

### Message from the Dean

**E**xams are finished, grades are submitted, and the Class of 2015 has graduated. But the campus is not quiet. Research activity is at its peak during the summer in the College



of Science & Mathematics. Over 120 Rowan students are spending a good part of their summers participating in the 2015 College of Science & Mathematics Summer Research Program for Undergraduates. Student research is an invaluable experience that not only improves a student’s understanding of the field, but also offers them a professional advantage in applying to graduate school or industrial jobs. Creating a CSM summer research program was my top priority this past year serving as the Interim Dean, and I am proud to say that it is a huge success!

Looking back on this past year, I can say that CSM is comprised of amazing students and professors. As you read this newsletter, I know you will agree that each year the level of accomplishment rises for students and professors.

My initial plan was to serve as Dean for just one year, however, I was honored when asked to continue in this role. Rowan is expanding at an unprecedented rate and my 26 years at CSM will provide insight and leadership as the college marches into the future.

Karen Magee-Sauer, Dean  
College of Science & Mathematics  
School of Biomedical Science & Health Professions

### CSM Celebrates Recipients of Dean’s Outstanding Senior Awards

**T**he College of Science & Mathematics recently awarded the Dean’s Outstanding Senior Awards at a ceremony in Eynon Ballroom. Dean Karen Magee-Sauer and Assistant Dean for Undergraduate and Graduate Students, Courtney Richmond, welcomed students, family, and faculty to the annual event, that featured Dr. Roy Sandau as the keynote speaker.

Dr. Sandau, a native of Southern New Jersey, graduated with honors from Rowan University in 2000, earning a degree in Biological Sciences and minors in Chemistry and Psychology. He received his medical degree from the UMDNJ School of Osteopathic Medicine in 2004. Currently in private practice with Advocare Associates in General Surgery, he specializes in endocrine surgery, minimally-invasive laparoscopic and robotic general surgery. His advice resonated with the future



*Pictured, standing, L to R: Timothy Vaden, Hieu Nguyen, Michael Lim, Kyle Munson, Jeffrey Scaturro, Lark Perez, Tom Dinzeo, Zachary Reburn, Aimee Burgin, Andrew Garcia, Matthew Bealor, Colleen Lees, Jennifer Kay  
Seated, L to R: Brooke Logan, Lydia Hanna, Lauren Miller, Michael Arteaga.*

graduates. He encouraged the seniors to discover what they love to do, as well as what challenges them, and to use both of those discoveries to their advantage.

Each of these remarkable students has achieved excellence in the academic realm, while also contributing to the culture of the university. These students wear many hats on campus, whether as the leader of a student club; teaching Pilates classes at the Recreation Center; tutoring other students; conducting research with a faculty member at Rowan or in an off-campus internship; or presenting research at meetings, both on and off-campus. In addition to the Dean’s Outstanding Senior Award, Brooke Logan also received the 2015 Rowan University Award for Excellence in Undergraduate Research, which is awarded by the Office of Research.

- Departments**
- Biological Sciences
  - Chemistry & Biochemistry
  - Computer Science
  - Mathematics
  - Nursing
  - Physics and Astronomy
  - Psychology

# Spring 2015 at CSM



Visitors meet reptiles at the Rowan University tent during the Carnival on the Parkway as part of the Philadelphia Science Festival.



Karlee Henderson, recipient of the Robert D. Bole Humanitarian Award and the Robert N. Renlund Preprofessional Award in the Allied Health Field, addresses CSM graduates at Commencement.



Chemistry majors at Commencement on May 12.



Discovering moldy bread through a microscope during CSM's Science Day, which welcomes high school students from across South Jersey.



Computer Science Professor John Robinson works with teachers during a Rowan Academy of Mobile Programming Workshop. Middle and High School teachers from across the region learn how to program mobile apps, which they bring back to teach in their own classrooms.



Dr. Roy Sandau and Biological Sciences Chairperson, Maria Tahamont, at the Dean's Outstanding Senior Awards Ceremony.

## CSM Commencement Celebration

May 12, on the University Green, with iconic Bunce Hall as a backdrop, 594 students in the College of Science & Mathematics, 179 students in the School of Biomedical Science & Health Professions, and 190 students in the Henry M. Rowan College of Engineering participated in Commencement.

The day was marked by more than a few decorated caps, cheers, tears, and special guests. Rowan President Dr. Ali Houshmand applauded the graduates for their accomplishments. Henry Rowan, benefactor of the University that bears his name



*Astronaut Dr. Bonnie J. Dunbar addresses Commencement for the College of Science & Mathematics, School of Biomedical Science and Health Professions, and the Henry M. Rowan College of Engineering.*

and the man for whom the College of Engineering has been named, had a seat of honor. His daughter and member of the Rowan University Board of Trustees, Virginia Smith, welcomed and introduced commencement speaker Dr. Bonnie Jeanne Dunbar, a retired NASA astronaut with decades of engineering, education, and flight experience.

