

UNIVERSITY LEADERSHIP

Hajim School Dean Rob Clark Named Provost

Noted engineer and educational leader succeeds Peter Lennie as the University's chief academic officer.

By Sara Miller

An academic leader who has guided the Hajim School of Engineering & Applied Sciences to record growth and served as a key figure in Rochester's new initiative in integrated photonics will be the University's new provost.

Rob Clark, who as dean of the Hajim School also serves as senior vice president for research, succeeds Peter Lennie beginning July 1, 2016. Clark's five-year term was approved by the University's Board of Trustees at the board's October meeting.

"Both as senior vice president for research and dean of the Hajim School, Rob's service has been exemplary," President and CEO Joel Seligman said in making the announcement.

ACADEMIC OFFICERS: President and CEO Joel Seligman introduced Hajim School Dean Rob Clark (center) as the University's 10th provost at a ceremony this fall. Clark succeeds Provost Peter Lennie (left) in July. Seligman cited Clark's leadership in engineering, where enrollment has doubled over the past seven years and the Department of Computer Science has been successfully incorporated into the Hajim School.

Seligman also praised Clark's leadership role in the development of Ronald Rettner Hall for Media Arts and Innovation, which opened in 2014, and the new Wegmans Hall, home to the Goergen Institute for Data Science, set to be dedicated in 2016, as well as his work to develop a new strategic plan for research.

When Clark becomes provost, he will step down as dean of the Hajim School, and a national search will be undertaken to name a new dean.

Clark succeeds Peter Lennie, the Robert L. and Mary L. Sproull Dean of the Faculty of Arts, Sciences & Engineering, who has served as provost since 2012. Lennie will continue to serve as dean of Rochester's main undergraduate and graduate academic division until June 2017.

As the University's chief academic officer, the provost works with the president and the senior vice president for administration and finance, to review divisional budgets, strategic plans, and facilities projects.

Since Lennie began his deanship in 2006, he has been what Seligman calls "my closest academic advisor." As the University's ninth provost, Lennie has led efforts to promote global engagement and a more robust institutional research program, among other achievements.

Clark joined the University as Hajim dean in 2008 from Duke University, where he served as senior associate dean and dean of the Pratt School of Engineering. In addition to growth in undergraduate enrollment at Hajim, he has overseen increases in the number of faculty and a significant rise in master's program enrollments.

He has also expanded the role of UR Ventures, the University's intellectual property portfolio, and supervised Rochester's online learning initiatives. ©

ADMINISTRATION & FINANCE

Holly Crawford Is New Financial Chief

Longtime leader is named senior vice president, CFO, and treasurer.

Holly Crawford '11S (MBA), a pivotal financial administrator at the University for nearly two decades, has been named Rochester's senior vice president for administration and finance, chief financial officer, and treasurer.

She succeeds Ronald Paprocki '69, '86S (MBA), who announced his intent to retire on January 15, 2016, after more than 45 years at the University and eight years as senior vice president and CFO.

Crawford, who as senior associate vice president for budgets and planning has served as deputy to Paprocki, will lead the Administration and Finance team. That group includes finance, budget, audit, campus planning and design, facilities, purchasing, auxiliary services, human resources, public safety, and environmental health and safety.

She begins her new role in January.

University President and CEO Joel Seligman made the announcement in October, after approval of Crawford's appointments by the University's Board of Trustees.

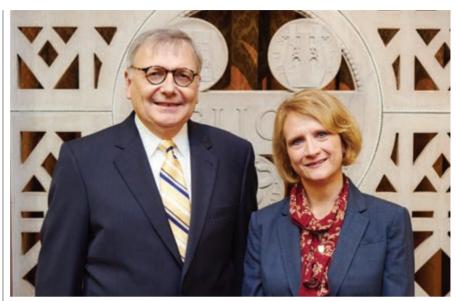
"Holly was the stand-out candidate in terms of already having had experience at both the technical and strategic levels in all administration and finance areas and having a proven track record of success in implementing University initiatives," Seligman said.

"She has strong relationships with administrative and financial colleagues across the institution, with divisional leaders, and with outside partners, including investment bankers and rating agencies. She will hit the ground running. She starts with a nuanced and complete understanding of our University."

As senior associate vice president for budgets and planning, Crawford is responsible for the stewardship and management of the University's multibillion dollar operating budget, capital budgets, and five-year financial plans.

As deputy to the senior vice president and CFO, she is the principal advisor on financial, planning, facilities, and administrative matters and often serves as a representative for campus emergencies and on key initiatives.

Crawford joined the University in 1998 as director of University Audit and conducted the first University-wide risk assessment, as well as developed a construction



FINANCIAL COLLEAGUES: Holly Crawford (right) and Ronald Paprocki have worked together for nearly two decades, overseeing the University's finances, budgets, and other operations.

auditing program, an effort that reduces costs for facilities projects.

In 2000, Paprocki asked her to assume responsibility for working with department managers, deans, and financial officers throughout the University to establish annual operating and capital budgets. She has facilitated strategic planning among key administrative functions with an emphasis

on improving human resource policies and practices, communications, IT, risk assessment and business case development.

