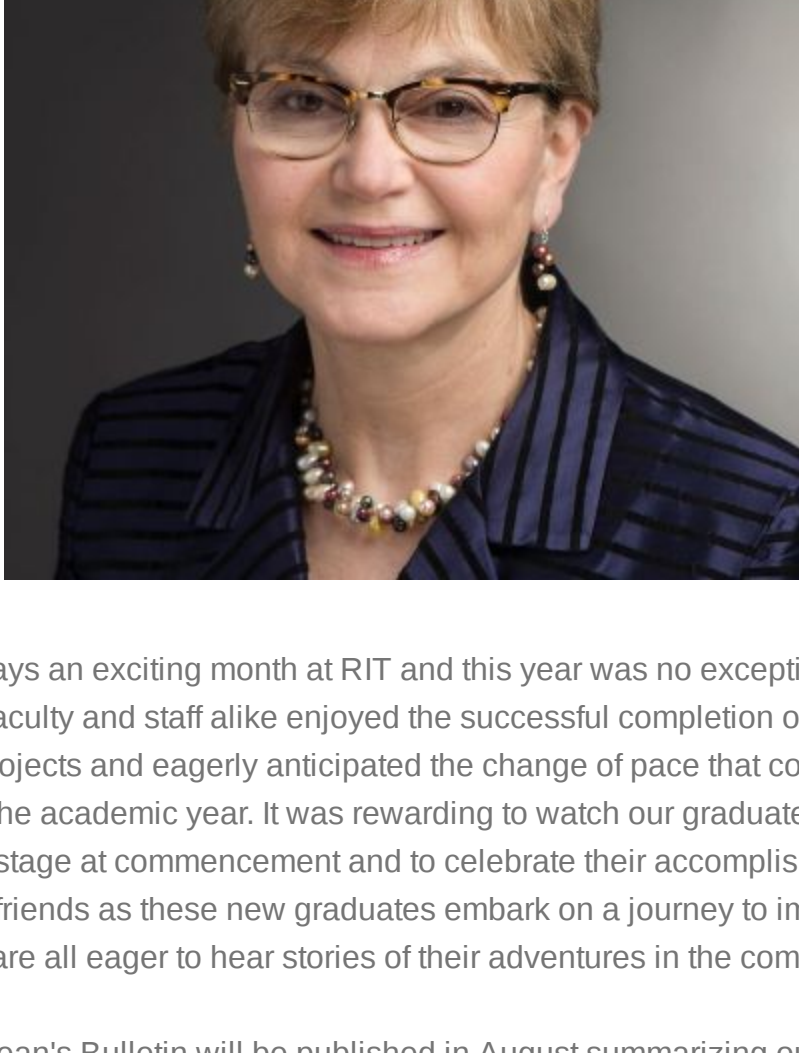


May 2019



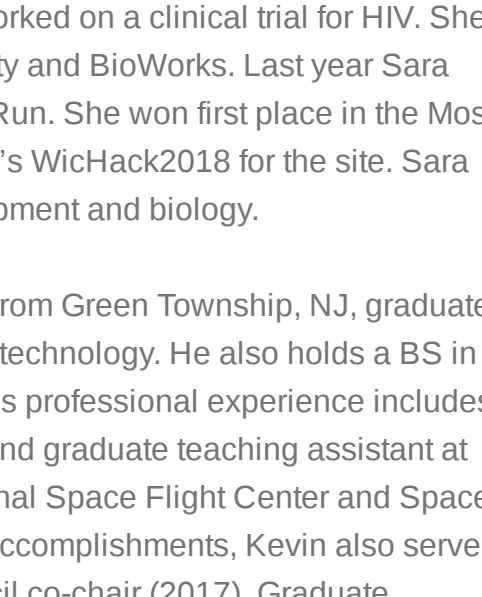
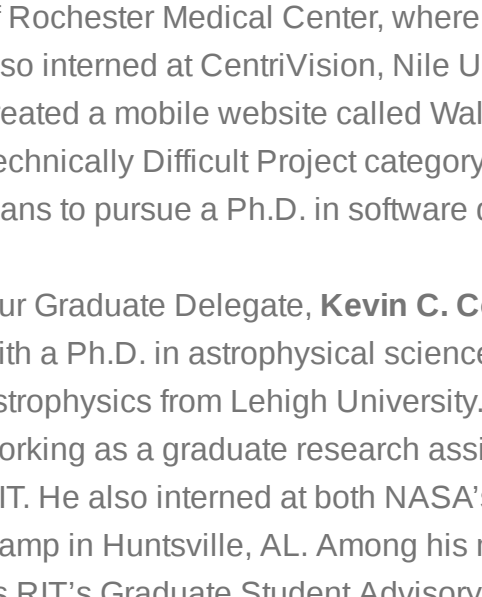
May is always an exciting month at RIT and this year was no exception. Students, faculty and staff alike enjoyed the successful completion of exams and final projects and eagerly anticipated the change of pace that comes with the end of the academic year. It was rewarding to watch our graduates walk across the stage at commencement and to celebrate their accomplishments with family and friends as these new graduates embark on a journey to improve our world. We are all eager to hear stories of their adventures in the coming years.

