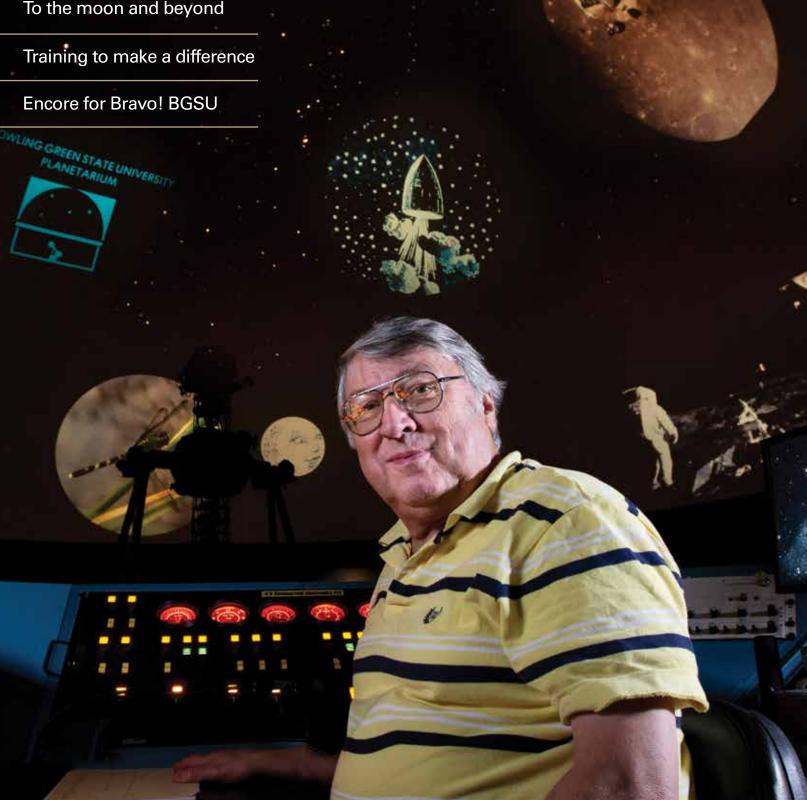
# Transformations COLLEGE OF ARTS & SCIENCES

Summer 2016

To the moon and beyond



## **Trans** formations

#### SUMMER 2016

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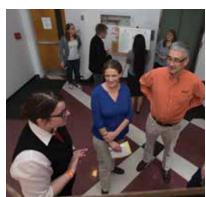
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Thousands of visitors each year take a trip to space and back while sitting in the comfortable and awe-inspiring expanse of the BGSU Planetarium. The view is spectacular and the lessons learned are forever. Dr. Dale Smith is the captain of the controls that transform the theater into an outer space experience.

Bowling Green State University College of Arts & Sciences Summer 2016

Editor Julie Carle '78

**Creative Director** 

Jeff Artz '92

**Graphic Designer** Rhonda Hile '79

**Photographers** Craig Bell Brad Phalin '88

**Contributors** Bonnie Blankinship Terri Carrol '88 Michelle Harvey Jan Larson McLaughlin '84

College of Arts & Sciences Dean Raymond Craig, Ph.D.

Executive Assistant to the Dean Jasmine Gordon Schulz

College of Arts & Sciences **Leadership Council** Conrad Allen '91, '97 Douglas Balogh '74, '76 Richard Barker '69 Teresa Berliner '84 Marsha Bordner '72, '74 Craig Burford '95 Brian Dicken '97, '12 Gloria Evangelista '73 James Fogarty '98 Kathleen Frankart '76 Suzette Johnson '80 Ronald Matter '80 Richard Newlove '69 Larry Oman '63, '64 Donald Rettig Jr. '90, '06 Timothy Ryan '95 Logan Stone '67 Robert Taller '61 Lane Williamson '85

Transformations is a publication of the College of Arts & Sciences at Bowling Green State University. Comments or questions should be directed to Transformations. College of Arts & Sciences, 205 Administration Building, Bowling Green, Ohio, 43403-0133 or email jgordo@bgsu.edu

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#### DEAN'S MESSAGE

As we wrap up another stellar academic year, I applaud the successes and reflect on the transformations that have occurred in the College of Arts & Sciences. Our summer issue of Transformations is a lighter, online version of the college newsletter, but still heavy with news about our students, faculty, staff and alumni.

In Transformations, you will read about how BGSU's Arts & Sciences is helping to change the world and solve pressing problems through outreach, new curricula, research, and study abroad.

Our planetarium program has encouraged and delighted young minds for two generations and is now transformed into the digital age. Steadfast to its educational mission, the planetarium connects future Falcons to the sciences. Our programs in psychology represent the best of BGSU: strong educational and research programs woven together to serve individuals and communities. The tradition of excellence and engagement within this department make it clear why BGSU is a destination for students and faculty who want to have an impact on the world.

We share news about our students, who are developing strong habits of mind in the classroom, in faculty-directed research, and through internships, study abroad and field experiences; our faculty who are being recognized for their outstanding work, whether in research, community engagement, and performance; and our programs, which are being recognized for their excellence in education and research.

I am extremely proud of the great showing we had at this year's Faculty Excellence Awards; College of Arts & Sciences faculty and advisors earned 14 of the 17 awards presented. Our faculty and advisors are committed to making a difference, to advancing student success and contributing to our communities.

There is a special satisfaction I feel when I meet with our alumni who are willing to share with our students and who demonstrate the power of a liberal arts education. Listening to Howard Aldrich '65 and Jay Crawford '87 at commencement speeches this year, I was struck by the meaning of their messages. Dr. Aldrich said his BGSU education taught him the importance of "learning by doing," and Jay Crawford talked about BGSU being "a launching pad to catching your dreams." You will read here about Dr. Bonnie Sandman and her husband Dan; I am so impressed with their continued commitment to excellence in the industrial organizational psychology program. Their support makes a difference each day to the research and outreach that benefits students and the industry.

Finally, let me thank those of you who supported our Bravo! BGSU event, now in its second year. To the faculty, students, and staff who worked to put on the event, thank you. And for those of you who contributed to our scholarships in the Arts, Bravo! to you as well.

Please take the time to read about and share with others our successes—and tell us about yours—our collective success points how meaningful and productive a BGSU education really is.

Regards,

Raymond A. Craig, Ph.D.

Dean, BGSU College of Arts & Sciences

Raymond a. Craig

TO THE

# moon and beyond

BGSU Planetarium delights, educates audiences of all ages

By Jan Larson McLaughlin



Though manmade lights blanch the brightness of stars across the world, there is a spot at Bowling Green State University where the stars burn as bright as ever.

Anytime day or night, the BGSU Planetarium shows its audiences the sun, moon, planets and more than 4,000 stars.

