RIT | College of Science

DEAN'S BULLETIN

April and May 2021 in Review

Celebrating our first Mathematical Modeling Ph.D. graduate!

L to R: **Nathan Cahill**, director of Mathematical Modeling Ph.D. program; **Sophia Maggelakis**, dean of RIT College of Science; **Nicole Rosato**, graduate; **Carlos Lousto**, Ph.D advisor; **Mary Lynn Reed**, head of the School of Mathematical Sciences

Message from the Dean

The spring semester has wrapped up and we couldn't be more excited to celebrate!

We were thrilled to finally be able to recognize all of our COS graduates from 2020 and 2021 during our commencement ceremonies on May 14 and 16. Although we couldn't have a full celebration with family and friends in attendance, it was a real joy to see the graduates walk across the stage with pride and celebrate all they had accomplished! I was especially delighted to see our very first graduate of the Mathematical Modeling Ph.D. program receive her Doctoral Hood on May 15. This was a program that I first envisioned during my days serving as head of the School of Mathematical Sciences so watching **Nicole Rosato** cross the stage to receive her hood was especially memorable.

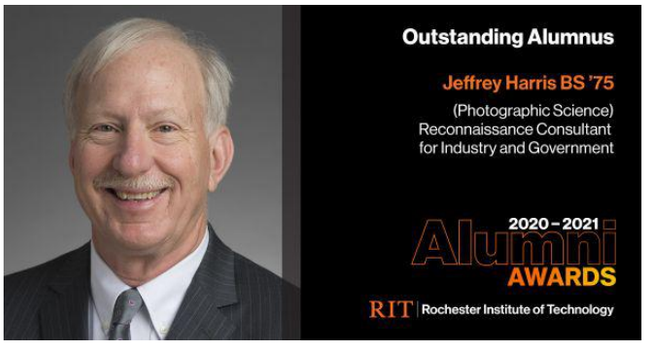
I'm also thrilled to share the news that **Jeff Harris**, a COS Distinguished Alumnus, long-time member of the College of Science External Advisory Board and friend of the college, was selected to receive the 2021 RIT Outstanding Alumnus Award. The college has been enriched by Jeff's presence in innumerable ways over the past 40+ years and we cannot think of a more deserving recipient of this honor.

In this newsletter, you'll see ways that students and faculty are making their mark in the research arena, stories of our awards and promotions, changes coming to our college and so many ways that our lives are carrying on just as they were before COVID changed everything. It's amazing to reflect on all we have accomplished together over the past year. And yet, many of us are already setting our sights on what's next: Summer Courses offered online with financial grants for those who take at least 6 credits; and graduate programs including RIT's Master Plan which provides recent graduates with a 55% tuition discount. Things are starting to look a little bit more like normal, and we couldn't be happier!

SOPHIA MAGGELAKIS

Dean, RIT College of Science

Student & Alumni News



RIT Outstanding Alumnus Award: Jeffrey Harris

Established by the Office of the President in 1952, the RIT Outstanding Alumnus Award is the highest honor the university can bestow upon an alum in recognition of their professional accomplishments as well as service and generosity to the university. The 2020-2021 Outstanding Alumni Award recipient is **Jeffrey Harris '75 BS** (photographic science). In 2002, Harris was honored as a distinguished RIT alumnus, representing the College of Science. Harris and his wife, Joyce Pratt established the J.K. Harris Scholarship for a Rochester City Scholar and have generously supported the Chester F. Carlson Center for Imaging Science and the performing arts at RIT. Harris was elected to the RIT Board of Trustees in 2007.

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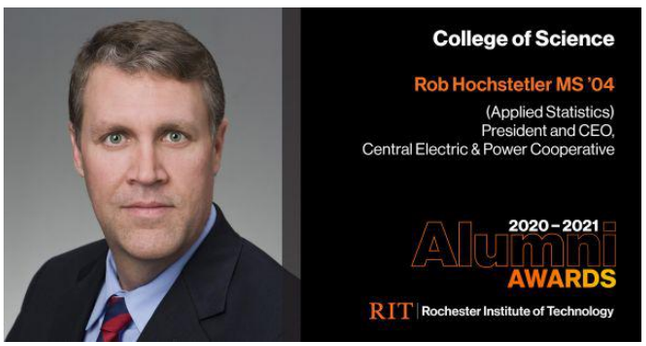

College of Science 2020-2021 Distinguished Alumnus: Rob Hochstetler

The Distinguished Alumni Awards are presented annually by each of RIT's nine colleges and the School of Individualized Study to alumni who have performed at the highest levels of their profession or who have contributed to the advancement and leadership of civic, philanthropic, or service organizations. It is the highest award an RIT college can bestow upon its alumni.
The 2020-2021 recipients were honored during a virtual ceremony on April 29. Congratulations to **Rob Hochstetler '04 MS** (applied statistics), President and CEO of Central Electric Power Cooperative, who was selected as the 2020-2021 College of Science Distinguished Alumnus.