The next Dean's Bulletin will be published in August summarizing our summer experiences. You can still keep up with all of the adventures of our COS family through social media accounts on [Facebook](#), [@RITCollegeofScience](#) and on Instagram - [@RIT_Science](#).

I am grateful for all that we have accomplished together this past year. We have much to be proud of! Best wishes to all for a productive and restful summer with plenty of time to enjoy your family and friends!

SOPHIA MAGGELAKIS
Dean, RIT College of Science

Student & Alumni News

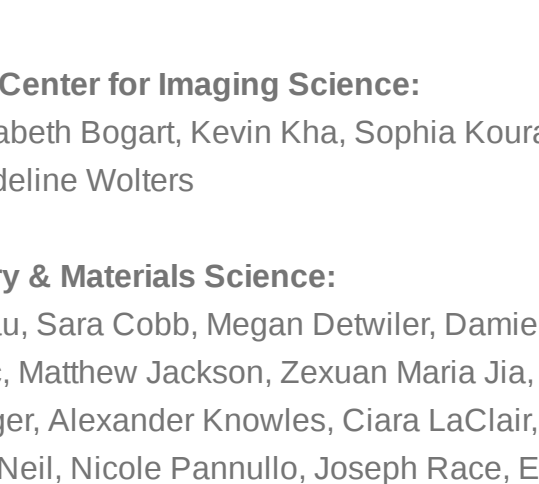


College of Science Commencement Delegates

We were pleased to have selected distinguished Student Delegates representing the College of Science during the RIT Commencement activities this year. Our Undergraduate Delegate, **Sara Ail**, a bioinformatics major from Cairo, Egypt is the recipient of numerous awards and scholarships from the United States Agency for International Development (USAD) Egypt Higher Education Initiative. Sara completed an internship as a research assistant at the University of Rochester Medical Center where she worked on a clinical trial for HIV. She also interned at CentriVision, Nile University and BioWorks. Last year Sara created a mobile website called WalkDon'tRun. She won first place in the Most Technically Difficult Project category at RIT's WicHack2018 for the site. Sara plans to pursue a Ph.D. in software development and biology.

Our Graduate Delegate, **Kevin C. Cooke**, from Green Township, NJ, graduates with a Ph.D. in astrophysical sciences and technology. He also holds a B.S. in astrophysics from Lehigh University. Kevin's professional experience includes working as a graduate research assistant and graduate teaching assistant at RIT. He also interned at both NASA's Marshall Space Flight Center and Space Camp in Huntsville, AL. Among his many accomplishments, Kevin also served as RIT's Graduate Student Advisory Council co-chair (2017), Graduate Showcase Committee representative (2017 & 2018), and an ASST Program Curriculum Committee student representative (2017). Kevin is also the author or co-author of five peer-reviewed publications.

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Research Scholars celebrated

Each year, academic units within the College of Science recognize graduating undergraduate students as **Research Scholars** for their participation in research activities during the course of their studies at RIT. This year 48 Research Scholars were honored during a ceremony on May 10. Additionally two students were recognized as **College of Science Research Scholars** for exceptional research contributions in their field of study:

- **Emma Snyder** – Biochemistry
- **Ethan Burroughs** – Computational Mathematics

Congratulations to all of our 2019 Research Scholars!