During a recent visit by elementary students, as the stars filled the domed planetarium sky and a cardboard rocket took off into space, one of the students quietly slid over to sit in her teacher's lap.

"This was so real, one little girl thought the dome took off," teacher Nancy Frankart said after the planetarium show was over and the lights came on. "She thought we were traveling to space."

It's that out-of-this-world experience that brought the first through third graders from St. Wendelin Catholic School in Fostoria to the planetarium.

"It's a reward for Right to Read Week," said Frankart, the Title 1 reading specialist at the school. "We 'blasted off' for reading. Now we're adding on for an enrichment experience. What they learned is going to be reinforced, in a fun way."

The planetarium, with its 40-foot dome, has shows for all ages on a galaxy full of topics. For





The planetarium also works hand-in-hand with other departments on campus, according to Smith. Astronomy, he said, is the most interdisciplinary of all sciences. So it just makes sense then that Smith reaches out to work with other disciplines on campus.

the youngest, Smith shows "Larry Cat in Space," and hands out some glow-in-the-dark teddy bears.

"If the 5-year-olds see the stars and have a good time, I'm content," he said. "I hope they go away thinking science is fun."

Planetarium Director Dale Smith realizes people can now access the solar system on their computer screens. But that solitary experience just isn't the same as sitting back and looking skyward in a planetarium.

"We've got the dome you don't have at home," he said. It's almost like a social experience at the movie theater, with the feature attractions being such titles as, "The Race to Land a Man on the Moon," "Mission to Mars" or "The Little Star that Could."

People like to share out-of-this-world experiences with others, Smith said, recalling 2003 when Mars was shining especially bright. The line of people wanting to view Mars from the BGSU observatory stretched out to the street. People waited two hours to share that experience with others, he said.

The experience works on all ages.

For older viewers, Smith hopes the planetarium creates some of those rare "aha" moments in science. And he doesn't want those moments to end when the lights come back on.

"You can just step out in your backyard," he said. "I want people to go out and connect with the sky."

If possible, it can start a lifelong love of astronomy. "When they are 70, they will take their grandkids out."

The planetarium, which opened in 1984, recently received a \$500,000 upgrade funded by the university. With the budget being tight, Smith was not sure if the upgrade would be approved. But Smith said his "stars lined up right," and the funding allowed for the planetarium to switch over from "umpteen" projectors to new video technology which makes use of the full dome.

The new technology allows Smith to push a button on the computer running the system and not have to worry about changing slide trays for each show. Smith is in the process of taking all the classic planetarium shows and encoding them for the new system.

"The goal of that is to preserve the existing cluster of shows and enhance them at the same time," he said.

The planetarium also works hand-in-hand with other departments on campus, according to Smith. Astronomy, he said, is the most interdisciplinary of all sciences. So it just makes sense then that Smith reaches out to work with other disciplines on campus.

That was seen recently during an orchestra performance, when real images of the planets were projected onto a screen behind the orchestra.

"That's the kind of interdisciplinary cooperation I think we need more of," he said.

Smith, who has been director at the planetarium since it opened, has created many of the 72 shows to share the secrets of the galaxy to preschoolers through senior citizens.

During the St. Wendelin school visit, Smith asked the children to put on their imaginary seatbelts, lean back in the planetarium seats and travel through space with the "Secret of the Cardboard Rocket" program. This particular show tells of siblings who build a spaceship out of cardboard and spend the night in it in their backyard. The rocket blasts off in the night, taking the pair to every planet in this solar system.

The students' eyes were glued to the dome ceiling for the 40-minute trip to Pluto and back. The shows get routine for Smith, but the children's questions after the show continue to thrill him.

"Once the first one asks, the ice is broken," Smith said. And the flood of questions began. "You never know what you are going to get."



This visit was no different, when the lights came on, the little hands shot up.

- How do the gas giant planets stay together?
- Are all the planets real?
- Why don't all planets have gravity?
- Why is Uranus on its side, was it knocked over?
- · Are ice crystals worth money?

Smith answered them all. It would take nine years to travel to Pluto and back. A person weighing 100 pounds on earth would weigh 40 pounds on Mars. Yes, you would boil to death on Venus – right away. Astronauts can rest on spaceships because it's not like driving a car. Once they blast off, it's "sort of on autopilot."

Then comes the question specifically aimed at Smith. "How do you know all this?"

That allows Smith to share other lifelong lessons – on books and imagination. Smith explains that he does his homework and reads lots of books. Then, like the siblings in the cardboard rocket, he opens his mind.

Look up! Look up! The planetarium prompts interesting questions and perspectives from the young visitors.

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vears to travel to Pluto and back. A person weighing 100 pounds on earth would weigh 40 pounds on Mars. Yes, you would boil to death on Venus right away. Astronauts can rest on spaceships because it's not like driving a car. Once they blast off, it's sort of on autopilot.

"They used their imaginations," he said. "With your imaginations, you can go anywhere."

Smith sends the students home with instructions to continue looking up into space, specifically where they can find Jupiter right now in the night sky. And, he adds a pitch for the children to bring their parents to the planetarium – to share the power of the sky with whomever will look up to the stars.



Training to make a difference

Undergraduate, graduate programs have tradition of excellence

People tend to gravitate toward psychology because of a desire to help others. So Bowling Green State University's Department of Psychology does everything it can to give them the training to do just that.

"A lot of psychology majors get into psychology because they want to make a difference," said Mike Zickar, chair of the department.

"We're really dedicated to high quality research and providing hands-on training to reduce suffering in the real world," said Annette Mahoney, director of clinical training and clinical psychology in the department.

The program has been recognized nationally for attracting students, matching them with worthwhile internships and preparing them to go out and help people with challenges they face.

"We've had a long history of success at BGSU,"
Zickar said, dating back to when he was first hired here

20 years ago. "It was like getting an offer from an lvy League school."

Top Doctoral Programs

The department focuses on four areas of psychology: Industrial-Organizational, which deals with the workplace; Clinical, which covers a wide range of therapies; Developmental, which focuses on children; and Neuro Cognitive Science which has to do with the brain and how we think.

Clinical is the most popular, and Industrial-Organizational is gaining, Zickar said.

The department currently has 561 psychology and neuroscience undergraduate majors and 238 minors, and 107 doctoral students. Making it attractive to students is the "gold standard" American Psychological Association accreditation, Zickar said.

The department's success is attributed to its community internship focus, research opportunities

The Department of Psychology provides many opportunities for students - undergraduate and graduate - to research and present their findings at poster presentations and conferences.

and collaboration among undergrads, graduate students and faculty.

"We have a program that is dedicated to producing mental health professionals at a doctoral level that understand science," and use that knowledge to help people, Mahoney said.