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RIT Outstanding Graduate Woman Achievement Award highlights Graduate Student Advisory Council leaders

RIT students Emily Wilson and Teresa Symons are co-recipients of the Outstanding Graduate Woman Achievement Award for their dedication and leadership on RIT's Graduate Student Advisory Council.

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First class of RIT Undergraduate Research Scholars will be recognized at 2021 graduation

Forty members of the inaugural class of Undergraduate Research Scholar Awardees will be honored at this year's graduation ceremonies. The recognition highlights their accomplishments in a variety of complex and demanding research areas during their time at RIT. It also shows RIT's commitment to meeting the growing demand by undergraduates for research experiences to complement coursework.

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Imaging science student makes dream job at Facebook a Reality

Jared Gregor is about to graduate with a bachelor's degree in imaging science and take an exciting new job at Facebook Reality Labs, but he never would have found his college major without a happy accident.

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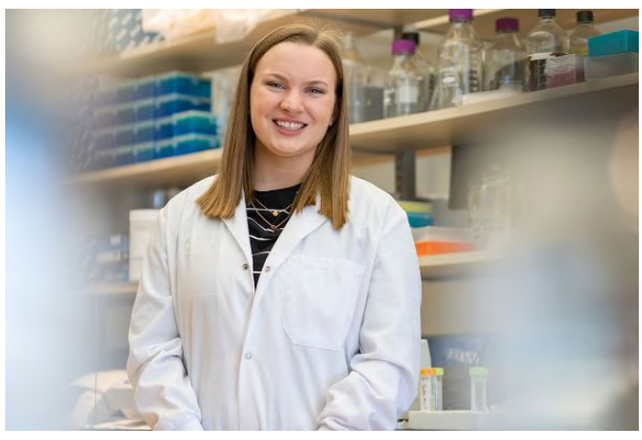

Fulbright scholar Ashley Tucker will travel to Nigeria to research malaria testing

Ashley Tucker, a graduating senior double majoring in biomedical sciences and biology in RIT's College of Health Sciences and Technology and College of Science, will travel to Nigeria at the end of the

summer on a Fulbright Research award. Tucker will work with a malaria research group at University of Ibadan College of Medicine. Her research will help improve the rapid diagnostic testing for the deadly tropical disease.

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RIT student Quinn Kolt named 2021 recipient of prestigious Goldwater Scholarship

Rochester Institute of Technology student Quinn Kolt has been awarded a **Barry M. Goldwater Scholarship**, the premier undergraduate research scholarship in the fields of math, natural sciences, and engineering in the United States.

The fourth-year applied mathematics and computer science double major from Solon, Ohio, was selected as one of 410 scholars from a pool of 1,256 nominees by the Barry Goldwater Scholarship and Excellence in Education Foundation, in partnership with the Department of Defense National Defense Education Programs. Since 2005, RIT has had 30 Goldwater Scholars and seven honorable mentions.

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Ph.D. students complement academic research with internships and co-ops

Internships and co-ops are not just for undergraduate students at RIT!
Pancy Lwin, a mathematical modeling Ph.D. student from Myanmar, received an NSF INTERN award to work at IBM Research Almaden, based in San José, Calif., developing models that study the interplay of structure, statistical mechanics, and mechanics in biological systems.
Olivia Kuzio recently completed her third co-op while pursuing her Ph.D. in color science, a program where co-ops are optional. She previously spent two summers on co-op with the Smithsonian Museum Conservation Institute in Washington, D.C., and in the fall she finished a yearlong co-op at the Getty Conservation Institute in Los Angeles.

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AST Program Grad is now Researching Stars at the Smithsonian

RIT Astrophysical Sciences and Technology Ph.D. graduate **Rodolfo (Rudy) Montez Jr. '10** is now an Astrophysicist researching stars at the Center for Astrophysics | Harvard & Smithsonian.

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Faculty, students innovate when plans for saliva testing changed

Team coordinating testing shifts to research, developing lab activities, and behind-the-scenes information about testing processes.

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How'd They Get There? Alumni Conversations

On April 15, **Sesquile Ramon '07** shared how he leverages his knowledge of biotechnology to guide policy making and business strategies in Washington, D.C.

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Learning Assistant pedagogy

The Center for Advancing STEM Teaching, Learning and Evaluation (CASTLE) hosted a Brown Bag Workshop on April 15 for students involved in the Learning Assistant program to learn about **Formative Classroom Assessment**. LAs and Mentors discussed different forms of assessment and had time to brainstorm ways to actualize these ideas in the classroom environment.

Our Stories

RIT researchers using drones and artificial intelligence to help assess crop growth

Researchers at Rochester Institute of Technology are exploring ways to use drones and artificial intelligence to help farmers and other users assess how well fields of crops are growing. The National Science Foundation awarded Guoyu Lu, an assistant professor in RIT's Chester F. Carlson Center for Imaging Science, more than $583,000 to spearhead the project.