A certified public accountant and certified internal auditor, Crawford held accounting and audit positions at organizations including Bausch & Lomb, ACC Corporation, and Arthur Andersen before joining the University. ①

Warner Leader's Appointment Extended

Raffaella Borasi, dean of the Warner School of Education for 15 years, will carry on for the next two years, to continue to oversee initiatives in which the school is engaged.

Most notable among them is the University's assumption—as the Educational Partnership Organization—of full management responsibilities for Rochester's East High School.

In making the announcement, President and CEO Joel Seligman called Borasi "instrumental in forging the partnership to improve the struggling city school."

Borasi has led Warner through a period of substantial growth, with student enrollment and research funding both more than doubling. She led the launch of online courses at Warner, has taken leadership roles in four National Science Foundation-funded grants from the Robert Noyce Scholarship program,



EDUCATIONAL APPOINTMENT: Borasi will lead the Warner School through 2017.

and drove the opening two years ago of Raymond F. LeChase Hall, the new building that houses the school.













NATIONAL RECOGNITION

A Hall of Fame Scientist and Mentor

Microbiologist Barbara Iglewski is the third Rochester faculty member inducted into the National Women's Hall of Fame.

By Emily Boynton

An internationally regarded microbiologist who made history at the Medical Center joined a history-making group of American women this fall.

Barbara Iglewski, a professor emeritus in the Department of Microbiology and Immunology, was inducted into the National Women's Hall of Fame in Seneca Falls, New York, considered the birthplace of the American women's rights movement.

The nation's oldest organization dedicated to recognizing and celebrating the achievements of great American women, the hall was created in 1969. Every two years, the hall honors a group of women nominated by the public and chosen by a national panel of experts.

One of 10 inductees in 2015, Iglewski was selected for her research on how bacteria cause infections. Her laboratory was the first to discover that bacteria use a communication system—a type of chemical language—to coordinate attacks on human cells and initiate disease.

Her work launched an entire field of study into how the system works in many types of bacteria. Several drugs designed to interrupt the communication process and prevent infection are being developed.

"I think the Hall of Fame is amazing and I am overwhelmed by this huge honor," says Iglewski. "When you look at all of the members, women who have had such a profound influence on me and so many others in our society, it puts you in awe of what they have accomplished."

The first woman from the medical school, Iglewski is the third from the University to be inducted. She joins Judith Pipher, a professor emeritus of physics and astronomy, who was inducted in 2007, and Loretta Ford, the founding dean of the School of Nursing, who was inducted in 2011.

Iglewski pursued a career in science after accompanying her father, a country physician, on house calls and spending hours answering the phone and playing with microscopes in his office.

She received her PhD in microbiology from Penn State University, held her first position as an instructor at the Oregon Health and Science University School of



HALL OF FAME: Internationally regarded for her work as a microbiologist, Iglewski was the first woman to chair the Department of Microbiology and Immunology.

Medicine, and was recruited to Rochester in 1986 to serve as chair of the Department of Microbiology and Immunology. She was the first female department chair at the School of Medicine and Dentistry, a position she held until 2009.

The author of more than 150 research papers and book chapters, Iglewski is recognized by the Institute of Scientific Information as a highly cited scientist, a group that makes up less than 0.5 percent of all publishing researchers.

She served as president of the American Society for Microbiology from 1987 to 1988 and chaired the organization's publications board from 1990 to 1999—a time when very few women served on editorial boards.

Iglewski is credited with leading efforts to increase the number of women holding

editorial positions among the society's scientific journals.

Also inducted this fall was Philippa Marrack '91 (Honorary), a former member of the School of Medicine and Dentistry's faculty who now holds positions at National Jewish Health and the University of Colorado Health Sciences Center in Denver.

Others with Rochester connections include the late Mary Steichen Calderone '39M (MD), who established the Sex Information and Education Council of the United States.

An author and coauthor of several books, professional journals, and magazine articles, Calderone was inducted in 1998. And Rochester-based women's rights activist Susan B. Anthony was inducted in 1972.

CAMPUS UPDATES

Work Aims to Reshape Campus Spots

Wegmans Hall, a student center, and library renovations will bring a new look to prominent parts of the River Campus.

Some prominent spots on the River Campus are expected to soon have a more vibrant and engaging feel to them. Several construction and renovation projects got under way this fall, including construction of Wegmans Hall, a new academic building that will be home to the Goergen Institute for Data Science, and a major overhaul of the Frederick Douglass Building to transform the 60-year-old facility into a new student center.

Work began this year on Wegmans Hall, named in recognition of leadership support for the project from the Wegman Family Foundation. The 58,000-square-foot, four-story building is expected to be dedicated in late 2016 and fully occupied early in 2017.