"Our graduate students really like the balance between research and practice," Mahoney said.
The students learn to respect and understand research and how to adapt "cookie cutter" interventions to fit the person in need.

To turn out well-prepared graduates, the program requires four years of training at BGSU and a one-year internship in the field.

"We do a really good job of training our students for internships," Zickar said. And that, in turn, makes them very attractive to future employers. Several students do volunteer work, internships and then are sometimes hired at local mental health agencies like Children's Resource Center or The Link.

"I'm really proud of how we are connected with the community," Zickar said. "I push our undergraduates to get that opportunity."

"We're always on the lookout to try to partner with community agencies," Mahoney said.

Learning from classroom lectures and by watching videos can only go so far, he explained. "It's something else to be working out in the community."

Clinical doctoral students also work at the on-campus Psychological Services Center, where they help assess mental



health problems. "We treat them more like junior colleagues," Mahoney said.

The students learn to do psychotherapy with individuals, couples and families.

"They like how we still make it a priority to advance their career goals," Mahoney said.

Industrial-Organizational students do consulting work for regional businesses, helping with pre-employment testing, development of hiring and training systems, and finding ways to evaluate and motivate employees.

"Students get experience in the business world, and businesses get help at a low cost," Zickar said.

Students are also held to high standards in the classroom and in research. "We have a rigorous curriculum," and a "research-active department," he added.

It doesn't hurt that the topic of study is quite interesting to many.

"It's directly relevant to everyone's day-to-day life," Zickar said. "A lot of students enjoy that psychology helps them make better decisions, helps them be better parents, helps them understand family members."

The 25-member faculty creates a "cohesive team" with students,

by getting undergrads to work on research projects being done by graduate students, supervised by faculty.

Graduate students are given opportunities to teach and work with undergraduates. "We really give graduate students latitude to identify and research topics that are passions of theirs," Mahoney said.

It's that teamwork that helped convince Garrett Foster to pursue his graduate degree at BGSU.

"BGSU's industrialorganizational program is marked as one of the best in the nation," Foster said. The department is recognized for its culture of productivity, collaboration and non-antagonistic environment, he said, adding the faculty promotes that cohesiveness.

Foster said he has benefitted from the "real applied experience" of his internship at the Edward Jones corporate headquarters. He has not yet decided whether to pursue a career in academia or a private company.

"I am very well prepared for either path," he said. "Bowling Green has done very, very well by me, and has offered me lots of opportunities to prepare myself with lots of transferrable skills."



Students Najae Bolden-Hall and Alexandria Hudek test EEG equipment for their research.

Elizabeth Herring, an undergraduate in the clinical program, credits the faculty such a success.

"I have had the opportunity to work with professors in many different settings, such as on research, and in every instance the professors have gone above and beyond to facilitate my intellectual growth and help propel me towards my dreams," Herring said.

The psychology department prepares students for using their degrees, she said, by offering them advice on how to pursue research and internship opportunities that help prepare students for graduate school.

Since 2009, the program has graduated 56 people earning a clinical Ph.D., and 98 percent are employed in the field of clinical psychology in a doctoral-level position, according to Mahoney. Their positions include university professors, clinical psychologists in psychiatric or mental hospitals, community mental health centers and independent private practices.

The BGSU Department of Psychology has achieved several national rankings, such as:

- Second in the nation for preparing students for careers in professional counseling, by counselingpsychology.org
- 22nd among the nation's 50 best
   Ph.D. programs in clinical psychology, according to bestcounselingdegrees.net
- 100 percent match rate in the clinical psychology program for graduate students being matched into pre-doctoral clinical internships
- Third for industrial-organizational psychology programs nationwide.



### **I-O Psychology** benefits from alumna gift

Many Americans spend the majority of each day - around 1,700 hours per year - at work.

For Dr. Bonnie Sandman, a 1978 graduate of BGSU's doctoral program in industrial-organizational psychology, this big piece of the pie presents the best opportunity for improving people's lives and helping companies succeed.

"With the majority of people's lives spent at work, job satisfaction clearly has an enormous impact on quality of life. Numerous studies demonstrate a positive link between job satisfaction and overall life satisfaction, wellbeing and even improved health outcomes. Furthermore, it has also been found that companies with satisfied employees report lower turnover rates, helping the bottom line and the attraction of new hires." Sandman said.

As a practitioner in the field of industrial and organizational psychology, Sandman is passionate about matching people's interests, abilities and values with career choices that benefit both the individual and the employer. She has used many of the systems that govern employee selection and promotion, performance management and supervisory training. Sandman has served as a consultant to organizations in manufacturing, steel, industrial casting, transportation, telecommunications, child protective services, electric utilities, health care and public safety.

She also is the co-founder of uSooth.com, a company specializing in the field of career match services.



Bonnie Sandman learned about I-O psychology from legacy faculty members Drs. Patricia Smith and Robert Guion.

Through the integration of numerous interest assessments, inventories and interviews, uSooth's career selection engineers promise customers a future that fits.

Sandman discovered her passion for what she calls "career sweet spots" during her first postundergraduate job as a writer for an oil company. She found herself more interested in how people performed in their jobs and how the company and employees interacted and affected one another than writing about the oil industry. Her curiosity led her to doctoral studies in industrial and organizational psychology at BGSU.

Because of her connection to the program, Sandman has further shaped the field with a generous gift to BGSU's industrial and organizational psychology program, which has consistently been ranked in the top three in U.S. News and World Report's listings of best graduate programs in the discipline.

"BGSU has a longstanding reputation in the area of industrial and organizational psychology established by leaders in the field, Patricia C. Smith and Robert Guion. I had the privilege of being a student in the program when they were teaching," Sandman said. "My husband (Dan) and I have been so

very fortunate in our careers, in great part due to our excellent educations, so we have made gifts to our respective universities."

The couple previously established an award that is presented to a fourth-year industrial and organizational psychology doctoral student based on his or her overall excellence. More recently, they further supported the program through a transformational gift of \$500,000 that already is having a significant and lasting impact on the doctoral program. The gift endows the existing Sandman Award and establishes the Sandman Professorship in Industrial and Organizational Psychology. The couple also sponsors the annual Industrial and Organizational Psychology "Best Practices" conferences at BGSU.

"Bonnie and Dan's gift ensures that the industrial and organizational psychology program will continue to recruit, retain and recognize exceptional faculty members and graduate students, who will share their expertise to improve the effectiveness of businesses and organizations," said Dr. William Balzer, vice president for faculty affairs and strategic initiatives, and former chair of the Department of Psychology.