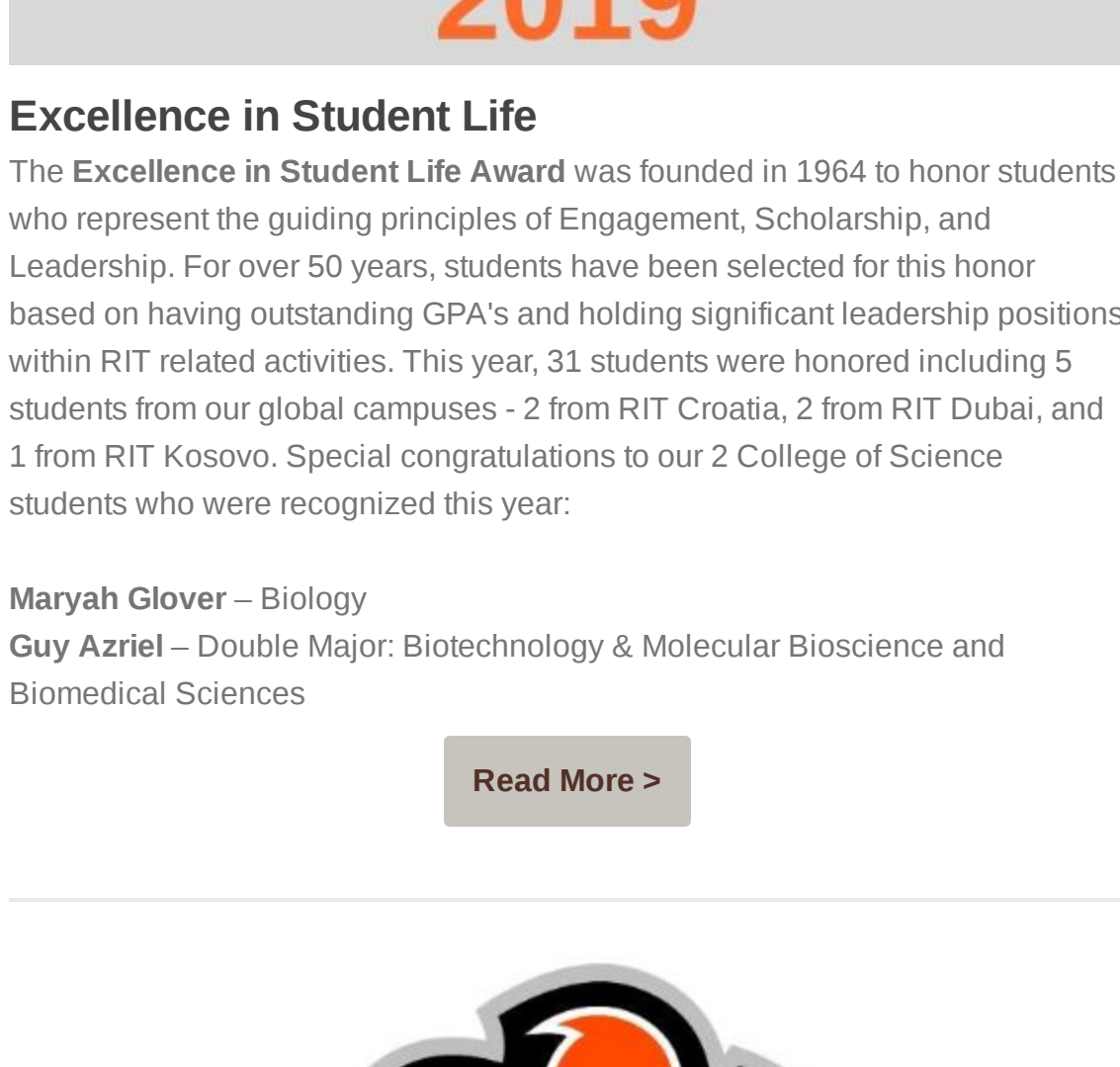
Chester F. Carlson Center for Imaging Science:
Sheela Ahmed, Elizabeth Bogart, Kevin Kha, Sophia Kourain, David Lewis, Rachel Shadler, Madeline Wolters

School of Chemistry & Materials Science:
William Charbonneau, Sara Cobb, Megan Detweiler, Damien Dobson, Yang Goh, Carmen Isaac, Matthew Jackson, Zouren Nishi, Jie, Keleba Jones, Daniel Kriegenberger, Alexander Knowles, Clara Lacas, Samantha Lauro, Minh Le, Meghan O'Neill, Nicole Panunzio, Joseph Race, Emma Snyder, Daniel Verico

School of Mathematical Sciences:
Kylie Pleakis, Meaghan Hott, Nicholas Wilkins, Ethan Burroughs, Nathan Hott

School of Physics & Astronomy:
Elyse Rood, Noah Reuter, Kain McCall, David Specker

Thomas H. Gosnell School of Life Sciences:
Milky Abajorga, Goy Azriel, Molly Border, Meghan Buldo, Nicholas Burns, Briana Burr, Adriana Coll De Pena, Katherine Hensel, Gretchen Horst, Jeremy Kane, Adeline Maybach, Sydney McVieles, Amanda Weiss

