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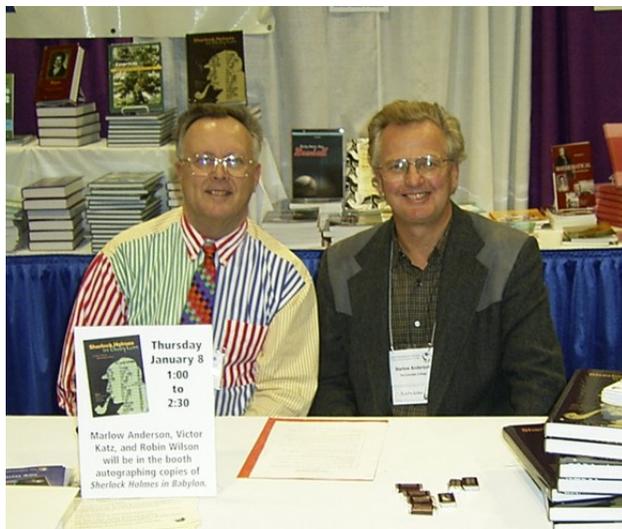
MARLOW ANDERSON RETIRES

This spring Professor Marlow Anderson is retiring, ending his 39-year career in the mathematics department at CC. On March 9th, he delivered his Last Lecture on Zoom, under the auspices of Alumni Relations, to more than 200 friends and alumni, a whimsical talk giving a description of his career in mathematics, from his childhood onward.



In Block 8, the mathematics and computer science department sponsored a MarlowFest, a meeting in Marlow's honor, featuring some of his colleagues, students and friends. This took place on May 6-7. The keynote speakers were Todd Feil (pictured above) and Robin Wilson (pictured below), and the other speakers were eight of Marlow's current and former students: Courtney Gibbons, Ariel Li Detlefsen, Barry Balof, Amy Hepner, Elizabeth Wolfe, Nicole Lyubenko, Sarah Wolff & Molly Moran.

Marlow Anderson studied mathematics as an undergraduate at Whitman College, which is located in his hometown Walla Walla, Washington. He went on to study abstract algebra at the University of Kansas, receiving his Ph. D. in 1977. He began his academic career at Indiana-Purdue at Ft. Wayne, before coming to Colorado College in 1982. In addition to technical papers in partially ordered algebra, he has co-written a technical monograph on lattice-ordered groups, and an undergraduate textbook in abstract algebra, now in its third edition. In recent years, he has developed a strong interest in the history of mathematics and has co-edited two collections of papers on mathematical history with Robin Wilson of the Open University. Over the years, he



has taught much of the undergraduate curriculum in mathematics at Colorado College, with particular emphasis on algebra, analysis and mathematical history, including a number of courses in General Education. In the classroom he is well known for being lively, loud and liable to spill coffee on students in the front row. In the late 90s he took up scuba diving, which has taken him and his wife all over the world. That interest led him to write a book on the physics of scuba diving. Marlow has been married for over thirty years to his wife Audrey. They live in a 19th century house in Manitou Springs, Colorado, with their 4 cats (all named after mathematicians).

RAWLES EXAM

The 50th Annual Rawles Prize Competition was held on April 29th, 2021. Seven students completed the 3-hour, 6-question Rawles exam and performed admirably. The top two scores were earned by upper division winner and math major Lily Salzman and lower division winner (and first year student) John Le. Congratulations, John and Lily!

THE CODING CLUB!

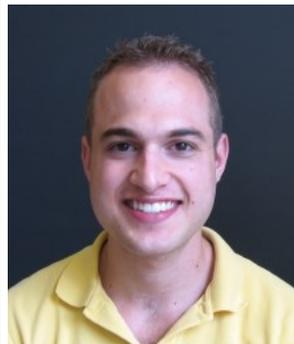
The student organization for Computer Science students (and other interested in coding). They continued to be active, although the pandemic did put a damper on the hackathons and other in-person activities the club usually hosts. Two alumni were hosted by the Coding Club for Zoom presentations about their experience in industry this year; those alumni were Daniel Barnes '19 and Nate Burt '13.