#### **Awards**

## GEORGE HEATH NAMED 2016 College Alumni Award recipient

George Heath, a 1987 BGSU College of Arts & Sciences graduate, earned the College Alumni Award for 2016. He was one of the seven accomplished BGSU alumni who were recognized at a special ceremony in February.

In just 10 years as a vice president of marketing, division general manager, and group president at Sherwin-Williams, Heath led the transformation of two global businesses: the struggling Product Finishes Division went from just \$300 million in sales to more than \$1 billion, and the newly formed Global Finishes Group went from \$1.6 billion to more than \$3 billion with 7,000 employees.

Along the way, Heath was awarded the prestigious Chairman's Award at Sherwin-Williams as its President of the Year. Before joining Sherwin-Williams, Heath also helped grow another public company, PPG Industries in Pittsburgh, as well as a venture-funded start-up in Boston.

Since retiring in 2015, Heath has been serving as a guest lecturer at several universities, including Clemson, SUNY Oneonta and Miami, where he also serves on the Business Advisory Council for the Farmer School of Business.



#### COLLEGE FACULTY/STAFF win numerous University awards

The College of Arts and Sciences' faculty and staff were big winners during the Faculty Excellence Awards presented this spring.

- Dr. Rebecca Skinner Green, art history, Faculty Senate Distinguished Service Award
- Dr. Dara Muher-Eizenman, psychology, Faculty Senate Faculty Mentor Award
- Dr. Laura Stafford, School of Media
   Communication, Faculty Senate
   Leadership as a Chair/School
   Director Award
- Dr. Paul Moore, biological sciences, Faculty Senate Lifetime Achievement Award

- Dr. Robert Dyer, computer science, and Dr. Russell Mills, political science, each earned the Outstanding Early Career Award
- Dr. Lawrence Coates, English, Olscamp Research Award
- **Dr. Farida Selim**, physics and astronomy, Elliott K. Blinn Award for Faculty/Undergraduate Student Basic Research/Creative Work
- Dr. Lisa Hanasono, communication, Elliott K. Blinn Award for Faculty/Undergraduate Student Basic Research/Creative Work and President's Award for Academic Advising of Undergraduate Students by Faculty and Staff

- Eve Crandall and Rachel Flick, A&S academic advising, President's Award for Academic Advising of Undergraduate Students
- Dr. Melissa Miller, political science, Student Alumni Connection 2016 Master Teacher
- Dr. George Bullerjahn, biological sciences, Professor of Research Excellence
- Dr. Dale Smith, physics and astronomy, Professor of Service Excellence



# SPRIRITUALITY WORKSHOP honors Ken Pargament

Dr. Kenneth Pargament, professor emeritus of clinical psychology, was the honored guest at an event hosted at BGSU in April. "Spirituality and the Deepening of Clinical Research and Practice: An Emerging Multi-Disciplinary Field" was organized to honor Pargament's scholarly contributions. Seven presenters and a panel discussion focused on topics ranging from "Advancing Evidence-based Chaplaincy Care" to "Gold Nuggets of Knowledge on Religion, Spirituality and Health Mined from Medical Research."

#### BIOLOGICAL SCIENCES DEPARTMENT contributes to education

The Bowling Green State University Department of Biological Sciences was recognized for its outstanding contributions to education with the Faculty Senate Unit Recognition Award at the Faculty Excellence Awards Ceremony and Reception.

"This cohesive, collegial and proactive set of faculty exhibit the highest standards of educational excellence that has the University's Core Values at its foundation," Dr. Jeffrey Miner, professor and chair of the department, wrote in his nomination of the unit.

The department is composed of 31 full-time faculty members who train more than 700 undergraduate majors and thousands of other students through service teaching and who, with their doctoral and master's students, conduct advanced research affecting society and the environment.

Several changes in the program have contributed to the retention of these students, including testing the utility of the Student

Success Collaborative, conducting campaigns to identify students at different levels of risk and proactively engaging students to keep them on track and successful in their studies. The department has also been an active participant in the linked courses program and conducts highly active advising programs.

In terms of research, the faculty members generate more than 50

peer-reviewed publications and approximately \$1 million in external grant funding each year. Examples of research include environmental microbiology studying harmful algal blooms in the Great Lakes, organisms in ancient ice from Antarctica and identification of bacteria that produce toxins against other bacteria. Other research areas include behavioral neuroscience and community ecology.



Department of Biological Sciences faculty members accept the unit award at the 2016 Faculty Excellence Awards Ceremony.

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#### **Sciences**

## COLLABORATIVE RESEARCH studies bacterial drones vs. tumors

A BGSU biologist is part of a collaborative research team that is on the cutting edge of cancercuring methodologies.

BGSU biologist and bacteria-engineering expert
Dr. Jill Zeilstra-Ryalls is working with University
of Wyoming scientists Mark Gomelsky and Anya
Lyukskyutova, molecular biologists, and Jason Gigley,
an immunologist, to use bacteria and the body's
own immune system to kill cancer. The strategy is to
release special forces carrying programmed devices to
infiltrate deep into an enemy's territory, counter enemy
propaganda, and then, using infrared light, trigger
detonation without harming the surrounding population.

It's not science fiction: it's science.

"It sounds so far-fetched to think about bacteria in the bloodstream," Zeilstra-Ryalls said. "Yet it's working to purposefully inject the bacteria and not have it cause disease."

They want to use what they call bacterial drones, or bactodrones, as cancer-targeting, remotely controlled weapons, in contrast to chemotherapy and radiation – the shotgun approach, Gomelsky said.

The team wants to test nonpathogenic bacteria Rhodobacter. Zeilstra-Ryalls explained Rhodobacter bacteria could sneak under the radar of the immune system and reach tumors without causing disease anywhere in the body. Plus, these bacteria glow naturally in the presence of infrared light so they can reveal tumor locations in the body.

Finding a way to induce a person's immune system to fight tumors the same way the immune system fights infectious diseases was an exciting cancer-battling advance, Gomelsky said.

The survival of a tumor depends on its ability to trick immune cells to stand down.

Advances in the study of tumor microenvironments have revealed how tumors trick immune cells. Turns out that, because of this trickery, bacteria can accumulate and survive inside tumors. The body's immune system attacks bacteria in healthy tissues, but does little to bacteria growing inside tumors.



Jill Zeilstra-Ryalls continues collaborative work in BGSU laboratory.

The team wants to use that free pass to "intoxicate" tumors and overcome the tumors' no-worries directive to immune cells.

Enormous progress has been made recently in removing those tumor immunity directives using specific antibodies, but in many cases the awakened immune cells still don't recognize the cancer cells as invaders. Immune cells may be ready to fight but need to know what to attack, Gomelsky said.

The team believes that, by exposing tumor cells killed by bacteria, they will alert immune cells to what they should attack.