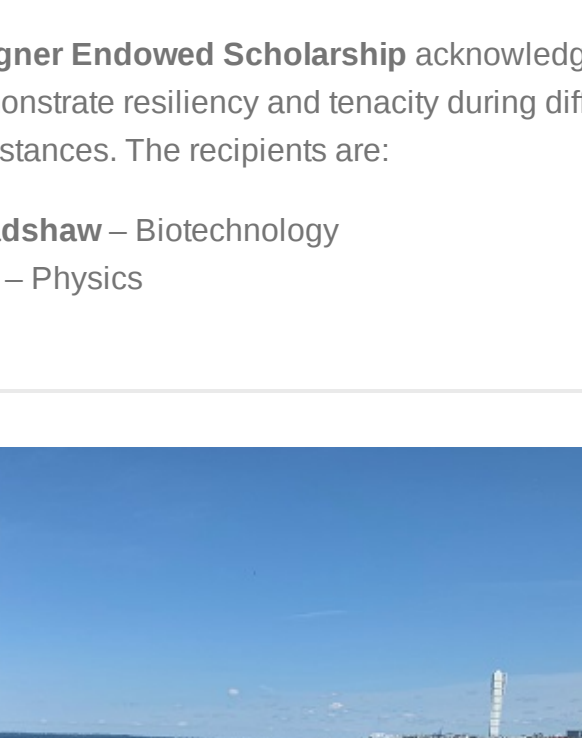


Excellence in Student Life

The **Excellence in Student Life Award** was founded in 1964 to honor students who represent the guiding principles of Engagement, Scholarship, and Leadership. For over 50 years, students have been selected for this honor based on having outstanding GPAs and holding significant leadership positions within RIT related activities. This year, 31 students were honored including 5 students from our global campuses - 2 from RIT Croatia, 2 from RIT Dubai, and 1 from RIT Kosovo. Special congratulations to our 2 College of Science students who were recognized this year.

Mayah Cleaver – Biology
Guy Azriel – Double Major: Biotechnology & Molecular Bioscience and Biomedical Sciences

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COS Scholarship winners announced

The College of Science Student Honor and Awards committee is pleased to announce the winners of two COS scholarships. The **Alumni Endowed Scholarship** is awarded to one or two full time students each year who have demonstrated outstanding leadership abilities and have maintained a cumulative GPA above a 3.0. This year's recipients are:

- **Emily Mahoney** – Chemistry
- **Patrick Edwards** – Chemistry

The **Dr. Andy Langner Endowed Scholarship** acknowledges student nominees that demonstrate resiliency and tenacity during difficulty or challenging circumstances. The recipients are:

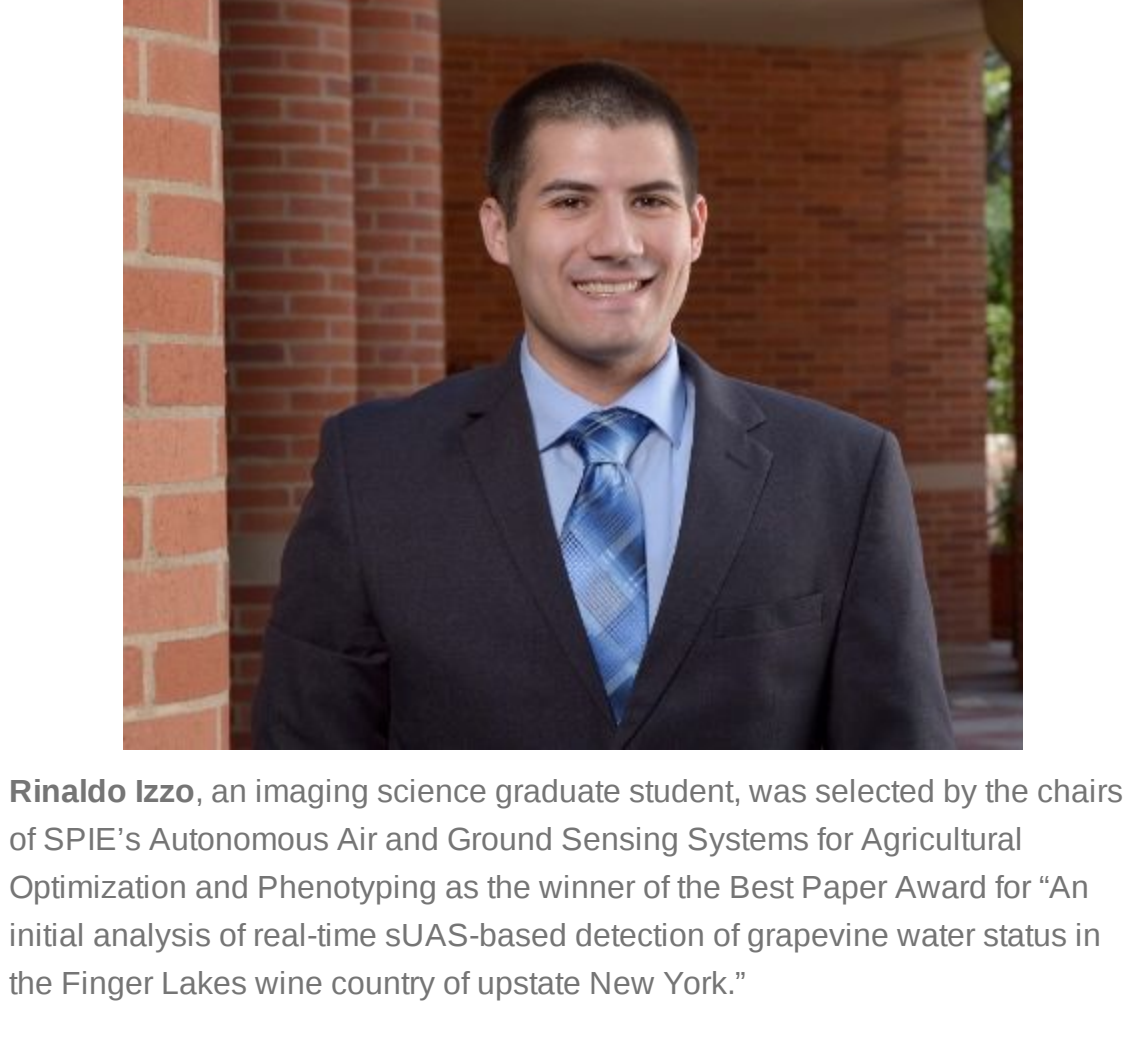
- **Spencer Bradshaw** – Biotechnology
- **Isabella Cox** – Physics



Study Abroad adventures

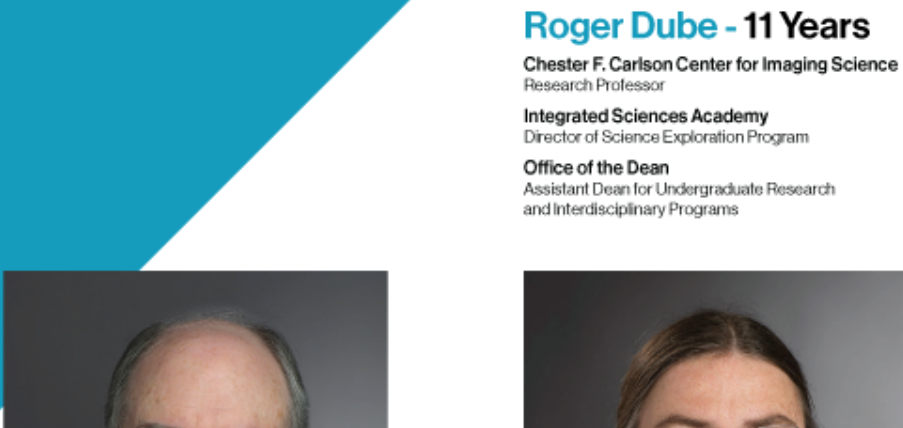
Malmö, Sweden and the Galapagos Islands are two of the beautiful Study Abroad locations that College of Science students ventured to this month to learn about "Urban Ecology" and "Ecology & Evolution."

GS&S Professor **Karl Korfacher** and Associate Professor **Elizabeth Hane** led a group of students to explore many examples of green infrastructure, sustainable design and low impact transportation systems in Sweden – the world's most sustainable country.