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James Webb Space Telescope program aims to map the earliest structures of the universe

When the James Webb Space Telescope (JWST)—the long-awaited successor to the Hubble Space Telescope—becomes operational in 2022, one of its first orders of business will be mapping the earliest structures of the universe. A team of nearly 50 researchers led by scientists at Rochester Institute of Technology and University of Texas at Austin will attempt to do so through the COSMOS-Webb program, the largest General Observer program selected for JWST's first year.

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RIT postdoctoral researcher Erika Holmbeck named one of NASA's 2021 Hubble Fellows

An RIT postdoctoral researcher has been selected as one of 24 new fellows for the prestigious NASA Hubble Fellowship Program. Erika Holmbeck, who has been working as a postdoctoral associate with Associate Professor Richard O'Shaughnessy in the Center for Computational Relativity and Gravitation since fall 2020, will begin as a Hubble Fellow in fall 2021.

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RIT Professor Mark Fairchild awarded Otto Schade Prize by Society for Information Display

The Society for Information Display is recognizing a Rochester Institute of Technology professor for his research that has led to major improvements in the visual quality of electronic displays. Professor Mark Fairchild, head of the Integrated Sciences Academy and director of the Munsell Color Science Laboratory and the program of color science in RIT's College of Science, received the 2021 Otto Schade Prize, which recognizes vision scientists, human factor engineers, and engineers whose efforts have led to major improvements in the visual quality of electronic displays. The society praised Fairchild for his contributions to quantifying spatial display performance and analogous human visual performance metrics.

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RIT researchers use Frontera supercomputer to study eccentric binary black hole mergers

Researchers from Rochester Institute of Technology's Center for Computational Relativity and Gravitation (CCRG) are using the world's most powerful academic supercomputer to perform simulations that will help scientists study eccentric binary black hole mergers.

Professor Carlos Lousto from the CCRG and School of Mathematical Sciences secured one of 58 new science projects for 2021-2022 that received time allocations on the Frontera supercomputer at the Texas Advanced Computing Center (TACC).

Read More >

Modular 3D-printed instruments allow science students to conduct experiments at home

How do you teach students to use scientific instrumentation when a pandemic forces classes online and the students have no access to the usual lab or analytic equipment? Adjunct Professor Bruce Kahn found a creative solution this spring while teaching an experimental techniques class.

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Rochester Rising: RIT is helping make Rochester a next-generation technology hub

Move over, Silicon Valley. Rochester, N.Y., can be the next great American technology hub. That's according to an MIT economics expert, who ranked Rochester as the No. 1 city with potential to be a national economic driver. The Digital Imaging and Remote Sensing Image Generation (DIRSIG) modeling software, which was developed at RIT decades ago, could be a part of that movement. In Rochester, L3Harris Technologies continues to leverage the DIRSIG technology to quantify and visualize performance of its imaging systems.

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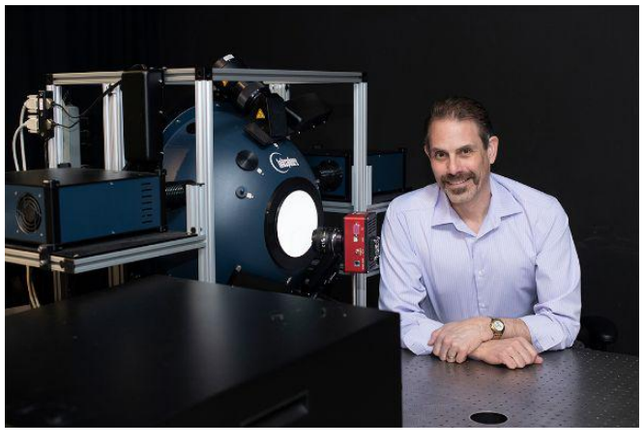
Honors, Awards & Recognitions



Emmett Ientilucci's knack for engaging students

earns him award for excellence in teaching

Emmett Ientilucci has always loved teaching, but he took a long and winding road to becoming a tenure-track faculty member in the Chester F. Carlson Center for Imaging Science in RIT's College of Science.

His academic career began while working two day jobs and taking electrical engineering night classes at Monroe Community College. After changing majors and becoming a full-time day student, he earned an associate degree in optics, then headed to Los Angeles where he graduated from music school. He ultimately returned to Rochester to earn his BS, MS, and Ph.D. degrees in imaging science at RIT, worked in the imaging industry for several years doing research at Xerox, taught classes part-time at MCC, continued as a private drum instructor, then ultimately began as an RIT assistant professor in 2016.

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Eisenhart Award winner Nathaniel Barlow strives to bring out the fun in math

Nathaniel Barlow has always looked for creative ways to help his students solve mathematical problems, but when the coronavirus pandemic moved his classes online, it forced him to rethink his approach.