The point of using a bacteria-based system is not only to kill the tumor that's present at the time, but to retain immunological memory – the immune system will remember and kill tumor cells and not allow the cancer to recur, he noted.

The scientists are working to obtain additional funding as a means of continuing the research. "The public could help by telling their representatives how important funding is to the future of science in the country," Zeilstra-Ryalls explained.

"It's so important that the public be aware of the need for research; no one can predict the next cure for cancer," she stated.



drugs made in clandestine labs and how they affect the body.

#### THE CHEMISTRY of clandestine drugs

Dr. Jon Sprague and undergraduate neuroscience student Greg Grecco are part of a crusade to protect the public from the harmful effects of synthetic drugs produced in clandestine labs. Their work is not on the street fighting drug crime, but in the laboratory working to understand how the chemical changes made to drugs in clandestine labs change how they affect the body.

Sprague, who is director of the Ohio Attorney General's Center for the Future of Forensic Science at Bowling Green State University, is a pharmacologist dedicated to educating future forensic scientists. At the core of his current research is a proposal to enact a Federal Pharmacophore Act that ultimately will help in the fight against synthetic drugs of abuse. "Pharmacophore" is the term used to define the structural portion or portions of a drug molecule responsible for producing a drug response, Sprague explained.

He and Grecco spend time looking at molecular structures of existing and new drugs, "trying to stay ahead of clandestine labs," Sprague said. They are looking for the similarities in a variety of drugs.

The work he and Grecco are doing is expected to result in a published paper to support the idea that structurally similar substances should be categorized similarly, as Schedule I or II controlled substances. Current federal law makes it difficult to present drug cases to a jury because of the modifications to drugs being cooked up in clandestine laboratories. The chemistry behind new illicit drugs may or may not be considered "substantially similar," Sprague said.

# COLLEGE EXPANDS major opportunities in science

Two new majors and a new master's program have been added to the College's science offerings that build on the University's strengths and position our students for current and emerging careers.

Approved by the BGSU Board of Trustees this spring were the Bachelor of Science in Forensic Science and the Bachelor of Arts in Biology. In December, the trustees approved the Master of Science in Forensic Science degree.

The new undergraduate major in forensic science builds upon the University's addition of forensic science specializations in three undergraduate degree programs: criminal justice (criminal examination), biological sciences and chemistry. The Bachelor of Science in forensic science represents ongoing collaborations between the Colleges of Health and Human Services and Arts & Sciences on forensic science curriculum. The focus is to prepare students to apply scientific principles to forensic evidence.

The master's program is designed primarily for working professionals in the field and is aimed at filling the growing demand for practitioners with the technical and legal skills to work effectively. BGSU's forensic programs are also strengthened by an academic partnership with the Bureau of Criminal Investigation laboratory on the University's campus. It is one of the only partnerships of its kind in the country.

The new biological sciences major in the Bachelor of Arts degree will complement the existing Bachelor of Science in biology but replaces the required advanced mathematics, physics and chemistry requirements with additional courses in social sciences and the arts and humanities. The major will enable more students with a strong interest in biology to prepare for jobs in the field. Other institutions have already begun offering this option, so credits will transfer for students who wish to transfer to BGSU or to go on to advanced degrees elsewhere.

#### **Sciences**

## MENUS for monarchs

In a small, warm room in the Life Sciences Building, rows of white mesh tepees housing monarch butterflies are lined up on tables. The fabled, orange and black insects are carefully tended and monitored by BGSU conservation biology students under the watchful research eye of Dr. Helen Michaels.

The work may one day provide insight into what plans are most beneficial to monarchs and help guide conservation and restoration efforts. Although monarchs are found in most of North America, the Caribbean and even in Australia, climate change and habitat loss are threatening their existence.

BGSU graduate student Paige Arnold studies whether some plant nectars, the adult monarchs' primary food source, are more beneficial than others. She feeds some of her subjects a specific composition and concentration of sugar solution while others get nectar rich both in sugars and amino acids. Her work is supported by two grants, from Prairie Biotech Research and the Ohio Biological Survey.

They looked at nectar of many different species, including four milkweeds: Sullivant's milkweed (also known as prairie milkweed), swamp milkweed, common, and butterfly milkweed.

Undergraduate biology student Matthew Zach is collecting data using the caterpillars that hatched from Arnold's experiment. He is comparing the growth of the caterpillars eating the swamp milkweed versus those fed prairie milkweed, and their survival.

One reason this is so important is that some of the milkweed species, such as the prairie milkweed, are disappearing.

"We hope to be able to link the results of our survey to the monarch butterflies through the amount of amino acids in the various species we surveyed and to the reproduction and longevity of the butterflies in the experiment," Arnold said. "And we hope the results will be used to make restoration recommendations about what plants to include or increase in abundance in habitat restoration plans."



Matthew Zach and Paige Arnold participate in monarch research.

## COMPUTER SCIENCE professor receives NSF grants

Dr. Robert Dyer, professor in the Department of Computer Science, has been awarded two National Science Foundation grants.

One of the three-year, multi-institutional grants for \$2.1 million (\$214,000 for BGSU) will fund his team to investigate utilizing Big Code – millions of open-source software projects – to automatically infer formal specifications of open-source libraries. Formal specifications, used in safety-critical applications such as airplanes and medical devices, describe what the code is supposed to do and allows verifying its correctness.

The second three-year grant for \$1.5 million (\$130,000 at BGSU) supports the community research infrastructure called "Boa," which enables researchers to mine hundreds of thousands of open-source software projects very efficiently. More than 500 researchers in 20 countries currently use Boa.

"I am interested in improving upon or developing new programming models to maintain the benefits of software

engineering practices such as separation of concerns, agile software development, etc.," Dyer wrote on his website.

According to department Chair Dr. Joseph Chao, Dyer's scholarship record is significant and noteworthy for a junior faculty member.



Dr. Robert Dyer

#### **Arts**

## ANIMATION PROGRAM gets noticed

Bowling Green State University's recent school ranking is a reason to get animated.

BGSU ranks seventh in the Midwest (a region of 13 states) and 38th nationally for animation schools and colleges, according to Animation Career Review's annual rankings.

Animation Career Review, which started its rankings in 2012, looked at several hundred schools that offer animation or game design. The criteria used for the rankings were academic reputation, admission selectivity, depth and breadth of the program, value as it relates to tuition and indebtedness, and geographic location.

BGSU's ranking in the Midwest was up from in 2015 when it ranked 15th.