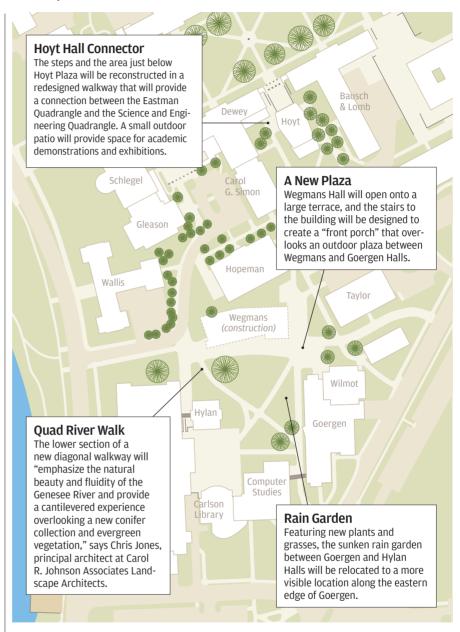
In 2014 Danny Wegman, chair-elect of the University's Board of Trustees and the president of his family's foundation and chairman of its board, announced a \$10 million commitment for the building. In 2015, Robert Goergen '60, chair emeritus, and his wife, Pamela, the namesakes for the Goergen Institute, committed \$11 million for the project.

The new building is part of a new four-acre Science and Engineering Quadrangle formed with Goergen Hall, Hylan Hall, Hutchison Hall, and the Computer Studies Building. A landscaping plan by the Boston-based firm Carol R. Johnson Associates Landscape Architects is intended to make the quadrangle a more community-friendly area, including the creation of more green space and allowing the quadrangle to house tents and seating for University events such as Meliora Weekend, Commencement Weekend, student club activities, concerts, and food trucks.

The final design is scheduled to be in place by December, with landscape construction set to begin in April 2016. The new quadrangle is expected to be ready by next fall.

Renovations are also under way to make Douglass a new student center, housing a newly updated dining facility, the Paul J. Burgett Intercultural Center, and a new Language Center. The building will also feature redesigned student gathering spaces and links to other student areas on the River Campus.

Opened in the 1950s, the building



originally served as the men's dining center when the colleges for men and women were merged. Most recently, it was home to the University bookstore, which moved to College Town last spring.

Plans for the bookstore's move prompted discussion among students, student life administrators in the College, and others on the River Campus about how the building could be transformed. Renovations are expected to be completed in time for the building to reopen in fall 2016.

Plans to renovate several areas of the River Campus Libraries have also begun. At Rush Rhees Library, plans are under way for the Barbara J. Burger iZone at the River Campus Libraries, a new space where students can gather to explore social, cultural, community, and economic ideas. The space is named in recognition of support from University Trustee Barbara Burger '83.

At Carlson Library, plans call for a new collaborative area that supports and showcases work in all phases of research. **3**

A Musical Time Machine

The only instrument of its kind in North America, the full-sized Italian baroque organ at the Memorial Art Gallery is a musical time capsule. "This organ is like a living recording of the 18th century," says David Higgs, chair of the organ department at the Eastman School of Music and one of the country's leading concert organists.

Rescued in 1979 from an antique gallery in Florence, where it likely would have been sold as furniture, the restored organ was purchased by the Eastman School and installed at the gallery in 2005. A four-day interdisciplinary festival in October celebrated the 10th anniversary of its arrival with guest performers, lectures, and the first North American performance of a newly discovered mass by Italian baroque composer Domenico Zipoli.

The organ is an ancient instrument whose "golden age" was the 17th and 18th centuries, when Italy was at the center of the musical world, says Honey Meconi, professor of musicology in the College Department of Music and an organizer of the festival. It's part of a Humanities Project called "Performing History: The Italian Baroque Organ and Its Cultural Intersections," a yearlong series of collaborative events exploring the organ, its repertoire, and its place in culture and society.



Fountain Court

Now home to the organ, this room—designed in 1926—has architectural proportions similar to those of a small Italian Renaissance church, says Higgs, which adds to the preservation of authentic 18th-century sound. The organ is surrounded by more than 30 major baroque paintings and sculptures from the gallery's permanent collection.

Hand Crafted

The lavishly decorated, wooden organ case features carved ornamentation, classically inspired painted vases, and an elaborate gilded crown ornament depicting Saint Andrew, perhaps a reference to the patron saint of the unknown church or chapel where the organ was first located. The case probably dates from between 1730 and 1770, when the original instrument—from around 1670—was enlarged and reinstalled in the new case, likely built to match the ornamentation of its surroundings.

ines

The organ has almost 600 pipes made of tin and lead alloy and wood, which range from the size of a pencil to more than six feet in height. Some of the parts, like the wind chest, date from circa 1670. "Impurity in the metal pipes is one of the secrets" of each premodern organ's unique sound, says Edoardo Bellotti, associate professor of organ, harpsichord, and improvisation.



Console

wind chest 3, an airtight wooden box below the

compressed air through the wind trunk 2 to the

the pedals to depress them, forcing a column of

or rank, representing a particular tone quality, is

pipes in the organ case. Each row of pipes 4,

controlled by a stop knob 6. When the organist

Organist

Pedalboard

The keyboard, pedals, and stop knobs—which open and close various sets of pipes—form the console. The combination of stops, pipes, evs., and pedals allows the organ to produce a wide range of sounds. "It's like an orchestra in one instrument," says Meconi. Performers' fingers from over the centuries have worn indentations into the organ's keys that manifest the tight connection between the player and the organ. "The instrument tells you what you have to do," says Bellotti, likening it to a living thing.

