mathematics at Winthrop University, where he has served as a research mentor for 38 different students on 21 distinct research projects over the past 6 years. His mentoring experiences include informal research seminars, mathematical research competitions, honors theses, a 2013 MAA NREUP grant, a 2014-16 NSF REU grant, and participation in the MAA's PIC Math program, among others. This work has led to 40 student presentations at various conferences, two publications with student co-authors in professional journals, and two student-authored publications in undergraduate research journals. His passion for undergraduate research stems from the transformative experiences he witnesses in his students as a result of their research: they learn perseverance, gain self-esteem, develop an improved work ethic and love of learning, and become confident that they can use their skills and education to make a difference.

In his nomination, one of his research students wrote, "The trust that Dr. Abernathy had in my abilities fostered my confidence in my potential as a mathematician. He has had

an active role in my search and application to Ph.D. programs in mathematics, and the confidence I gained by working with him is a major reason I decided to apply to graduate school." vOn his approach to undergraduate research, a colleague added, "While the quality and quantity of his students' work merits national acclaim, it is his personal commitment to students which sets him apart. The key to Dr. Abernathy's success as a research mentor is the deep respect he has for his students. He values the skills that they have and does not judge them for those they lack. The research output has always been secondary to the opportunity to transform the lives of others."

Dr. Abernathy received his M.S. and Ph.D. in mathematics from North Carolina State University in Raleigh, NC.

Nominations for the 2018 awards are due March 31st. Please see the division website or contact Jan Rychtář for more information.

What is it like to be a New Councilor?

I am a professor of statistics and data science at St. John Fisher College in Rochester, NY, and a new Councilor in the MCS Division. I attended my first CUR Annual Business Meeting in Flagstaff, AZ in June. It was a rewarding experience, in large part because of the community of MCS Councilors that welcomed me. In our MCS division meetings we had lively discussions on things we are doing, and can do, to support student research in mathematics, statistics, and computer science. Councilors are expected to get involved in one or more CUR committees too, and I joined the Advocacy Committee, learning about how CUR works in Washington to educate legislators and shape policy in ways that benefit undergraduate research. The issue that motivates me as a CUR Councilor is in helping student researchers (across departments and disciplines where quantitative research methods are used) to do the best statistical analysis that they can. At my school, we assist students with issues related to sampling and measurement, data analysis and interpretation, and statistical computing. In the coming 3 years, as a CUR Councilor in the MCS Division, I want to work on initiatives that help institutions develop statistical support services for student researchers.

Dr. Evan Blaine, Professor of Statistics & Data Science at St. John Fisher College

Incoming Chair Message

Dear Computer Science, Statistics, and Mathematics enthusiasts,

The CUR Division of Mathematics & Computer Science has been involved in many national initiatives, including providing awards to student speakers and being instrumental in the creation of the Mathematical Association of America's new Special Interest Group on Undergraduate Research. Individual councilors have been further involved in renewing funding for the Center for Undergraduate Research in Mathematics (CURM), the Preparation for Industrial Careers in Mathematical Sciences (PIC Math), as well as REUs and conferences. As your new division chair, I encourage you to send me ideas and ongoing projects in which the 24 divisional members of CUR's governing council could assist you, regardless of whether you think it should be a CUR-managed or CUR-sponsored initiative.

Last year many of you helped with judging Posters on the Hill submissions, and you may be interested to know that we were the first division of CUR to go beyond our elected councilors to form our team of reviewers. I hope to continue this trend of greater involvement across our division in CUR events. Next year's CUR Biennial Meeting will take place July 1-3 in Arlington, VA, less than five miles from the National Mall with a variety of free national museums. We have a hotel rate of \$159 per night (single/double occupancy), which is valid for a few days past the conference if you want to bring your family to the national fireworks display.

At CUR conferences you will find a mix of faculty, staff, and administrators from across STEM and beyond. Many administrators and members of other disciplines still see undergraduate researchers as employees or as volunteers to be supervised in the running of a lab, while theoreticians in mathematics and elsewhere think of their students as collaborators who need ample attention. Our division's councilors thus decided this summer to hold some new types of events at the 2018 Biennial. These will include:

- a workshop which will help us to work on projects which are more in line with how our administrators and lab science peers think that we do undergraduate research, such as through modelling projects within our domain or through statistical projects which allow us to work more closely with those in other fields. This 3-hour modelling workshop will take place on the afternoon preceding the main Biennial conference.
- a talk or discussion with administrators and members of other fields to discuss the difficulties that theoreticians face when trying to collaborate with undergraduates in research, and what university policies can be tweaked to support us.

I look forward to seeing many new faces at these events. And I am eager to hear your ideas for supporting or enhancing undergraduate research, and how CUR can help.

Sincerely, Patrick X. Rault Chair, Mathematics & Computer Science Division of CUR Associate Professor, University of Arizona

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