According to the publication's website, BGSU's School of Art programs for aspiring animators were cited as key factors in the rankings. That includes a Bachelor of Fine Arts in digital arts and a Bachelor of Arts in art with a digital arts specialization with three areas of focus: computer animation and video, imaging, and interactive multimedia. Graduate programs include a Master of Fine Arts in art with a major in digital arts in computer animation, digital imaging and interactive media. In the fall semester, a new 21-credit Minor in Digital Arts also will be available to BGSU students.

"Digital Arts majors have a variety of routes to success while studying at BGSU," said Heather Elliott-Famularo, the division's chair. "Our curriculum includes courses in traditional and 3-D animation, digital imaging, video art and interactive multimedia. In addition, our VR (virtual reality) course has been completely revamped and is being taught by our new animation professor, Heejoo Kim, using the Unity 3-D game engine.

"VR is having a revival right now, and we are excited to prepare our students for a future in this field. In fact, many of our alumni have gone on to successful jobs in the animation and game-design industries upon graduation."



Digital arts and animation students had the privilege of listening to professional animation artists Hunter Grant and Tomas Jech.

## GRAPHIC DESIGN STUDENTS 'Do Amazing Things'

BGSU students in Amy Fidler's three-dimensional design class do amazing things. In fact, "Do Amazing Things" is the name of a mural they created that earned them top advertising awards at the local and district levels.

The students planned, developed and implemented the mural for the Toledo Arts Commission's Artomatic419 last April. The team won a gold ADDY award at the American Advertising Federation (AAF) of Toledo's awards ceremony and a Gold ADDY at the district competition, which qualified the project for the national competition.

Team members include Fidler, a lecturer in graphic design, who served as project manager, with the creative talents of students Alyssa Batch, Michelle Carandang, Tristan Saffron-Cottrell, Rachel Court, Caroline Ellingboe, Chris Hatfield, Alaina Nogar, Trevor Rice, Rebecca Schroeder, Katelin Warner and Abigail Zbasnik.



Three-dimensional design students earned a gold ADDY award for the "Do Amazing Things" project.

#### **Arts**

## BGSU THEATRE opens curtain on 95th season

The 2016-17 BGSU theatre season will feature BGSU student performers in a variety of dramas, comedies and musicals, including several collaborative productions and opening Oct. 20 with Evelyn in Purgatory by Topher Payne.

The production, directed by Sara Lipinski Chambers, is a comedy in two acts. Winner of the 2012 Essential Theatre Playwriting Award, "Evelyn in Purgatory" tells the story of Evelyn Reid who lands in the Department of Education's "Reassignment Center" after a student claims improper behavior. While in the "rubber room," she encounters a group of teachers, some guilty, and some not, who have long since lost any hope of returning to the classroom. Over the course of the school year, these colleagues form an unlikely alliance, reminding each other of forgotten passions, emerging to face life outside in unexpected new directions. They also learn French and workshop a screenplay. Performances are scheduled Oct. 20-23 and 27-29 in the Eva Marie SaintTheatre.

Other scheduled productions are:

"The Drowsy Chaperone" — Nov. 17-20. Based on the book by Bob Martin and Don McKellar, with music and lyrics by Lisa Lambert and Greg Morrison, the production will be directed by Dr. Michael Ellison.

When a die-hard theatre fan plays his favorite cast album (a fictional 1928 musical), the characters come to life in this hilarious musical farce. Winner of five Tony Awards (including Best Book and Best Original Score), "The Drowsy Chaperone" is a loving send-up of the Jazz age musical featuring one show-stopping song and dance number after another.

Hailed by New York Magazine as, "The Perfect Broadway Musical," "The Drowsy Chaperone" is a masterful meta-musical, poking fun at the characters and situations that became hallmarks of musical theatre in the '20s and '30s. The production will be in the Thomas B. and Kathleen M. Donnell Theatre.



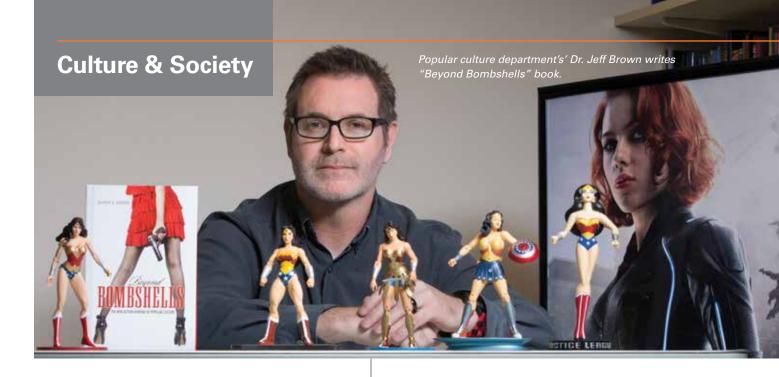
"The 25th Annual Putnam County Spelling Bee" was one of the theatrical productions presented during the 2015-16 season.

#### "The Penelopiad": The Play by Margaret Atwood —

Feb. 16-19 & 23-25. The Penelopiad is Margaret Atwood's new stage adaptation of her own wry, witty and wise novel that tells the story of the Odyssey through the eyes of his wife Penelope - how she waited 20 years, devoted and dutiful, for the return of her husband Odysseus from the Trojan War instigated by the legendary beauty of Helen of Troy. As Penelope — perhaps the first desperate housewife to appear in art — fends off the attentions of greedy suitors, traveling minstrels regale her with the news of Odysseus' epic adventures around the Mediterranean, only to have him repay her and her maids' devotion with heart-wrenching ruthlessness. Full of music, poetry and movement, this new telling of an ancient story echoes from the hearts of the maids with the fluidity of the original mythic material and resonance for today. "The Penelopiad" will be performed in the Eva Marie SaintTheatre.

#### "Twelfth Night " by William Shakespeare — April 20-23.

Dr. Jonathan Chambers will direct the play that was the last of Shakespeare's three "mature comedies." Like his early comedies, The Comedy of Errors or The Taming of the Shrew for instance, "Twelfth Night" is essentially a celebration of romantic love and can be viewed as a traditional romantic comedy. This is a play about love, placed in a festive atmosphere in which three couples are brought together happily. It opens with Orsino, the Duke of Illyria, expressing his deep love for the Countess Olivia. Meanwhile, the shipwrecked Viola disguises herself as a man and endeavors to enter the Duke's service. Although she has rejected his suit, the Duke then employs Viola, who takes the name of Cesario, to woo Olivia for him. Ironically, Cesario falls in love with the Duke, and Olivia falls in love with Cesario, who is really Viola disguised. This show will be in the Donnell Theatre.



## **BOOK REFLECTS CULTURAL** attitudes about female super heroines

The modern day action heroine is being redefined in movies, comic books, television and literature says a BGSU popular culture faculty member.