моң лі

(linked to keyboard)

Some details have been omitted or altered for clarity.

key channel 99. Now the rank of pipes connected

to that channel will sound or speak.

pressurized air in the wind chest to flow into the

a wooden panel or pallet (8) opens, allowing the

to be played. The organist presses a key 🕜 and

pulls the knob, a mechanical link moves a wooden

slat or slider 6 beneath the pipes. Holes in the

slider are lined up with the pipes, allowing them

Learn

Mars, Martians, Metaphors, and Mirrors

Why does the red planet fascinate storytellers?

Interview by Scott Hauser

From a brief appearance in Jonathan Swift's Gulliver's Travels in 1726 to this fall's big screen blockbuster, The Martian, Earth's nearest neighbor in the solar system has a storied history in popular culture and the literary life of science fiction. Even as advances in interplanetary science bring Mars into ever sharper focus, the planet has remained a compelling source for creative artists to explore ideas about what it means to be human, says Jeffrey Tucker, associate professor of English.

"Science fiction is always a way of commenting on what's happening in the here and now," says Tucker, who studies and teaches literature, particularly in the context of technology, science, culture, and identity. A leading scholar of author Samuel R. Delany, whose science fiction and critical analysis have made him an influential figure in the genre, Tucker says he often reminds his students that seemingly speculative or imaginative stories are usually grounded in a larger context. "When I teach science fiction, I quote Delany, who says, 'Science fiction is not about the future: it uses the future as a narrative convention to present significant distortions of the present. ... Science fiction is about the current world—the given world shared by writer and reader."

Why does Mars seem to loom so large in popular culture?

One of the best answers I've read is from Isaac Asimov's introduction to an edition of H. G. Wells's *The War of the Worlds.* He basically suggests that much of our fascination with Mars and the notion of life on Mars has to do with a matter of translation—or a mistranslation—of the Italian word "canali." In 1877, when



MARS ATTACKS! With Martians who invade Earth from militaristic spacecraft (like those illustrated in a 1906 edition), H.G. Wells's War of the Worlds set the stage for later stories about Mars.

the Italian astronomer Schiaparelli noted markings on Mars's surface, dark lines that seemed to crisscross each other, he called them channels. The Italian word for channels is "canali," and this somehow became "canals" in English rather than channels. There's a big difference between the two. A channel can be a naturally occurring geographic phenomenon, whereas a canal suggests an artificial creation, which further suggests some intelligence created it. That prompted a lot of people, including the American astronomer Percival Lowell, to speculate

about intelligent life on Mars. There are, of course, the other facts about Mars: it's the closest planet to Earth and it's similar to Earth in terms of its physical makeup. And it has moons. The similarities have invited reflection and comparison.

Have the stories evolved over time?

There are a couple main trajectories to the stories. In *The War of the Worlds*, Earth is invaded by Martians. The Martians are intelligent, but they certainly are not humanoid. They're more like octopi, and

they arrive in these gigantic military spaceships. In the opposite trajectory, human beings go to Mars. One of the earliest and best known is Edgar Rice Burroughs's Barsoom series. The first book is *A Princess of Mars*, which was published in 1917. Burroughs is best known for *Tarzan of the Apes*, and the Mars books are very similar except that instead of Africa, the protagonist, John Carter, goes to Mars.

What do those stories tell us about humans?

Science fiction is always a way of commenting on what's happening in the here and now. In *The War of the Worlds*, the only country we see invaded is England. Why is that? Wells is commenting on British imperialism—on the English and their history of invading and colonizing other parts of the world. And it's violent and troubling and disturbing. What's also interesting is that the Martians are defeated not by humanity, but by bacteria, the lowliest life form on the planet.

The classic science fiction story about humans going to Mars would be Ray Bradbury's Martian Chronicles, published in 1950. In those stories, there's an implicit criticism of human beings who dismiss or who are disrespectful of an ancient Martian culture that existed there. What's also interesting is the shift in perspective. In the Martian Chronicles. you can see Earth from Mars. And Earth is this greenish star-like thing. But the inhabitants of Mars can also see the destruction of Earth, because there's war happening on Earth. And that green star is on fire in the night sky.

Mars provides a perspective, both literally and figuratively, on the planet Earth.

Do you think the average reader who enjoys science

fiction thinks about the stories on that level?

I can't speak to what the average reader gets from the stories, but I challenge my students to be very thoughtful about what we read and why. What I find most interesting about science fiction is its allegorical ability to comment on what's happening

at the time described by the text—on a social, or political, or ideological level.

I'm also interested in other themes, including alien encounters, which are about the ways in which people who are different encounter one another. There are lots of ways in which humanity's encounters

with aliens from other planets are metaphors or allegories for humanity's encounters with itself. That encounter can be friendly and productive, or it can be violent and exploitative.

It's intriguing that as scientists announce more details about Mars, the imaginative

pull remains strong.

What do they say? Never let the facts get in the way of a good story. I don't think what we have learned about Mars and what it's really like has gotten in the way of our ability to tell good stories, or had an effect on the kind of stories that have been told about Martians.

Tensions on the Frontier

Historian Thomas Devaney examines the rise of religious intolerance in medieval Spain.