Dunbar spoke not just of her career, but also of what inspired her.

Though she lived on a homestead in Washington State, without plumbing until age 13, Dunbar felt wealthy because she learned to read at age five. The works of H.G. Wells and Jules Verne introduced her to the moon and Mars, and influenced her career.

As a youth, she was not aware of college, but knew she wanted to go into space. “I was thinking about the excitement of exploration,” she said.

She listened to teachers and mentors. And she pursued opportunities. Quoting her grandfather, a Scottish immigrant, Dunbar said to the students, “The most important possession you have is knowledge. No one can take that from you.”

## 18th Annual Rowan University STEM Symposium

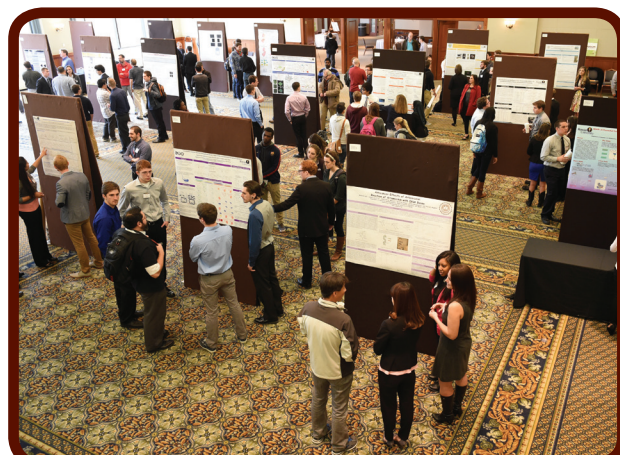
Four sessions of Rowan University student researchers successfully presented their work at the 18th Annual STEM Student Symposium on April 24 in the Eynon Ballroom of the Chamberlain Student Center.

During the STEM – science, technology, engineering and mathematics – symposium, more than 160 teams of students and professors from Rowan University, Rowan University School of Osteopathic Medicine (SOM), and Cooper Medical School of Rowan University (CMSRU) displayed their research conducted throughout the academic year.

According to Dr. Gregory Hecht, long-time chair of the event and a biological sciences professor, this year’s symposium expanded greatly, with more students presenting from the Main, Camden, and Stratford campuses. The sessions included four clusters: Biomedical, Computer Games, Energy, and Pharmaceuticals.

“The presentation count at our symposium jumped 40 percent in just one year,” Hecht said. “We featured close to 165 posters. While the STEM Symposium always has reflected the depth and breadth of our students’ research, this year’s entries are exceptional – both in number and quality. I think the entries are a strong reflection of the emphasis Rowan places on research and the opportunities our colleges offer our students.”

The research presented was conducted in the fields of science, technology, engineering, mathematics, medicine, and more across the University. Topics throughout the day were diverse: from melanoma to microbes, Alzheimer’s disease to fighting fish, and solar panels to biomedical applications.



*Participants in the 18th Annual STEM Symposium present their projects to attendees.*

# Christopher Yochim and Dr. Nora Berrah Share Ideas, Wisdom at Dean's Distinguished Speaker's Series in March and April



This spring, CSM welcomed two speakers that appealed to students across a broad array of disciplines. Christopher Yochim, chairman of the board for the Delaware Bioscience Association, discussed the state of the pharmaceutical and biotechnology career market and how the fields will be evolving for graduates of the College of Science and Mathematics.

"The Philadelphia area is the fifth largest [research and development] hub in the nation," Yochim said. "It generates \$10.5 billion annually. If you expand it to a 50-mile radius, you're looking at the second largest R&D hub in the country."

According to data provided by Yochim from Labor Planning & Analysis, as of 2012, over 116,000 employees in NJ worked in life sciences, making a combined \$14.8 billion annually.

The future of pharmaceuticals and biotechnology companies lies in making prescription drugs affordable and accessible to not just Americans, but the entire world.

"The pharmaceutical industry will always be around. Though it changes, its mission will never go away," Yochim said.

In April, Dr. Nora Berrah, Chairperson for the Department of Physics at the University of Connecticut and a Fellow of the American Physical Society, shared a presentation demonstrating the advancement of short x-ray pulses from free electron lasers (FEL) and the resulting ability to magnify and animate the molecular world.