MATH STUDENT ORGANIZATIONS

The department's three student-run math groups kept an active calendar of events, despite Zoom fatigue and many other pandemic-related challenges. The Association for Women in Mathematics maintained a blog (thanks, Ying Wang!), organized a virtual tea where women mathematicians shared their experience with the group, and continued the mentoring program begun last year. The Society for Industrial and Applied Mathematics Student Chapter organized a graduate school panel and a movie night, as well as spearheaded an essay contest which welcomed entries across the clubs. The Math Club held a math book club, reading "The Code Book" by Simon Singh and meeting blockly to discuss. All three groups have elected leaders for next year. Thanks to all the leaders this year: Margie Knight, Makayla McDevitt, Alayna Mann, Nate Blower, Katy Omizo, Ying Wang, Abigail Ezell, and Bridget Galaty. Welcome to next year's leaders: Davidson Cheng, Alayna Mann, Yiming Qiu, Aiden Ingenthron, Lilly Davis, and Yingting Zhong!

PI MU EPSILON

Pi Mu Epsilon is a national mathematics honorary society whose purpose is the promotion and recognition of scholarly activity in the mathematical sciences. This year, the Colorado Epsilon chapter of Pi Mu Epsilon will induct five new members based on their interest and accomplishments in the field of mathematics. The new inductees are Margaret (Margie) Knight, Alayna Mann, Makayla McDevitt, Lily Salzman, and Jinchun (Tom) Wan. Congratulations!



ANDREW KELLEY LEAVES CC AFTER 4 YEARS

Andrew Kelley has been a Visiting Professor at CC for four years. He has recently accepted an offer from Colorado Engineering Inc. to work as a Senior Engineer. Andrew's mathematical work is in group theory, in particular studying subgroup growth.

CORY SCOTT RETURNS AS A TENURE- TRACK COMPUTER SCIENTIST!



The department is delighted to welcome CC alumnus Cory Scott '13, into a new tenure-track position in computer science, starting in the fall of 2021. During his time at CC, Cory majored in both mathematics and computer science, receiving the Florian Cajori Award as best math major of the year. In addition, he served the department as both Computer Science and Mathematics Paraprofessional in 2013-2014. Cory is currently completing a PhD in Computer Science at the University of California, Irvine, after having received an MS degree there in 2017. Cory's research combines machine learning and graph theory, with many interesting applications in the natural sciences, a combination sure to excite many CC students.

CC WELCOMES FULL PROFESSOR LUIS DAVID GARCIA PUENTE!

We are thrilled to report to the wider Colorado College Statistics, Computer Science and Mathematics community that Luis Garcia Puente will be joining the department as a Full Professor in the Fall of 2021. Luis's distinguished career now moves to CC, from Sam Houston State University, where he has taught and conducted research with undergraduates, graduate students and the top scholars in his field since 2008. He has previously held positions at Berkeley, the Mathematical Sciences Research Institute (MSRI), and Texas A&M.



Luis broadly describes himself as an algebraist; just over the past six years he has published extensively in algebraic statistics, computational algebraic geometry and algebraic combinatorics. He and his equally accomplished partner and mathematician Prof. Rebecca Garcia have contributed mightily to STEM outreach over the past two decades, and their careers have exemplified a profound commitment to opening up mathematical careers to all peoples.



GRAPH THEORIST LAUREN NELSEN IN VISITING POSITION

Dr. Lauren Nelsen will be joining the Math/CS department this fall. She completed her Ph.D. in 2020 at Denver University, after having done her undergraduate work at the University of Montana. She studies graph theory and combinatorics, and is particularly interested in spectral graph theory. After her Ph.D., she spent one year in a visiting position at the University of Indianapolis.

AWARDS FOR OUR GRADUATING SENIORS

Each year the department gives the **Florian Cajori Award**, honoring a student who has demonstrated unusual talent, achievement and interest in mathematics. This year the department honors two such students: **Abigail Ezell** and **Ying Wang**. The **Steven Janke Award in Computer Science** goes to the student who best demonstrates unusual talent and achievements in CS; this year's winner is **Ely Merenstein**. The **Grace Hopper Award** in CS goes to the student who best demonstrates an unusual commitment to the CS community, and the

winner this year is **Brianna Fuentes**. In addition, **Makayla McDevitt** and **Jerrell Cockerham** received the **Sophie Germain Award**, which honors the mathematics students "who demonstrate an unusual commitment to the mathematics community" and "passion for the field." And **Ely Merenstein** also won the **Fearless Award**. Math and CS seniors must submit 4 summaries of math/CS talks over the course of the year; this award is for the best talk write-ups of the year.