The Christian civic and religious leaders of 15th-century Castile didn't have televised news conferences or government websites to help them shape or respond to public opinion.

Instead, they staged public spectacles that served much the same purpose—including festivals, religious processions, and knightly tournaments that often included a theatrical narrative framework.

In his new book, Enemies in the Plaza: Urban Spectacle and the End of Spanish Frontier Culture, 1460-1492 (University of Pennsylvania Press), Thomas Devaney, assistant professor of history, shows how such staged events eventually helped harden Christian attitudes toward Muslims in neighboring Granada and toward the religious minorities in Castile, eventually leading to religious conflict and repression.

Modern Spanish anxieties and ambivalences about Islam may descend from those of Spaniards' "medieval forebears," Devaney says. His book traces the arc of those reactions in the late 15th century.

For Americans today, the term "frontier" implies action, says Devaney—a place "to be crossed, conquered, pushed back, and made civilized." But for medieval Castilians it denoted a "borderland region," an area for interactions between cultures. Christians living closest to the frontier between Castile and Granada had developed—despite their religious differences—lucrative trading partnerships with Muslims on

the other side, partnerships that were disrupted with great loss to both sides whenever conflicts flared. So they tended to be the least enthused about going to war with Muslims.

With the spectacles, rulers were trying to provide the people with what they guessed the populace wanted, says Devaney. The people, in turn, took the spectacles as evi-

individual or group's control."

Often, spectacles staged by figures of authority had extensive subtexts that reflected a complicated balancing of competing interests. For instance, Don Miguel Lucas de Iranzo, the ruler of the frontier town of Jaén, was eager to resume military campaigns against Muslims across the border. But to do so, he had

Devaney says that in the 32 years the book covers, people in the region moved from a kind of acceptance of difference to fear to, finally, dismissal, as the majority asserted that theirs was a Christian society. He calls the time frame of his book a period of "growing intolerance and a renewed push for holy war."

The questions his book address-



SPECTACLE: Staged events—similar to this "Game of Stickes" played in Valladolid in honor of Philip the Fair—helped harden Christian attitudes toward Muslims in medieval Spain, argues historian Thomas Devaney. It's a story of "how one society moved from greater to lesser tolerance," he says.

dence that they had license to lash out against religious minorities.

"The city council members and nobles thus see more and more public activity against religious minorities; the level of the rhetoric gets ratcheted up a notch; and we have this ongoing back and forth," he says.

"In other words, there's really no bad guy, no person planning this. To a large degree it just happens, and it's not under any to "inspire a local population that was just as happy to trade with the Muslims as fight them," Devaney writes.

Nothing would be the same, however, after spectacles later in the time period turned violent. In the 1470s in Córdoba, for instance, a religious procession ended in a riot. As the violence spiraled out of control, many of the town's converts were killed, while others fled for their lives.

es, he writes, "have emerged anew in the last couple of decades, fueled by increased immigration and by fears of terrorism."

"In a small sense, this is a book about particular group interactions in a few cities on the Spanish-Granadan border in the late 15th century," he says. "In a larger sense, it is a story about how one society moved from greater to lesser tolerance."

-Bob Marcotte



SCRUTINIZING DIET: A new study finds that a gluten-free, casein-free diet does not benefit children with autism spectrum disorder.

Diet Interventions for Autism Found Ineffective

Gluten-free, casein-free diets have become popular complementary treatments for children with autism spectrum disorder, but a rigorous Rochester study has found that following the diets had no effect on the behavior, sleep, or bowel patterns of children. Results of the study—the most tightly controlled research

on dietary intervention and autism to date—were published in the Journal of Autism and Developmental Disorders.

Following a group of children between ages two-and-a-half and five-and-a-half years old for 30 weeks, the researchers—led by Susan Hyman, chief of the Division of Neurodevelopmental and Behavioral Pediatrics at the Medical Center—strictly implemented the gluten-free, casein-free diet with each child.

No significant changes were found when the children were given snack foods with gluten—a compound found in wheat, rye, and barley—or casein—found in milk—a combination of both,

or a placebo. Researchers also ensured that the children received the same level of other behavioral interventions and other treatments so that any observed changes could be safely attributed to diet. Such controls were not in place in previous diet studies.

-Sean Dobbin

Choosing Relief for an Aching Back

A new study in the journal *Neu-rology* found that people with a common form of lower back pain called lumbar spinal stenosis overwhelmingly choose pain relief treatments over those that would help them stand or walk.

"There has long been a debate in the medical community over striking the right balance between pain relief and physical function," says the lead author of the study, John Markman, professor of neurosurgery and director of the Translational Pain Research Program. And while physicians have favored increasing mobility, patients see things differently.

"Even the patients who could not stand long enough to pick up a letter from their mailbox or wash the dishes after dinner chose pain relief," he says.

Lumbar spinal stenosis is brought about by a narrowing of the spinal canal caused by the degeneration of the vertebrae, discs, joints, and ligaments that make up the spinal column, resulting in a compression of nerve roots. This narrowing of the spinal canal triggers pain, tingling, and numbness in the lower back, buttocks, and legs that is most commonly experienced when a person is upright or walking.