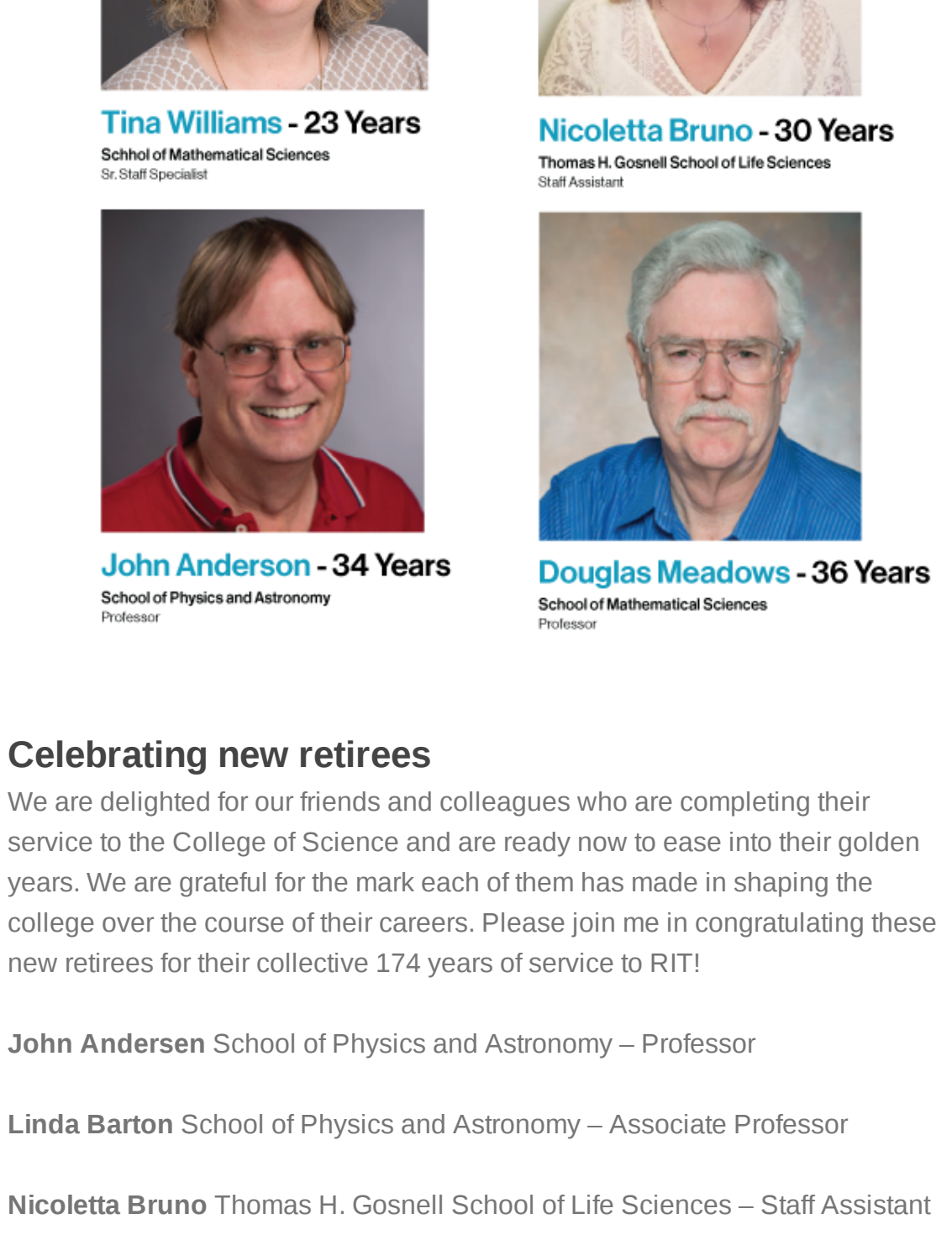
Another fortunate group of students accompanied **Bob Rothman**, professor, GS&S to the Galapagos Islands for a once-in-a-lifetime opportunity to learn about the wildlife, ecology and geology of the Galapagos Islands, and their influence on Darwin's theory of natural selection.

More information about future opportunities for Study Abroad adventures including program costs and registration deadlines can be found at the [RIT Global](#) website.



Rinaldo Izzo, an imaging science graduate student, was selected by the chairs of COS's Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping as the winner of the Best Paper Award for "An initial analysis of real-time sUAS-based detection of grapevine water status in the Finger Lakes wine country of upstate New York."

Our Stories and News



Celebrating new retirees

We are delighted for our friends and colleagues who are completing their service to the College of Science and are ready now to ease into their golden years. We are grateful for the mark each of them has made in shaping the college over the course of their careers. Please join me in congratulating these new retirees for their collective 174 years of service to RIT!