*Graduating Majors, 2021***Mathematics:**

Karston Barney
 Nate Blower
 Grace Brooks
 Ruixin Cao
 Jerrell Cockerham
 Olivia Coleman
 Julian Douglass
 Abigail Ezell
 Damon Hardwick
 Miles Irmer
 Margi Knight
 Nicole Lyubenko
 Makayla McDewitt
 Maria Nowotka
 Lily Salzman
 Chengtian Shen
 Jingcheng Wang
 Ying Wang
 Elizabeth Wolfe

Computer Science:

Benjamin Cole
 Dakota Damato
 Samuel Doggett
 Brianna Fuentes
 Isley Griffith
 Damon Hardwick
 Elliot Hardwick
 Harrison Helm
 Samuel Hum
 Viktor Keleman
 Parker Kerth
 Guang Zhen Loy
 Ely Merenstein
 William Pasley
 Mataan Peer
 Case Regan
 Henry Rose
 Josephine Stevens
 Madeline Strasser
 Haoyu Wang
 Delaney Weiss
 Lauren Weiss
 Shu Zhou

Mathematical Economics:

Benjamin Cole
 Andrew Edds
 Bridget Galaty
 Hannah Kates
 Ava Kazemi
 Young Jae Kim
 Hannah Kip
 Sydney Lane
 Walker Martin
 Fanbi Meng
 Jenna Wilt
 Wenqian Wu
 Zihan Zhu

GIVING TO THE DEPARTMENT

To make a gift to the Mathematics and Computer Science Department, please visit our secure online giving site at www.coloradocollege.edu/giving. Or you can mail your check or money order, payable to Colorado College, to:

Office for Advancement
 Colorado College P.O. Box 1117
 Colorado Springs, CO 80901-9897

Please include the designation "Department of Mathematics and Computer Science" in the memo line of your check, or include a note with your online gift. You may choose an existing fund (e.g., Euclid Fund or Department Fund) as a designation, or contact Chair Mike Siddoway to discuss new ways to support the Mathematics and Computer Science Department.

The Euclid Fund has been entirely funded by alumni gifts, and supports the Euclid Scholarships (see story on following page), and also funds undergraduate summer research at CC; \$2000 would support one student's project.

NEW TENURE-TRACK STATISTICIAN!

The department hired Dr. Minh Kim for a new tenure-track position in statistics. Minh has recently completed his Ph.D. work at Baylor University, where he also got his masters degree. His main research interests are in spatial statistics, Bayesian statistics, and data science. In a recent project, Minh proposed a statistical downscaler for estimating precipitation area, which includes the challenge of modeling a binary process. He has used his model to run simulation studies and to analyze precipitation data from South Korea.

With Dr. Flavia Sancier-Barbosa in place, this now means the department now has two Ph.D. statisticians as faculty members. We all look forward to an expansion of our statistics program.

ADAPTING TO TEACHING WITH ZOOM ON THE BLOCK PLAN!

Here's a report from the front lines, courtesy of Professor Janet Burge (her faithful kitty Aurora is waiting for class in Janet's home office): This year faculty and students had to adjust to an instructional format they never expected to have to use at Colorado College - online courses over Zoom. Unlike the rapid pivot of the Spring of 2020, faculty had the summer to re-format our classes for the online environment by learning new tools and techniques to engage our students in learning from a distance. We still had many challenges - learning across multiple time-zones, working from our homes (when house hunting a dedicated home office didn't seem that important when we knew we had our lovely offices in Tutt Science), and the almost daily "you're on mute" that occurs in Zoom classes. On the plus side, inviting our students into our homes and seeing them in theirs meant frequent pet visits and the inclusion of a "pet policy" into many of our syllabi (pet policy: when a pet appears on-screen there must be a pause to introduce and admire the pet). We're all looking forward to returning to in-person learning, but will miss having every day be "take your pet to work day."