Barlow, an associate professor in RIT's School of Mathematical Sciences in the College of Science, often uses things like 3D printed models in the classroom to help students visualize math concepts. But teaching classes in an online synchronous setting did not allow for those tactile demonstrations, so he quickly began cooking up new methods of engaging students in his home kitchen, where he has taught since the pandemic began.

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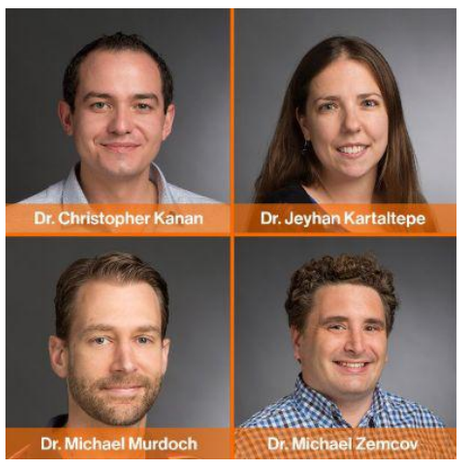

Announcing Tenure Awards

We are delighted to announce that four of our colleagues were awarded Tenure this month:

- ***Dr. Christopher Kanan***, *Chester F. Carlson Center for Imaging Science*
- ***Dr. Jeyhan Kartaltepe***, *School of Physics and Astronomy*
- ***Dr. Michael Murdoch***, *Programs of Color Science, Integrated Sciences Academy*
- ***Dr. Michael Zemcov***, *School of Physics and Astronomy*

We thank each of them for their contributions to the mission of our college and the university and offer our sincere congratulations for achieving this major milestone along their academic path.

Announcing Promotions

I am delighted to announce to you the following promotions:

To Senior Associate Dean:

- ***Dr. Larry Buckley**, Associate Dean for Academic Affairs*

To the Rank of Professor:

- ***Dr. Christy Tyler**, Thomas H. Gosnell School of Life Sciences*
- ***Dr. Yosef Zlochower**, School of Mathematical Sciences*

To the Rank of Associate Professor:

- ***Dr. Christopher Kanan**, Chester F. Carlson Center for Imaging Science*
- ***Dr. Jeyhan Kartaltepe**, School of Physics and Astronomy*
- ***Dr. Michael Murdoch**, Program of Color Science, Integrated Sciences Academy*
- ***Dr. Michael Zemcov**, School of Physics and Astronomy*

To the Rank of Principal Lecturer:

- ***Dr. Dawn Carter**, Thomas H. Gosnell School of Life Sciences*
- ***Dr. Aaron McGowan**, School of Physics and Astronomy*
- ***Olga Tsukernik**, School of Mathematical Sciences*
- ***Carrie Lahnovych**, School of Mathematical Sciences*

To the Rank of Senior Lecturer:

- ***Connie Fitch,** School of Mathematical Sciences*
- ***Dr. Bernadette Lanciaux,** School of Mathematical Sciences*
- ***Dr. Adam Towsley,** School of Mathematical Sciences*

Please join me in congratulating our colleagues for this well-deserved promotion and in thanking them for their dedication to our students and for their contributions to their academic unit, our college, and our university.

John Wiley Jones Scholars

Congratulations to our 2021 John Wiley Jones Outstanding students! Each year, one student from each of the five academic units of the College of Science is chosen based on their academic achievements, citizenship, and contributions to the quality of campus life.

- ***Adam Giammarese** - School of Mathematical Sciences*

- ***Jonathan Chu*** *- Thomas H. Gosnell School of Life Sciences*
- ***Lily Gaffney*** *- Chester F. Carlson Center for Imaging Science*
- ***Lucas Berens*** *- School of Physics and Astronomy*
- ***Nana Aikins*** *- School of Chemistry and Materials Science*

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THE HONOR SOCIETY OF PHI KAPPA PHI

Phi Kappa Phi National Honor Society announces 2021 inductees

In April, the RIT chapter of Phi Kappa Phi recognized 121 RIT students, faculty, and staff who accepted the invitation to become members in the 2020-21 academic year. Phi Kappa Phi is a national academic honor society, recognizing excellence in all academic disciplines since 1897. Congratulations to the following students and faculty from the College of Science who were inducted into the honor society this spring:

JUNIORS

- ***Lauren Burke*** *– Applied Mathematics - BS*
- ***Kelly M. Frost*** *– Biotechnology & Molecular Bioscience - BS*
- ***Olivia M. Lydon*** *– Applied Mathematics - BS*
- ***Katherine O'Neill-Knasick*** *– Biochemistry - BS*

SENIORS

- ***Gaurav S. Cheema*** *– Biochemistry - BS*
- ***Zachary M. Gazzillo*** *– Physics - BS*