John Andersen School of Physics and Astronomy – Professor

Linda Barton School of Physics and Astronomy – Associate Professor

Nicoletta Bruno Thomas H. Gosnell School of Life Sciences – Staff Assistant

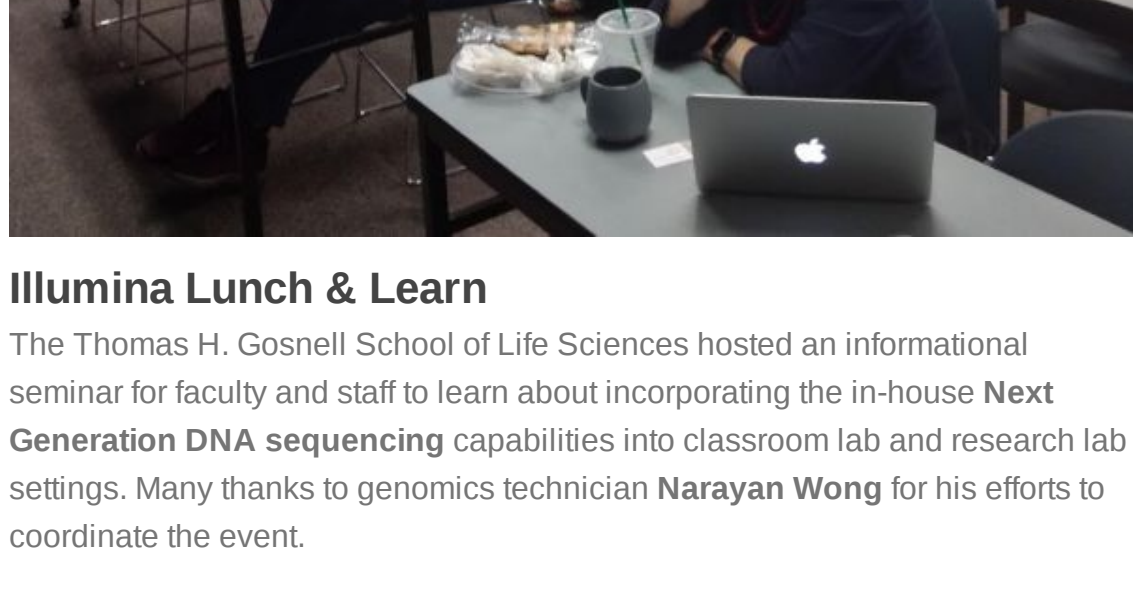
Roger Dube

- **Chester F. Carlson Center for Imaging Science** – Research Professor
- **Integrated Sciences Academy** – Director of Science Exploration Program
- **Office of the Dean** – Assistant Dean for Undergraduate Research and Interdisciplinary Programs

Douglas Meadows School of Mathematical Sciences – Professor

Robert Teese School of Physics and Astronomy – Professor

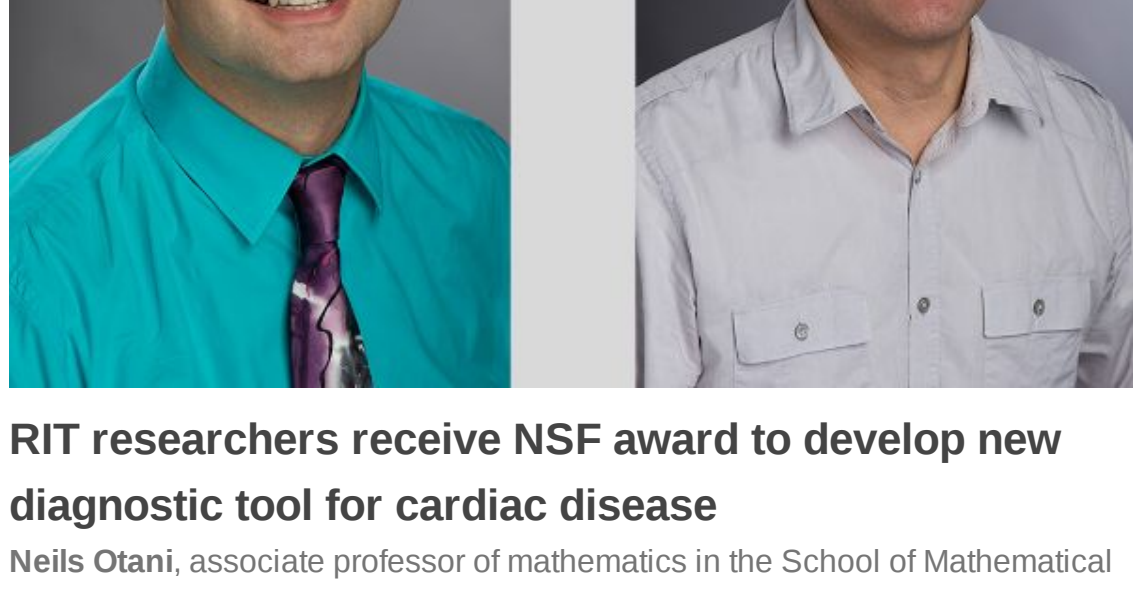
Tina Williams School of Mathematical Sciences – Sr. Staff Specialist



Illumina Lunch & Learn

The Thomas H. Gosnell School of Life Sciences hosted an informational seminar for faculty and staff to learn about incorporating the in-house **Next Generation DNA** sequencing capabilities into classroom lab and research lab settings. Many thanks to genomics technician **Narayan Wong** for his efforts to coordinate the event.