EUCLID SCHOLARSHIPS

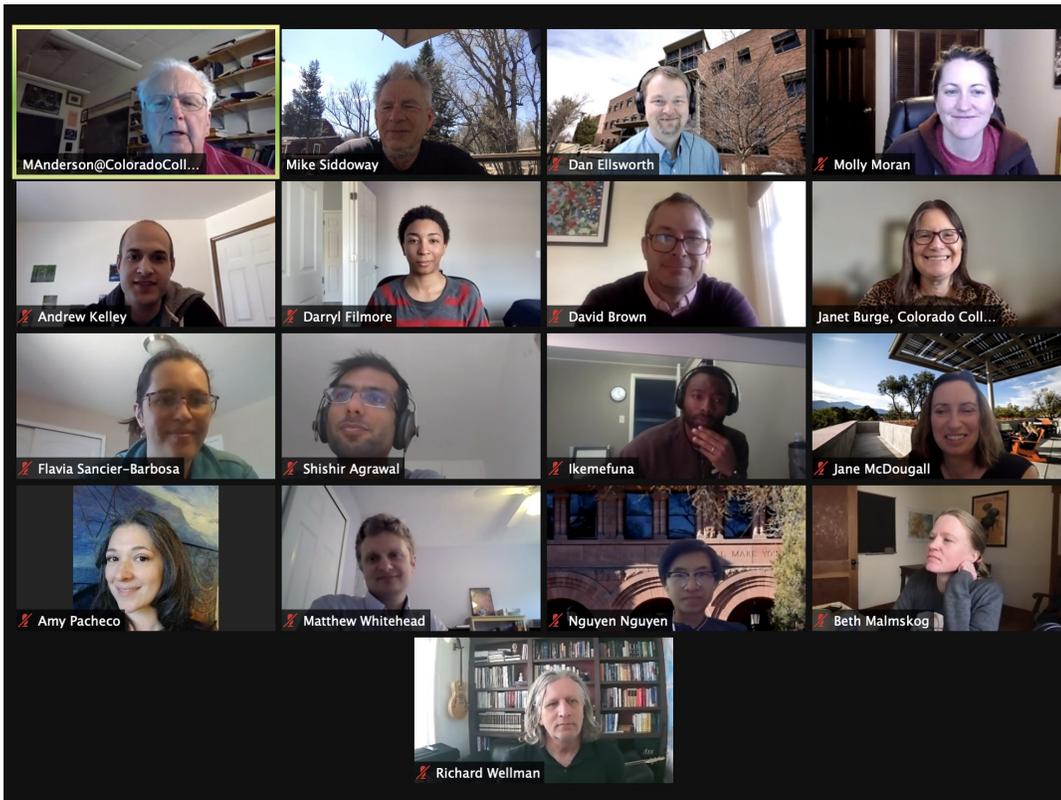
This year the department was able to award 11 Euclid scholarships, which are given to first and second year students who show unusual talent and interest in mathematics or computer science. The scholarships are paid for with a fund supported by the generous donations of our alumni.

This year the winners were: Sophomores: **William Holtz, Jessica Hannebert, Casmali Lopez, Cheney Hurley, Ellen Moore** and First years: **Alisha Bloom, Gwen Hardwick, Sabrina Pitkanen, Katherine Joslyn, Aiden Ingenthron, Jacob Tow**. Congratulations to all!

SANCIER-BARBOSA ON SABBATICAL NEXT YEAR

Flavia Sancier-Barbosa will be on a pre-tenure sabbatical in the Fall of 2021. She will begin by writing an R package to make the task of testing option pricing models more streamlined, and will use it to wrap up simulations and tests with data, which started in 2020 with some summer research students. She will also work with collaborators on statistical analyses in applied projects, and will continue to develop community partnerships, with the help of Colorado College's CCE (Collaborative for Community Engagement), with the purpose of adding course projects and student research opportunities in an actionable context.

VIRTUAL DEPARTMENT MEETING!



These days, both students and faculty at CC spend a lot of time on Zoom!! Here is a picture of one of our department meetings, showing a good sample of our faculty and staff. Sadly, this shot does not include any of the departmental pets who often make it to our meetings — for that, see the previous page!

MODELING CONTEST

Professor Ike Agbanusi organized CC's annual participation in MCM (The Mathematical Contest in Modeling). The contest took place over the weekend February 4—8. CC had one team, consisting of Zeyuan Li, Jingching Wang and Jinchun Wan. Students work over the weekend to construct a complicated mathematical model, which they describe in a written report. Congratulations to the students who participated!

MCDOUGALL, STIERMAN PAPER

2020 math graduate Lauren Stierman recently had a paper on "Rosette Harmonic Mappings" published in *Complex Analysis and Operator Theory*, written with Professor Jane McDougall, with whom Lauren conducted independent research.

ALUMNA WEDDING

Two of our graduates Computer Science major Lylya Parish '11 and Math Minor Esther Lowe '13 got married on May 2, 2021. They have been working at the Los Alamos National Labs.

**The Colorado College Department of
Mathematics and Computer Science**

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*Math and Computer Science
Faculty (2020-2021)*

Ike Agbanusi
Shishir Agrawal
Marlow Anderson
Andrea Bruder (Dean's Office)
Janet Burge
David Brown
Dan Ellsworth
Stefan Erickson
Andrew Kelley
Beth Malmskog
Molly Moran
Jane McDougall
Nguyen Nguyen
Flavia Sancier-Barbosa
Mike Siddoway
Richard Wellman
Matthew Whitehead

Departmental Staff

Marita Beckert (Office Manager)
Darryl Filmore (Paraprof.)
Cinea Jenkins (Paraprof.)
Amy Pacheco (Tech. Dir.)