GRADUATE

- ***Arthur Carbonare de Avila*** *– Applied Statistics - MS*
- ***Vitaliy Chernyshov*** *– Applied Statistics - MS*
- ***Peter A. Craig*** *– Astrophysical Science & Technology - Ph.D*
- ***Erin R. Kesel*** *– Bioinformatics - MS*
- ***Sophia C. Kotok*** *– Mathematical Modeling - Ph.D*
- ***Sridevi Kayyur Subramanya*** *– Bioinformatics - MS*

FACULTY
Dr. Andre Hudson – Professor, Head of the Thomas H. Gosnell School of Life Sciences

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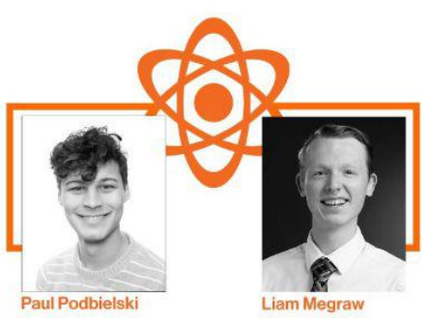
Congratulations to our **2021 College of Science Undergraduate Research Scholars, Andrew Rosato** and **Peter Wengert**! This award recognizes truly exceptional undergraduate researchers.
Peter and Andrew were named College of Science Undergraduate Research Scholars from among 42 Undergraduate Research Scholars that were recognized by their academic units for their contributions to undergraduate research throughout their academic careers at RIT.
Following commencement, Andrew plans to work on personalized medicine-based projects and Peter plans to become a research scientist.



College of Science Delegates

Meet our College of Science Student Delegates!

Undergraduate Delegate, **Paul Podbielski** is graduating with a BS in biotechnology and molecular bioscience. He is a recipient of the RIT Presidential Scholarship and the Nathaniel Rochester Society Scholarship. From 2018 – 2020, Paul completed four independent research projects. Most recently, he served as the principal investigator on a project that studied synthetic systems in yeast. Additionally, Paul has served as a teaching assistant for Organic Chemistry, Plant Molecular Biology, and a Molecular Biology Lab. . Following graduation, Paul plans to travel the world to help make better plants that use the finite amount of land on Earth more efficiently. He is starting in Iowa with Corteva Agriscience to find new herbicide resistance genes.

Liam Megraw is graduating with an MS in environmental science. His thesis focused on improving invasive plant monitoring, examining reporting biases, and understanding factors of spread. In 2020, he graduated with a BS in environmental science from RIT. Liam's professional experience includes working as a Green Infrastructure Peer Mentor at RIT, where he served as a liaison between university students and Rochester Museum and Science Center clients. . Liam also worked as a graduate resident advisor and graduate research assistant. One of his responsibilities was aiding in research on wetland restoration and nutrient cycling. After graduation, Liam plans to work on invasive plant management, public engagement, and environmental justice.

Congratulations to our Excellence in Student Life Award recipients, **Lauren Trumpore** and **Emalee Wrightstone**. RIT has been honoring students for this award since 1964 as a way to recognize students who were able to find the balance between academic success and student engagement.

Third-year students Biochemistry major **Elizabeth Lucas**, mentored by Associate Professor Suzanne O'Handley (SCMS) and Biomedical Science major **Zach Williams**, mentored by Associate Professor Lea Michel (SCMS) are part of the 2021 cohort of the **American Society of Biochemistry and Molecular Biology (ASBMB) National Honor Society ΧΩΛ**. Recognized for their scholarly achievements, research accomplishments, outreach activities, and leadership in their ASBMB Student Chapter, Lucas and Williams are part of a select group of 31 inductees across the United States.

Emmett Ientilucci, assistant professor in the Chester F. Carlson Center for Imaging Science has been named an Associate Editor for **IEEE Geoscience and Remote Sensing Letters (GRSL)**. GRSL is a monthly publication for papers addressing new ideas and formative concepts in remote sensing as well as important new and timely results and concepts.

College Updates

Robert Rothman, founder of RIT's longest-running

study abroad program, retires

A pioneer of one of RIT's earliest study abroad programs and a founding member of the biotechnology and molecular bioscience program has retired. Professor Robert Rothman from the Thomas H. Gosnell School of Life Sciences taught his final courses in Genetics and Evolution and Creationism this spring, capping off an RIT career that began in 1984.

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The School of Chemistry and Materials Science will sorely miss the contributions of Professor **Thomas W. Smith** as he enters retirement at the end of June. Following a highly productive career at Xerox, Tom joined our faculty with the rank of Professor in 2002 and had an exemplary career at RIT. He has been an excellent teacher and mentor to the students in our programs, a productive researcher who frequently published with his graduate and undergraduate students, and a leader in service and administration on our campus. He has consistently contributed to the life and culture of the School, the College, and the Institute. We wish Tom all the best in his retirement!