Using evidence from her research at the Linac Coherent Light Source (LCLS) at the SLAC National Laboratory on Stanford University's campus, the first x-ray FEL lab, Berrah demonstrates scientists' newfound ability to observe the molecular world at the femtosecond timescale. Because subatomic particles move so fast, a very short measurement is required to avoid a blurry picture of what is happening. At this timescale, scientists can observe a molecule breaking apart, coming together, or creating larger molecules. This should lead to a better understanding of how molecules combine or break apart, greatly enhancing scientists' knowledge of and control over these fundamental processes.



## CSM Faculty Tenure Appointments and Promotions

CSM proudly announces tenure appointments and promotions effective September, 2015.

Professors at CSM work diligently to educate their students, conduct research, present findings at conferences, and represent Rowan at events throughout the year. Combined efforts that produce successful results, both inside and outside the classroom, advance Rowan professors in their fields and help attract top-notch students from around the country to attend CSM.

Congratulations to the following faculty:

### Tenure Appointments

Matthew Bealor - Biological Sciences

Tabbatha Dobbins - Physics & Astronomy

Eve Sledjeski - Psychology

Timothy Vaden - Chemistry & Biochemistry

### Promotion to the Rank of Associate Professor

Tabbatha Dobbins - Physics & Astronomy

Timothy Vaden - Chemistry & Biochemistry

### Promotion to the Rank of Full Professor

Gregory Caputo - Chemistry & Biochemistry

# Rowan Hosts Astronomy Night and Explorer Sunday

**A**stronomy Night and Explorer Sunday came to Rowan this spring. Both events, presented as part of the Philadelphia Science Festival, were extremely popular with the South Jersey community.

Astronomy Night welcomed more than 250 people on a terrific night for star-gazing. Six telescopes were set up on the fourth-floor observatory, and guests were treated to not only the crescent moon, but planets Venus and Jupiter, as well. Both Astronomy professors and students from the Astronomy Club were on hand to guide the record-breaking number of guests who came out to view the night sky on the rooftop.

Following Astronomy Night, Rowan played host to Explorer Sunday. Various family-friendly activities took place across campus, many of which were offered at Science Hall. Many of the youngest visitors enjoyed creating hexaflexagons and a Menger sponge with members of the Math Team, while others took part in



Visitors line up to safely view the sun on Explorer Sunday.

demonstrations of robotic programming.

More than 200 guests took advantage of one of the two free planetarium shows offered that day, and the telescopes that were set-up for solar viewing outside the building had lines at them throughout the event.

In addition to the educational events hosted at Rowan, the University took its science show “on the road” to the Mess Fest at Smith Memorial Playground and Playhouse and the Carnival on the Parkway in Philadelphia, the culminating event of the Philadelphia Science Festival. On the parkway, participants were introduced to reptiles by members from the Biology Club, as well as activities offered by the Math Team, the department of Health and Exercise Science, the College of Education, and the Henry M. Rowan College of Engineering.



Math Team member, Stephanie Gomez, helps Explorer Sunday visitors create cubes for the Menger sponge.

## Rowan University Homecoming Back to the Future October 12-17, 2015

Join Rowan University and CSM in October as we travel “Back to the Future” this year for Homecoming. Alumni and their families will converge on Glassboro for a week full of activities, including a showcase of colleges at College Row on Saturday, October 17. CSM faculty and students will greet guests with family-friendly activities to engage everyone in hands-on science experiences!



## Noteworthy



**C**SM's Department of Nursing faculty recently received three awards from the New Jersey State Council of Emergency Nurses Association (ENA) at the 2015 Emergency Care Conference.

Dawn Specht, PhD, MSN, RN, APN, received two awards, the 2015 Education Award and the 2015 Team Award. The Education Award honors a nurse who has made significant contributions to the education of colleagues, nursing students, EMS personnel, patients, families or the community through the publication of articles, formal or informal courses, or the development of a specific emergency nursing program or curriculum. The Team Award

recognizes a group or committee for significant contribution towards achieving the mission of ENA through a project or development of a program. The program or project must have had a positive impact on the profession within the community, region, or country.

Anthony Angelow, MSN, APN, ACNP-BC, AGACNP-BC, CEN, received the Nurse Practitioner Award. This award recognizes excellence as a nurse practitioner (NP) in an emergency care setting. Recipients are recognized by their NP peers, nursing and physician colleagues, and patients as clinical experts who deliver compassionate care in an emergency setting.