Margaret Elise Myers '72

PARAPROFS OLD AND NEW!

This year has been unlike any other, but the paraprofessionals have worked hard to support the students and the department during these trying times. Between holding office hours and problem sessions virtually, CS Paraprof Darryl Filmore '20 and Math Paraprof Cinea Jenkins '20 learned that connecting with students is rewarding, whether in the Math/CS lounge, or over Zoom. Darryl Filmore will be looking at software engineering jobs while staying in her hometown of Denver, CO. She has learned valuable interpersonal and technical skills while working on small projects and mentoring students, which she hopes to apply in a professional environment. Cinea Jenkins will be attending the EDGE Summer Program in June and the PhD Mathematics program at CU Boulder in the fall. She has learned much about how to interact with students so they get the most out of the experience and she looks forward to applying these skills as a TA in graduate school. While Darryl and Cinea are looking forward to starting the next chapter in their lives, they have loved their time with the department and cannot wait to visit CC again in the future. As the 2020-2021 academic year wraps up, Darryl and Cinea are excited for CS Paraprof Ely Merenstein '21 to start in the fall. Alongside being a fantastic paraprof, Ely is hoping to continue composing vocal music. He wrote a piece this year and is excited to make more! The Department also welcomes Alexander Wagner to CC as our 2021-2022 Mathematics Paraprofessional! Alex is a graduate of Santa Clara University with a bachelor's (2017) and master's (2018) degrees in Bioengineering. Before entering college, Alex was the 2013 valedictorian at Leland High School in San Jose, CA. Alex's interests in being a teacher and mentor are reflected in his extensive and effective work with Lindamood-Bell Learning Processes since 2019 as a one-on-one tutor and learning coach.

BRUDER IS NEW ASSOCIATE DEAN

During the 2020-2021 school year, former chair and Professor Andrea Bruder has taken a position as Associate Dean of the College. She is also chair of CC's COVID Science Advisory Group. Professor Bruder has been involved in a team 3-D printing face-shields, and also the testing of wastewater on campus, to help find COVID-19 cases before people become symptomatic. Everyone in the department admires her important work in the dean's office, although we miss her as a colleague!

NEW CHAIRS AND ASSOCIATE CHAIR

As an extraordinarily complex school year comes to a close, and another beckons on the horizon, the Department has decided to adopt a "2 Co-Chair, 1 Associate Chair" administrative model for 2021-2022. David Brown and Matthew Whitehead will serve as Co-Chairs, and Jane McDougall will take over Marlow's role as Associate Chair. We will welcome 4 brand new colleagues in the Fall – Luis Garcia Puente, Minho Kim, Cory Scott, and Lauren Nelson – and 5 current colleagues will have reviews at various times of the year – Ike Agbanusi and Dan Ellsworth (both 3rd-Year Reviews); and Janet Burge, Beth Malmskog and Molly Moran will each have Tenure Reviews. These are both unprecedented numbers for a CC department in a single year. Given the vibrant statistics, computer science and mathematics years ahead for this now largest department on campus, the "Dual Chair Model" could take root. Mike Siddoway leaves the top post at the end of June marking the 8th Spring Semester he's slid into home as department chair in his 33 years at CC. With all the sparks and activity we envision in the decades to come, this challenging year may be the last time a single person has the honor of chairing the whole Department of Mathematics, Computer Science (and Statistics?). Marlow finishes his illustrious career at CC just shy of 8! (that's "8 factorial") years as Associate Chair. We'll all be hard pressed to even come close to his combination of excellence in service, teaching and research over so many good years. A thousand thanks, Marlow! Good Luck, David, Matthew and Jane!

ALUMNA MEYERS RECEIVES 2021 HONORARY DEGREE

Colorado College mathematics graduate Margaret Elise Myers '72 is receiving an Honorary Degree at the 2021 Commencement. She is the director of the Information Technology and Systems Division at the Institute for Defense Analyses. She was appointed to the Senior Executive Service in 1992 and served on active duty in the U. S. Army, retiring from the Army Reserve in 2005 at the rank of colonel. She received the U.S. Department of Defense Distinguished Civilian Service Award and three Presidential Rank Awards. After her BA from CC, she received an M.S. in operations research from American University, and was the first female Ph.D. recipient from the George Mason University engineering school.