In his book "Beyond Bombshells: The New Action Heroine In Popular Culture," Dr. Jeffrey A. Brown looks at action heroines and addresses the shift in how female characters are portrayed in popular culture today.

"Beyond Bombshells" is Brown's second book that focuses on the action heroines; his first was "Dangerous Curves," published in 2011 by the same publisher, University Press of Mississippi.

"Today's action heroines reflect changing cultural attitudes," Brown said. Bombshells of the past were best known for their sexuality. Beauty was their weapon and their "powers" over men were stereotypically erotic.

Brown, who has studied action genres for decades, said, "These genres have changed over time."
Progression during the 1960s and '70s went from female characters who were girlfriends and damsels in distress to detectives who were smart but "still eye candy,"
Brown said. In the 1980s, female action characters, such as Sigourney Weaver in "Aliens," were masculinized, with more muscular and body builder-type bodies.

In recent years action heroines have further evolved. They continue to be beautiful and sexy, but they are also lethal. Instead of disarming men with their beauty, they are able to foil their counterparts with strength, intelligence and power, Brown explained. The new era includes such popular characters as Katniss Everdeen

from "The Hunger Games" and Lisabeth Salander of "The Girl with the Dragon Tattoo."

The new role model of action heroines is resonating with younger women, broadening the audience base for the action genre. The popularity demonstrates the shifting ideas about strong women, and the expanded audience is proving to have economic endurance, as evidenced by box office hits such as "The Hunger Games" and additions of "Supergirl" to network television.

## INTEGRATED MAJOR added in philosophy

A new major added to the College of Arts & Sciences' Department of Philosophy provides an integrated, interdisciplinary curriculum that will prepare students to work in law, medical ethics, philosophy and international positions.

The Philosophy, Politics, Economics and Law (PPEL) major was approved by the board this spring and will be available to students pending approval from the Ohio Department of Higher Education. In addition to taking the foundational courses, students in the major will follow one of three tracks: law, ethics and policy or national and international perspectives. The program was modeled after Oxford University's longstanding program. Students learn to think critically about the relationships between different social institutions – political, legal, social and economic – and to understand their historical and moral backgrounds. Graduates of the program will be equipped to solve challenges that require a multipronged approach.

#### **Culture & Society**

## COMMITTED to community and students

Dr. Lisa Hanasono's work is founded in the integration of research and teaching and lived out in her commitment to the community. In recognition of her engagement of students with such important issues as promoting unity, diversity and inclusion, Hanasono, an assistant professor of communication, received the 2016 David Hoch Memorial Award for Excellence in Service.



Also this spring, Hanasono earned two BGSU Faculty Excellence

Awards for her highly student-centered advising and teaching skills and a College Diversity Award for putting into practice her research and pedagogical interests in diversity and inclusivity. She was presented the Elliott K. Blinn Award for Faculty/Undergraduate Student Basic Research/Creative Work, the President's Award for Academic Advising of Undergraduate Students and the College of Arts & Sciences Diversity Award.

Collectively, Hanasono's teaching, research and service activities work together to strategically develop, deliver and evaluate the effectiveness of community engagement projects and initiatives that advance diversity at BGSU and beyond. Drawing from her research expertise on discrimination, advocacy and social support, she worked with community partners and students to design, launch and assess BG4Unity, a community-based service-learning project.

BG4Unity encourages people to use social media

— Facebook, Twitter and YouTube — responsibly to
advocate against hate and engage in community building.
Undergraduate students enrolled in Hanasono's Persuasion
courses partnered with local organizations and applied
course concepts to raise community members' awareness
about the prevalence and danger of cyber-bullying and online
discrimination. The goal was to motivate people to join
BG4Unity to demonstrate their solidarity against hate, and
inspire people to use social media to spread messages of
hope and support to those coping with discrimination.

Over the past year, Hanasono and her students partnered with BGSU and community organizations such as the Center for Community and Civic Engagement (CCCE), Not in Our Town (NIOT), the Graduate Student Senate and the Office of Multicultural Affairs.



Betsy Kling, a 1997 alumna, has found her niche as a TV meteorologist.

## CLEVELAND ALUMNA earns journalism award

Betsy Kling '97 came to BGSU to become a fourth grade teacher. She realized early on that teaching was not a good fit. She switched her major to journalism and, with the help of faculty members in two very different academic programs – journalism and meteorology – she discovered a career that has become a passion and provided a path for success.

Today she is the chief meteorologist at WKYC-TV in Cleveland, and in November she received the Chuck Heaton Award from the Press Club of Cleveland. Heaton, the award's namesake, spent 50 years as a sports writer for the Cleveland Plain Dealer and is a legend in northwest Ohio journalism. The award is given to the journalist who best exemplifies his sensitivity, humility and journalism heart.

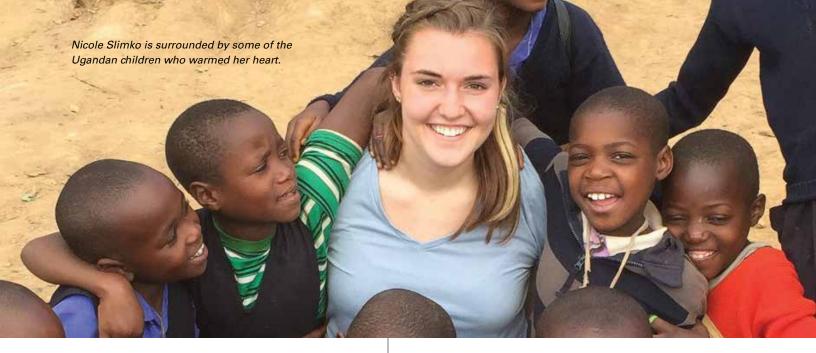
"My professors taught me that you have to be factual, but you can also be as creative as you want and that's where it really clicked with me," she said.

Kling, who picked meteorology as a lab science, credits Dr. Glenn Fry and a tutor for helping her understand the scientific side of what she was learning. Meteorology eventually became her minor.

"My senior year I was doing weather twice a week on BG24 News when a light bulb went off in my brain," she said. "I thought, 'Holy cow I can be scientific and creative at the same time!'"

Outside of her anchoring duties for the weekday 6, 7 and 11 p.m. newscasts, Kling volunteers for several local organizations and is very involved in the community.

Among her accomplishments are several Emmy Awards, a Certified Broadcast Meteorologist accreditation from the American Meteorological Society and the Seal of Approval from the National Weather Association. But her biggest accomplishment in her career is being recognized for doing what she loves.



## A HEART for children in crisis

Neuroscience major and volleyball player Nicole Slimko has a big heart. Last summer she spent two weeks in Uganda on a mission trip. The opportunity came out of a Juna Amagara fundraiser/mission trip spearheaded in her Crystal Lake, III. hometown.