Congratulations are in order for COS Academic Advisor **Rosanne Klingler**. Rosanne retired on May 15 after over three decades of service to the university. She and her husband Paul will be enjoying their new home, cat, puppy, boating, traveling and only adhering to deadlines of Rosanne's choosing! Rosanne, has been a terrific colleague and a pillar of strength and knowledge for our students, faculty and staff. Her contributions are too numerous to list, however each positively impacted the university and our students and all are truly appreciated.

Congratulations to Mark Gaul, Senior Director of Advancement, on his decision to retire after a long and successful career. Mark led the development efforts on behalf of the College of Science during much of his RIT career. Mark came to RIT in August of 2004. He spent the majority of those seventeen years fundraising for the College of Science and RIT and worked on two capital campaigns.

His knowledge and understanding of our college and meaningful partnerships with our faculty, staff, and our leadership team have all positively contributed to the College's success over the years. During his RIT career, Mark was the lead on gifts totaling more than $14 million. This includes five gifts of one million dollars or more and twenty-four six-figure gifts.
It was a pleasure working with Mark. He is organized, dependable, dedicated to his job responsibilities, and always willing to help and give good advice and guidance. This is a well-deserved retirement and we are happy Mark will have more time for family, travel, golf and hunting. We are so glad to have this opportunity to wish Mark well on his next adventure. Mark's last day with us will be June 30.

Carmody "Carrie" McCalley, assistant professor in the Thomas H. Gosnell School of Life Sciences. Carrie has been appointed Director of the Environmental Science MS Program, taking over the position from Associate Professor Jeff Lodge.

Inclusive Excellence Brown Bag

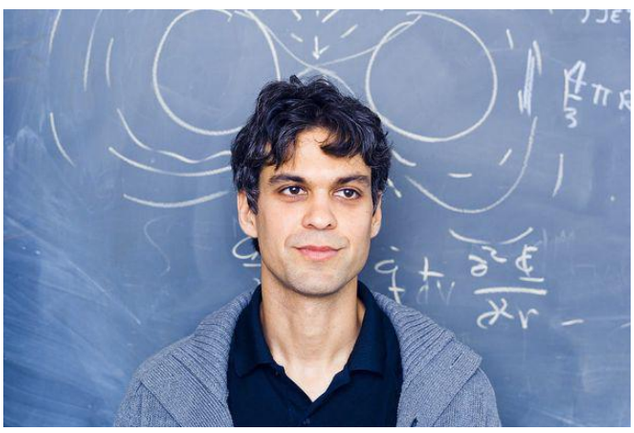
Inclusive Excellence hosts discussion groups

The Inclusive Excellence initiative hosted three programs in the month of April:

On April 16, COS faculty, staff, and students were invited to participate in a conversation about **Environmental Justice**. Participants discussed the common aspects of environmental justice and how it impacts the community where we live.

And on April 21, invited speaker Dr. Franco Delogu, associate professor of Psychology at Lawrence Technological University, joined the COS community to share strategies for creating learning environments that make STEM education accessible to all students using the Course-based Undergraduate Research Experience (CURE) model. CURE is an effective pedagogical model to increase enrollment, retention and graduation of historically underserved populations of students. The CURE model makes research activity an integral part of a regular course, so all students enrolled in the course can be included in the intervention, eliminating selection and self-selection constraints to research accessibility.

The month concluded with a discussion about **Food Insecurity**, facilitated by Sharon Kompalla-Porter, director of the RIT FoodShare Program. The RIT FoodShare, based on the RIT campus, was created in 2015 to help meet the needs of RIT students.



COS Distinguished Speaker Series – Cosmic Alchemy in the Era of Gravitational Wave Astronomy

On April 7, the college and the School of Physics and Astronomy welcomed **Distinguished Speaker** Dr. Enrico Ramirez-Ruiz, professor in the Astronomy and Astrophysics Department at the University of California, Santa Cruz. Dr. Ramirez-Ruiz's talk focused on recent advances in our understanding of the origin of the heaviest and rarest elements in the Universe.

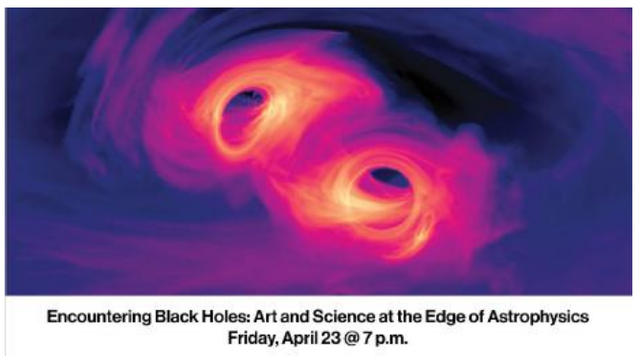
Peer Reviewed Publications

Rachel Hawks and **Yidan Yang**, Ph.D. students in the Mathematical Modeling program, are co-authors of a published paper, "A Variational Inequality Based Stochastic Approximation for Inverse Problems in Stochastic Partial Differential Equations," along with Baasansuren Jadamba, associate professor in the School of Mathematical Sciences. The paper appears in the book titled *Nonlinear Analysis and Global Optimization* published by Springer International.