Newsmakers



RIT researchers receive NSF award to develop new diagnostic tool for cardiac disease

Nelia Clark, associate professor of mathematics in the School of Mathematical Sciences and **Cristian Linde**, associate professor of biomedical engineering in RIT's Kate Gleason College of Engineering are a developing a critical tool that will help clinicians identify damaged areas in the heart to more accurately diagnose cardiac disease.

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RIT researchers contribute to massive Global Urban Evolution Project

Katlin Clark Whitney, visiting assistant professor of environmental science, GS&S lead a team of undergraduate researchers to collect samples of white clover plants for a **Global Urban Evolution Project** to study how the ubiquitous white clover plants are evolving differently in urban, suburban and rural ecosystems.

Read more coverage about this project from [WXXI News](#) and RIT News and Events.

[Read More >](#)

Emmett Ientilucci, assistant professor of imaging science, is giving an invited talk at the **14th Conference on Education and Training in Optics and Photonics** in Quebec, Canada, on May 24. His presentation will highlight the novel activities and educational approaches he takes in RIT's laboratory-based undergraduate radiometry course.

Associate Professor **Matthew Hoffman**, director of the applied and computational mathematics MS program, was named as a network member for Northwestern University's Program on **Electric, Ecosystems, and Public Health**.

Charles Bachmann, associate professor in the Chester F. Carlson Center for Imaging Science, and **Greg Redman**, Ph.D. (Imaging Science) and had a cover article published in the **March 2019 Issue** of the IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (IEEE JSTARS). The article is titled, "Assessing Effects of Azimuthally Oriented Roughness on Directional Reflectance of Sand."

The Center for Computational Relativity and Gravitation's computational astrophysics group got a new allocation on the Blue Waters supercomputer at the **National Center for Supercomputing Applications (NCSA)** for 265.6 million core hours. The project is titled "Realistic Accretion Dynamics of Black Hole Binaries Approaching Merger."

Susan Farnand, assistant professor in the color science program, delivered an invited talk titled "Evaluating Color Quality of Smartphone Images" at the **Tatavajuts, Imaging and Science Symposium** at the University of Westminster in London on April 26. The talk addressed using science to generate aesthetically pleasing images.

Michael Zemcov, assistant professor of physics, has been invited to serve on **NASA's Sounding Rocket Working Group (SRWG)** representing astrophysics. Zemcov will serve for a three-year tour of duty on the committee, which meets twice annually.

Sponsored Research

Carlos Lousto, SMS-ICRG, is the PI on a \$450,000 grant from the National Science Foundation to support the project titled "Early Relativistic Studies of Black Hole Binaries with Applications to Gravitational Wave Observations."

Niels Olsen, SMS, is the PI on a \$380,503 grant from the National Institutes of Health to support the project titled "Development of a new, Raman-base, low-energy, single-pulse cardiac defibrillation technique."

COS In the Media

North Shore News
Handsworth grad examines inner workings of outer space with NASA project
Assistant Professor **Michael Zemcov** interviewed by North Shore News for his part in contributing to NASA's new mission to explore the origins of the universe by performing the first near-infrared all-sky spectral survey.

WVIAK-TV
Local high school seniors, RIT scientists discover 'rare' bacterium that kills E. Coli
Democrat and Chronicle
Rochester: Five students discover bacteria research in scientific journal
WVIAK-TV and the Democrat and Chronicle report on a scientific discovery made by three Rochester Prep High School students working with **Andre Hudson**, professor and department head of the Thomas H. Gosnell School of Life Sciences.

GoVendo
Will there ever be new colors that we can see?
Mark Fairchild, head of Integrated Sciences Academy and director of the Program of Color Science quoted.

The Conversation
What Happens when a Raindrop Hits a Puddle?
Nate Barlow, assistant professor of mathematics, author.

The Conversation
A new type of laser uses sound waves to help detect weak forces
Mishka Bhattacharya, associate professor of physics and astronomy, author.

Optics and Photonics News
A "Laser for Sound" from a Levitated Nanoparticle
Optics and Photonics News feature work by **Mishka Bhattacharya**, associate professor in the School of Physics and Astronomy.