Since 1980, the HIV/AIDS pandemic has killed more than one million parents in Uganda, leaving more than 1.5 million children vulnerable to the ravages of poverty and disease. Nearly 800,000 of these orphans have been left on their own. In a country with no substantial welfare system this means that every day is a dangerous struggle for survival for children of all ages. These are the children who are served by Juna Amagara.

Slimko's group was tasked with bringing supplies and helping to set up the new medical clinic, along with touring the organization's schools and providing recreational instruction and equipment. With the support of her BGSU volleyball coach Danijela Tomic, Slimko was able to take volleyballs and nets enough for each of the schools.

"I want to go back to Uganda already, and I'm planning to return when I graduate," said Slimko. "The mission is so important and I want to do anything I can to help provide the children with what they need to feel loved and supported, and to be safe, well-educated and healthy."

As a follow up to her trip, Slimko has stepped up to sponsor Elizabeth, whom she met in May. "For me, it was life changing, opening my eyes to everything I have and reminding me not to take anything for granted."

## IT'S ON US advocates focus on one goal

At university and college campuses, sexual assault is a serious problem. It's On Us, a national movement championing prevention and awareness, has one goal – to stop campus sexual assaults.

Senior Mary Toth got involved in the student-led initiative to help improve the culture at BGSU. In fall 2015, she was chosen as one of 17 students nationally to serve on the inaugural It's On Us Student



Advisory Committee, which provides campus student leaders an opportunity to make a larger impact.

Toth pushes for more opportunities for education, awareness and prevention. Her personal story shows that sexual assault is not just a statistic, but is negatively impacting people across the country. "There is always a need to be more proactive," Toth said. "Campuses need to create a supportive and safe environment for all."

She works with fellow survivors and advocates at BGSU and on the national committee to combat sexual assault. "Students need to stand up. Action produces an equal impact as philanthropy," she said.

A political science and history major, Toth knows her work will not stop when her committee term ends. After graduation in August, she will be pursuing a career in nonprofit or political work focused on sexual assault advocacy and policy.

#### **Focus**

## MELISSA MILLER From political pundit to Master Teacher

Dr. Melissa Miller, an associate professor of political science, is known for many things. During Presidential campaigns and other political firestorms, she is frequently quoted in the media with comments about the candidates, the process and the outcomes. She also is a favorite, compelling professor who engages her students in meaningful dialogue and important research.

Miller is an expert on American politics, specifically when it comes to elections, voting behavior, women in American politics, public opinion and the media. She teaches courses in American Government, Political Parties, Voter Behavior, Women in American Politics and Research Methods. Frequently interviewed by local, regional, national and international media, she has appeared in/on CNN, ABC News, Fox News, Al Jazeera, The New York Times, The Guardian and the New York Review of Books, among others.

This spring, she was named the 2016 Master Teacher at Bowling Green State University. She received the prestigious award during the Faculty Excellence Awards Ceremony and Reception in April. This is the highest teaching award presented to faculty and the only student-driven and student-selected award at BGSU. In

addition to the honor, it comes with a \$1,000 check presented by the Student Alumni Connection.

Miller was selected because of her connection to students and the depth and breadth of her knowledge. She believes the most important aspect of teaching is sharing a contagious enthusiasm for learning.

"While brilliant scholars can bore students to proverbial tears, brilliant teachers convey a contagious enthusiasm for learning that is literally infectious," Miller wrote. "Enthusiasm

drives all of the other factors we tend to bandy about when ticking off what makes a great teacher: passion, dedication, charisma, intellect."

In addition to enthusiasm, Miller brings several qualities to the classroom that resonate with students.

"Having an enthusiastic, student-centered approach to every classroom session is the key to student learning, as well as the promotion of student growth as citizens and leaders in the BGSU and broader



communities," Miller wrote. "My teaching philosophy is driven by a desire to produce not just good students, but good citizens able to confront and address challenges in their lives, work and communities. Classroom experiences

> that build habits – of problem-solving, teamwork, resourcefulness and ingenuity – will serve students far into the future, as lifelong Falcons."

This includes the incorporation of research in the classroom. Miller believes there is no better way to learn political science than to actually conduct it.
Undergraduates have been involved with every research study Miller has undertaken.

This award is a way for students to say thank you to faculty for positively impacting their lives by providing knowledge, guidance and skills. For Miller, this

recognition honors a career that she finds infinitely more satisfying than that of political consultant.

"Intellectually, the professor's day is far richer than that of my former career," Miller wrote. "Daily, I am energized by new social scientific information I encounter within my discipline, challenged by intriguing questions and conversations with my students, and enlightened during conversations with my colleagues."

"While brilliant scholars can bore students to proverbial tears, brilliant teachers convey a contagious enthusiasm for learning that is literally infectious..."

Melissa Miller







Above, theatre students work on scenery for the spring production of "Noises Off" as art patrons Betty and Roger Anderson look on.

Above right, Baylee Sheets uses theatrical makeup to transform Beth Felerski from a young woman into a witch.







The costume shop, led by costume designer Margaret McCubbin and costumer Laurel Daman, creates such stunning costumes as these two used in one of the past BGSU operas.

Helen Holman shares her work in the digital arts/animation lab during Bravo! BGSU.

Some of the top artwork from the Bachelor of Fine Arts Student Exhibition were included in a special gallery presentation during Bravo! BGSU.





College of Arts & Sciences Office of the Dean 1001 E. Wooster St. Bowling Green, Ohio 43403

#### SEND US YOUR ACCOMPLISHMENTS

Keep your classmates and the University current on your achievements. These will be submitted to the BGSU magazine. The BGSU Magazine receives multiple submissions for the Alumni Notes secion of each issue. It is not the practice to print engagement, marriage or birth announcements. BGSU reserves the right to edit or omit any information submitted.

A convenient online form is available at bgsu.edu/casalumninews.

## **Kuhlin Center ribbon cutting is part of Homecoming 2016**



Homecoming 2016 will include many of the traditional activities and two special ribbon-cutting events to introduce new and renovated spaces to alumni and the public.

On Saturday, Oct. 1, the Michael & Sara Kuhlin Center, formerly South Hall, will open its doors for alumni and friends to tour. Refreshments and tours of the renovated, state-of-the-art classroom and technology spaces

will follow the official ribbon-cutting ceremony for the School of Media & Communication's new home. Scheduled for 11 a.m., the event will take place after the ribbon-cutting for the new Greek Village.

The College of Arts & Sciences is also hosting a tailgate tent prior to the 3 p.m. football game between the Falcons and the Eastern Michigan Eagles on Oct. 1.

Visit bgsu.edu/homecoming for the most current information.