New standards for pain relief—which historically have been left to pharmaceutical company scientists and government officials to decide—are increasingly being created based on input from patients. Many experts argue that new pain relievers, especially those with greater risks like opioids, should relieve pain and improve function.

"This study convincingly demonstrates the need to prioritize pain relief because that is what patients want," Markman says.

-Mark Michaud



BETTER BACKS: Back pain patients give pain relief higher priority than increasing mobility when choosing between treatments.

Parents' Confidence Could Help Break Abuse Cycle

Women who were abused as children are more critical of their ability to parent successfully, Rochester researchers have found. Therefore, intervention programs for mothers at risk of maltreating their children should focus on bolstering selfconfidence, not just on teaching parenting skills, they say.

Conducted at the Mt. Hope Family Center and published online in the journal *Child*

Maltreatment, the study found that mothers who had experienced more types of abuse as children—sexual abuse, physical or emotional abuse, and physical or emotional neglect—have higher levels of self-criticism and, as a result, greater doubt about their own ability to be effective parents.

That was true in both women with and without depression, says Louisa Michl, a doctoral student

in the Department of Clinical and Social Sciences in Psychology and the lead researcher for the study.

Self-doubt is related to "yelling, hitting, and other kinds of negative parenting behaviors," she says.

Teaching parenting skills doesn't necessarily help a mother in a stressful situation.

Mothers who don't believe that they can be a good parent and act on the things they've learned may treat their children the way they themselves were treated.

Previous research has shown such self-perceptions are changeable, though.

"If a mom who was maltreated as a child can sustain some strong beliefs in her competency as a mom, then it may help break the cycle of abuse and buffer her children against that kind of experience she had," Michl says.

-Monique Patenaude



TREATING THE SMALLEST: Extremely premature infants fare much better today than they did just 20 years ago. Improvements in care for mothers at risk of early delivery may be why.

Prospects Are Better for Extreme Preemies Today

Extremely premature babies considered to be on the cusp of viability are much more likely to survive and evade illness today than they were 20 years ago, according to a study published in the *Journal of the American Medical Association* and cowritten by Carl D'Angio, professor of pediatrics and medical humanities and bioethics.

Carried out between 1993 and 2012, the study found increases in survival rates of infants born 23 or 24 weeks into a pregnancy.

While babies born at such an early stage of pregnancy still have many health problems after birth, babies born as little as one week later—between 25 and 28 weeks—experienced a decrease in several illnesses that typically occur in extremely premature infants.

The continuing improvement may be due to the significant increase in the use of corticosteroids to speed up lung development in the fetuses of mothers at risk of delivering early. In 1993,

less than a quarter of mothers who delivered extremely premature infants received the steroids; the number had jumped to 87 percent by 2012.

Mothers at risk of delivery by 22 to 24 weeks were also much more likely to have a cesarean delivery and to be treated with antibiotics during pregnancy in recent years than they were at the beginning of the study. Cesarean deliveries may minimize the trauma of birth, boosting a baby's chance of survival, while

prenatal antibiotics are meant to prevent transmission of infections between mother and baby. No changes in infection rates were found over the course of the study, however.

The findings suggest a progressive increase in physicians' ability to treat extremely premature infants. The decline of health problems in slightly more mature preemies may also be attributed to improved medical care after birth.

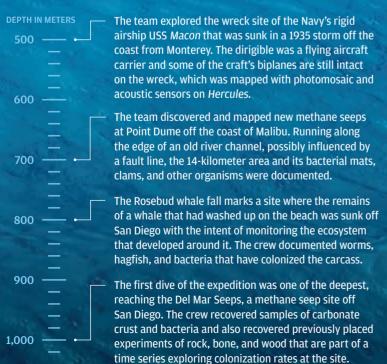
-Susanne Pallo

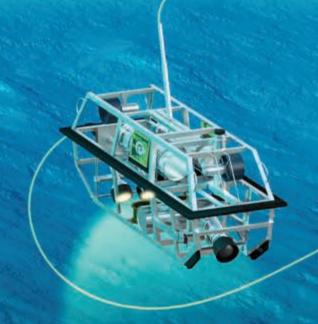


Multibeam Sonar: A hull-mounted system maps the seafloor up to 7,000 meters deep, collecting data about the ocean's physical characteristics. The information helps the crew identify areas or features of interest and to plan ROV dives.

In Depth Research

Founded in 2008 by Robert Ballard, a National Geographic explorer-in-residence who's best known for finding and mapping the site of the *Titanic* shipwreck, the Ocean Exploration Trust undertakes international scientific explorations of the seafloor. During summer 2015, the trust's flagship exploration vessel, the E/V *Nautilus* and its Corps of Exploration, explored sites along the Pacific coast of the United States. Wendy Snyder '17, a mechanical engineering major from Ossining, New York, joined the ship's crew during an expedition of an area known as the California Borderlands, just offshore from some of the most tectonically active areas of California.





ROV Argus: Most often used in conjunction with Hercules, Argus helps dampen the roll of the ship, allowing Hercules to remain steady through sensitive operations, as well as providing additional light to the ROV below it. By itself, Argus can dive deeper than Hercules, reaching depths of 6,000 meters.