*Rowan University students and professors at the 2015 SJACS Undergraduate Research Symposium*

## Sixth Annual SJACS Undergraduate Research Symposium

**R**owan University hosted the South Jersey Section of the American Chemical Society's (SJACS) Sixth Annual Undergraduate Poster Symposium on April 18. More than 40 students from Rowan University, Stockton University, and Rutgers University-Camden presented their posters. Faculty members and students from the three universities, scientists from local industry and government organizations, and parents of students discussed ongoing undergraduate research projects and shared their ideas.

## Biological Sciences Alumni Share Experiences

**T**his spring, alumni from the Biological Sciences department came together in Science Hall to share experiences with each other and to offer advice to current students. Alumni offered advice on varied career trajectories, including those with positions at DuPont, the Environmental Protection Agency, and the New York Botanical Garden.



*Maria Tahamont, Biological Sciences Department Chairperson, with alumni at the spring event.*

## Student News

Two Physics students, Anne Rebecca and Greg Taylor, attended the National Society of Black Physicists 2015 Annual Conference, “Re-Visioning the Future of Scientific Leadership,” with Professor Tabbetha Dobbins this spring. Greg Taylor won a Best Poster Award, presented by Brookhaven National Laboratory.



Greg Taylor and mentor Dr. Jeffrey Hettinger.

The Annual Conference brings together a broad range of experts in multiple fields of physics. It is the largest academic meeting of minority physicists in the United States. It is co-organized in partnership with Associated Universities, Inc. and co-sponsored by the National Science Foundation.

This summer, nine CSM students will be participating in Research Experiences for Undergraduates (REU) at prestigious universities across the country. These highly competitive and coveted opportunities offer undergraduates experience in areas to which they may, or may not, have access during the school year, and often help fuel ambitions for the roads they will forge once they graduate. CSM’s summer participants and the schools at which they are participating include:

### Biochemistry

Erica Avery, Sylvia Hanna - Princeton University

### Chemistry

Olivia Fiebig - Massachusetts Institute of Technology  
Christina Radicella - Boston University

### Physics & Astronomy

Tim Baker - Kansas State University  
Jesse Kosior - Naval Research Lab  
Anne Rebecca - Clemson University  
Ford Scott - National Institute of Standards & Technology  
Sean Zimmerman - Princeton Institute for Complex Materials

## 41st Annual Psychology Research Conference

The 41st Annual Psychology Research Conference, held in April, kicked off with two rounds of oral presentations, followed by poster presentations and one-on-one discussions of research, and concluded with recognition of exemplary psychology students with awards and the induction of new members into Psi Chi, the National Honor Society in Psychology.

The conference has been an ongoing tradition for 40 years and offers students from both the undergraduate and graduate programs the opportunity to present their research findings in a professional context. This conference offers students an excellent opportunity to develop their skills and gain experiences that will foster their professional development. Students, faculty, friends, and family attend the conference to applaud accomplishments and provide support to fellow students as they proudly showcase the results of the psychological research they have been doing over the course of the past academic year. Topics of the conference closely follow the research interests of faculty members and, as such, also highlight the breadth and depth of the Psychology Department faculty.



Retired Professor, Dr. Eleanor Gaer, presents the Eleanor Gaer Student Research Award to Alyssa Lompado



Audience members listen to a presentation at the 41st Annual Psychology Research Conference

**CSM student scholarships and program initiatives are made possible by the generosity of individuals and corporations. Please consider a gift and join us in delivering the highest quality education to our students.**

[www.rowan.edu/csm/giving](http://www.rowan.edu/csm/giving)

## Student Spotlight Brooke Logan, Mathematics '15

**B**rooke Logan, BS in Mathematics 2015, is a proud South Jersey native and unabashed math-lover. When choosing Rowan, Brooke considered not only academics, but the value of all that the University has to offer.

Little did she know at the time, Rowan would provide her opportunities and memories that have shaped her college career and continues to inspire her future path. The Math Team became her home away from home, a college family that spent endless hours volunteering tutoring services to fellow students, honing their skills for conferences, and sharing their penchant for fun-filled math projects at family-oriented festivals hosted by the University.

As a freshman, Brooke was offered a research opportunity by Professor Hieu Nguyen, something not many college freshmen at other universities have the chance to experience. Professor Nguyen encouraged Brooke's research ambitions and helped mentor her toward success through her three years at Rowan. This spring, she received Rowan University's 2015 Undergraduate Research Award for her work on Complimentary Code Matrices. Brooke was also honored with the Dean's Outstanding Senior Award in Mathematics and the James M. Shafer Excellence in Mathematics Award. Brooke will attend Rutgers University in the fall with plans to pursue a Ph.D., followed by a career in applied mathematics research.



*Dr. Hieu Nguyen, Brooke Logan, and Dean Magee-Sauer.*

## The Scope

Spring 2015

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