Zackary Santos, a Materials Science and Engineering major who received his BS Physics and MS MSE degrees is the lead author of the journal article titled "Thermodynamic stability of defects in hybrid MoS2/InAs heterostructures" along with Pratik Dholabhai, assistant professor in the School of Physics and Astronomy. The article was published in the *Computational Materials Science Journal*.

Laura Munoz, assistant professor in the School of Mathematical Sciences; **Elizabeth Cherry**, associate professor at Georgia Tech and research affiliate professor in the School of Mathematical Sciences; and **Mark Ampofo** '19 (applied and computational mathematics), published a paper, "Controllability of Voltage-and Calcium-driven Cardiac Alternans in a Map Model" in the journal *Chaos*.

Presentations & Workshops



Art & Science at the Edge of Astrophysics

The RIT Center for Engaged Storycraft hosted a webinar discussion with RIT Distinguished Professor of Astrophysics and director of the Center for Computational Relativity and Gravitation Manuela Campanelli, and Dr. Peter Galison, Joseph Pellegrino University Professor of Physics, Philosophy, and History of Science at Harvard University followed by a free screening of Dr. Galison's film *Black Holes: The Edge of All We Know*!

WISe STEM Career Panel

On April 14, the Women In Science (WISe) hosted **A WISe STEM Career Panel discussion: What can you do with your Science/Math degree?** Panelists included alumni, local STEM professionals, and COS Faculty who pursued careers outside of academia before coming to RIT, each providing a brief overview about their career, education, and training pathway followed by an open Question and Answer session.

Life Sciences & Chemistry

- **Ashley Adair** | Embryologist, Hudson Valley Fertility
- **Shivani Phadke** | Associate Scientist, Merck Pharmaceuticals
- **Abigail Melake** | ORISE Fellow, FDA
- **Christine Yoo** | Associate Medical Examiner, Monroe County Medical Examiner's Office

Physics, Imaging, & Math

- **Mary Lynn Reed** | Head of SMS at RIT and Former Chief at the National Security Agency
- **Donna Rankin-Parobek** | IP Specialist, Simone Center and Innovation Coach, KCOE MSD Guide
- **Dani Reding** | Electrical Control Engineer, McGard Innovative Security Products
- **Patricia Diute** | Principal Lecturer, SMS and Former Kodak Employee

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Mark Fairchild, professor and director of the color science program and Munsell Color Science Laboratory in the College of Science, presented an invited lecture, “The Art of Color Science: Individual Differences” at the second International Symposium for Color Science and Art hosted by the Tokyo Polytechnic University’s International Research Center for Color Science and Art on March 19.

Astrophysical Sciences and Technology Ph.D. candidate **Marko Ristic** and Physics Major **Elizabeth Champion** presented their talk "Interpolating Detailed Simulations of Kilonovae" at the American Physical Society. Kilonovae are the luminous counterparts to merging neutron stars, an astrophysical phenomenon that is thought to produce most of the gold in the universe. The students' work included state-of-the-art calculations from the Los Alamos National Laboratory.

Vera Delfavero, a graduate student in Astrophysical Sciences and Technology presented a talk “Constraining Startrack Binary Evolution with Gravitational Wave Observations” at the April 2021 American Physical Society meeting.

Michael Murdoch, assistant professor in the color science program, presented an invited webinar, “Variations in Visual Sensitivity & Color Matching Functions,” to architects, lighting designers, and lighting industry representatives in the Illuminating Engineering Society (IES) on March 31.

Raluca Felea, professor in the School of Mathematical Sciences, gave a presentation, “Fourier Integral Operators in the borehole geometry,” via Zoom during the Southeastern Analysis Meeting (SEAM) at the University of Florida on March 14.

Gregory Babbitt, associate professor in the Thomas H. Gosnell School of Life Sciences, is the lead author of a computational cancer drug study, with collaborators at HWI-Buffalo and Georgetown University Medical Center. Based on machine learning software/method published earlier in the year and presented at the 2020 Biophysical Society Meeting, the work was part of a long-term intellectual collaboration with Ernest Fokoue, professor in RIT’s School of Mathematical Sciences.

Research findings by Ben Zwickl, associate professor in the School of Physics and Astronomy, were featured in the Communications of the ACM. Zwickl recently co-authored a paper, “Achieving a Quantum Smart Workforce” and another on “ Preparing for the quantum revolution: What is the role of higher education?” published in *Physical Review Physics Education Research* with University of Colorado researchers Michael Fox and Heather Lewandowski.

Sponsored Research

Maureen Ferran, GSoLS, is the PI on a $451,178.00 grant from DHHS.National Institutes of Health to support a project titled “NFkB-dependent antiviral pathways in VSV-resistant cancer cells.”