Telepresence: As part of an effort to share the expeditions with scientists and interested viewers around the world, the ship streams video and data from the remotely operated vehicles to the *Nautilus*. From there, the high-resolution feeds are sent by satellite to the Inner Space Center at the University of Rhode Island and distributed directly to computers and to the web.

ROV Hercules: Considered the workhorse of the program, Hercules, which can descend to 4,000 meters, is always used in tandem with Argus. The ROV is designed to collect samples and recover artifacts. Video from its high-definition camera is streamed through a fiber-optic cable to the Nautilus and shared with the world.





IN CONTROL: Snyder took several turns helping to pilot two remotely operated vehicles that were tethered to the *Nautilus* and controlled from the main ship. The ROVs, as they're known, can be maneuvered to collect samples and artifacts.

Under the Sea

Here's a short list of things Wendy Snyder '17 saw last summer: the marine ecosystem that develops around the carcass of a whale on the ocean floor; the wreckage site of the USS *Macon*, a 1933 Naval airship designed to be a flying aircraft carrier; and plumes of naturally occurring methane seeping from vents in the seafloor.

In short, she spent four weeks living the life of an oceanographic explorer aboard the E/V *Nautilus*, one of the few ships in the world designed to explore the world's oceans. One of three college interns selected to join an expedition along the coast of California, Snyder describes the experience as "very hands-on." Among her duties, she helped pilot and maintain the ship's remotely controlled exploratory vehicles. Through the cameras of those vehicles she had a close-up view of an underwater world that's invisible to most. "We came across things all the time," she says. "It was hard for people not to get excited about what we saw."

In Brief



THEME MUSIC: Jeff '85E and Joan Beal '84E aim to make the Eastman School a destination for film industry music experts and for students interested in writing, producing, and performing music for film and media.

Calling 'Action!' for a New Film Music and Contemporary Media Institute

A new institute to provide students with instruction and experiences that prepare them for writing, producing, and performing music for film and contemporary media is the vision of Emmy-winning composer Jeff Beal '85E and vocalist Joan Beal '84E.

The Eastman School will launch the Beal Institute for Film Music and Contemporary Media,

thanks to a \$2 million commitment from the couple. Jeff Beal—who wrote the theme music for the Netflix series *House of Cards*, among many other film and television productions—will serve as artistic director. Joan Beal has sung on more than 100 film scores and provided the operatic vocals on *House of Cards*.

The institute will provide

support for student internships, scholarships, and projects; instruction; visiting artist residencies; and technology and infrastructure. Students will have opportunities to work with professionals writing for film and other contemporary media and will be encouraged to collaborate on cross-disciplinary and multimedia projects.

Physician Leads CDC Committee



VACCINE ADVISOR: Nancy Bennett leads a CDC committee advising on the use of vaccines.

Nancy Bennett, director of the Center for Community Health, has been appointed chair of the Advisory Committee on Immunization Practices for the Centers for Disease Control (CDC).

The advisory group's medical and public health experts provide advice and guidance to the director of the CDC and develop recommendations for the use of vaccines to control diseases in the U.S. civilian population.

Once approved by the CDC director, the committee's recommendations are published as official public health policy in an effort to reduce the incidence of vaccine-preventable diseases and increase the safe use of vaccines.

Bennett served for four years as a voting member of the group. Such members are selected by the secretary of the U.S. Department of Health and Human Services.

Vision Expert Recognized

David Williams, an expert on human vision, has been named the 2015 recipient of the Beckman-Argyros Award in Vision Research.

Williams, who pioneered the use of adaptive optics technologies for vision applications, is the William G. Allyn Professor of Medical Optics, director of the Center for Visual Science, and dean for research in Arts, Sciences & Engineering.

The award, given by the Arnold and Mabel Beckman Foundation, recognizes a person who has made transformative breakthroughs in vision research. Williams will receive a total of \$500,000, plus a commemorative gold medal.

This year, Williams was also selected to receive the Sigma Xi Procter Prize and a \$100,000 Alcon Research Institute Award for his research in vision science.

Astronomers developed adaptive optics so that telescopes could see more clearly through the Earth's atmosphere.

In his research Williams has applied the techniques of adaptive optics to the human eye, modifying light leaving the eye to obtain better pictures of the retina, and modifying light entering the eye to produce better vision.



VISIONARY: David Williams receives awards for his research on adaptive optics and the human eye.



Goergen Awards Recognize Teachers

TOP TEACHERS: The College presented three faculty members with Goergen Awards for Excellence in Undergraduate Teaching in recognition of their contributions to undergraduate education.

An annual award established by University Trustee Robert Goergen '60 and his wife, Pamela, the awards recognize, reward, and encourage exceptional and innovative undergraduate teaching. This year's recipients are John Kessler, associate professor of earth and

environmental sciences, Deborah Rossen-Knill, associate professor from the Writing, Speaking, and Argument Program, and Andrew Elliot, professor of psychology. During a ceremony this fall, a former or current student recognized each recipient for the influence the teachers had on their academic careers. Kessler was recognized by Eleanor Arrington '14 (above, left to right), Rossen-Knill by Allison Goldstein '08, and Elliot by Jeffry Magloire '16.