Michael Gartley, CIS, is the PI on a $16,286.00 grant from the Department of Energy / Sandia National Laboratories to support a project titled “DIRSIG Simulations for SNL.”

Seth Hubbard, SoPA, is the PI on a $25,000.00 grant from DOD – Department of the Air Force, Materiel Command / Microlink Devices, Inc. to support a project titled “Device Simulation and Modeling - Dual Junction InGaP/GaAs solar cells with wavelength selective photonic structures (WSPS).”

Jeyhan Kartaltepe, SoPA, is the PI on a $11,200.00 grant from NSF-National Science Foundation / National Radio Astronomy Observatory to support a project titled “What is the Origin and Subsequent Evolution of Starbursts at z~2? Part II.”

Guoyu Lu, CIS, is the PI on a $174,890.00 grant from NSF-National Science

Foundation to support a project titled “CRII: Modeling and Understanding the Invisible World in Thermal Modality.”

Six College of Science faculty were awarded **Grant Writers Bootcamp Seed Funding Grants** for proposals submitted through the RIT division of Sponsored Research Services:

- Lucia Carichino (SMS) for the proposal titled “Operator Splitting Methods for Sperm Motility.”
- Blessing Emerenini (SMS) for the proposal titled “Influenza Infection Dynamics in Cystic Fibrosis Patients: Mathematical Approach.”
- Lishibanya Mohapatra (SoPA) for the proposal titled “Role of limiting-pool in the assembly of nucleoli in early C. elegans embryo.”
- Shahla Nasserasr (SMS) for the proposal titled “Multiplicities of Eigenvalues of Graphs.”
- Mary Lynn Reed (SMS) for the proposal titled “Graph models for analyzing crypto-currencies and blockchain technologies.”
- Nourridine Siewe (SMS) for the proposal titled “Overcoming drug resistance to anti-VEGF in breast cancer patients with obesity.”

This year, two groups from the College of Science were awarding funding through AdvanceRIT’s Connect Grants program to run their projects:

- *Pre-tenure Female Peer-support Group in Mathematics*: PI - Lucia Carichino; Co-PIs - Blessing Emerenini, Shahla Nasserasr
- *Mentoring Faculty to Enhance their Professional Visibility Using Website Design and Social Media*: PI – Dina Newman; Co-PIs – Rita Margarida Almeida Magalhaes

COS in the Media

Scientific American
The James Webb Space Telescope’s First Year of Extraordinary Science Has Been Revealed
Scientific American talks to Jeyhan Kartaltepe, assistant professor in the School of Physics and Astronomy, about the program she is leading to use the James Webb Space Telescope to study thousands of the earliest galaxies in the universe.

ACM
Higher Education Readies for a Quantum Leap
Association for Computing Machinery (ACM) talks to Ben Zwickl, associate professor in the School of Physics and Astronomy, about quantum information science education.

WROC-TV
Four RIT alumni worked on ‘Ingenuity,’ the first helicopter to fly on another planet
WROC-TV features **Zac Bittner ’11 (microelectronic engineering), ’11 MS (materials science), ’19 Ph.D. (microsystems engineering)**; Nicholos Mackos ’08 (mechanical engineering); **Chelsea Mackos ’09 (microelectronic engineering), ’11 MS (materials science)**; and Joseph Hunt ’19 (chemical engineering).

WXXI-TV
The Gene: An Intimate History
André Hudson, professor and head of the Thomas H. Gosnell School of Life Sciences, was part of a panel of local genomic experts during WXXI Education's virtual screening and discussion of Ken Burns' *The Gene: An Intimate History* from 7 to 9 p.m. on Tuesday, May 4. The free event included a screening of a clip-reel from The Gene series (time length about 45 minutes) and a moderated discussion about some of the topics touched upon in the series.

WHAM-TV
How dirty is your mask? We put it to the test
WHAM-TV talks to Mary-Anne Courtney, lecturer**;** André Hudson**,** school head; and Christy Tyler, associate professor, all in the Thomas H. Gosnell School of Life Sciences, about bacteria on cloth face masks and proper disposal of used face masks.

WHAM-TV
Someone You Should Know: Jeyhan Kartaltepe
WHAM-TV features Jeyhan Kartaltepe, assistant professor in the School of Physics and Astronomy

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Do you have news you want amplified? Submit the details using the new COS Newsmakers Form, and we'll help you share it. "COS Newsmakers" is a quick and easy way to acknowledge the professional and academic accomplishments of COS faculty, students, and staff for acknowledgement in upcoming monthly newsletters, web and social media, or even RIT news! Examples of achievements may include:

- publishing an article in a scholarly peer-reviewed journal
- presenting research at a conference
- sponsored research awards
- earning a scholarship
- winning an award
- …and more!

COS Newsmaker Submission Form

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