What Does Sue B Say?

Much is known about Susan B. Anthony's stance on social equality and slavery, but she had a lot to say on a variety of issues that also still resonate. That's why the Susan B. Anthony Center has launched a Twitter campaign to connect social media users with the famed suffragist's stance on an array of topics, under the hashtag #SueBSays. The 10-month Twitter campaign coincides with the 95th anniversary of the signing of the 19th Amendment, which granted women the right to vote. Twice-weekly tweets will share excerpts from her correspondence with family, friends, and other suffrage leaders. The Center's Twitter handle is @UofR_ SBAC. The posts will also appear on the center's Facebook page.



ARTS & SCIENCES

Lecture Series Opens Humanities Center

Cultural historian Gerald Early delivers first of four talks by noted scholars.

By Kathleen McGarvey

The University celebrated the opening of its Humanities Center this fall with a standing-room-only inaugural talk by Gerald Early, a leading authority on race and American culture.

The lecture was the first of four this academic year, all sponsored by the Human-

ities Center and featuring distinguished scholars who have directed a humanities center at their own institutions. The other speakers are historian Caroline Winterer from Stanford, romance studies and global health specialist Deborah Jenson from Duke, and literary critic David Shumway from Carnegie Mellon.

"During this first year, we are looking to our peers for guidance as we develop plans for what our center will be," says Joan Shelley Rubin, the center's interim director and Dexter Perkins Professor in History.

Each speaker will present a public lecture on his or her work, lead a faculty workshop on building a humanities center, and meet with faculty, students, and, eventually, the center's fellows.

Early is a noted critic and professor of English

and of African and Afro-American studies at Washington University in St. Louis, where he was the founding director of its humanities center. His writings on American popular culture involve such topics as music, sports, and black America in the 1960s, and he has appeared in Ken Burns's documentaries on baseball, jazz, and prizefighting.

His talk in September centered on his research on the African-American community in Philadelphia. He began by reading a chapter from his forthcoming book about the city, his home for the first 25 years of his life.

The chapter spotlights the city's annual, one-day Odunde Festival, the largest African-American street festival in the country.

Founded in 1975, the festival draws hundreds of thousands of attendees and spans 12 blocks in one of Philadelphia's oldest historically African-American neighborhoods. In the second part of his lecture, he outlined challenges and opportunities facing cities like Philadelphia, where the majority of residents belong to a minority population.

Gloria Culver, dean of the School of Arts & Sciences, last spring announced the creation of the Humanities Center as a way to support scholarly research, student engagement, and the creation of new knowledge.

Plans for a physical home for the center in Rush Rhees Library are currently under way. Θ



CENTER SPEAKER: Cultural historian Gerald Early (center), a professor of English and of African and Afro-American studies at Washington University in St. Louis, was the first guest lecturer in a series of four talks planned this year to mark the opening of the University's new Humanities Center.

Directorship Endowed and Lectureship Established

University Trustee Ani Gabrellian '84 and her husband, Mark Gabrellian '79, have committed \$2 million to establish a directorship for the University's newly created Humanities Center. The Gabrellians also have pledged additional funds to support an annual lecture series through the center in honor of Ani's parents and their belief in the benefits of a humanistic education.

Both commitments support *The Meliora Challenge:* The Campaign for the University of Rochester, which ends June 30, 2016, as well as one of the four initiatives of University leadership's "Next Level" plan: Humanities and the Performing Arts.

The lecture series is named in honor of

Ani's parents, Hagop and Artemis Nazerian, immigrants from Middle Eastern and Armenian societies who developed interests in history, literature, philosophy, art, and music and developed proficiency in many languages. Rotating at least once every four years between Rochester and New York City, the series will kick off in Rochester on March 2, 2016, with a presentation by Joan Saab, chair of the Department of Art and Art History.

The Gabrellians previously endowed a professorship, and they endowed the Mesrob Mashtots Research Grants for outstanding incoming undergraduates. They are charter members of the George Eastman Circle, the University's leadership annual giving society.

Ask the Archivist: How Wide Was the Horizon?

A question for Melissa Mead, the John M. and Barbara Keil University Archivist and Rochester Collections Librarian.

As a high school student at Eastridge in Irondequoit in the early 1960s, I participated in a program called Wide Horizons at the U of R. In it, high school seniors from schools around Monroe County were selected to come to the University after school once a month during part of the school year to attend talks by professors describing their academic fields. I remember the names of only two: the talk on history was done by Dexter Perkins, and I believe science was done by a professor named Vishniac. There was also a talk on psychology, but I do not recall the professor. We met in the Cutler Union building, now part of the Memorial Art Gallery.

Although when I attended Wide Horizons I already knew that I wanted to attend college, this exposure to the University increased my motivation and made me all the more in love with learning. I eventually returned to the U of R campus for graduate school, having first attended MCC and then receiving my BA at Nazareth College of Rochester. Later, I went on to SUNY Geneseo for my master of library science degree and a career in librarianship.

Can you tell me more about Wide Horizons?

Does it continue, perhaps in some other form?

It was a memorable and valuable experience
for me.—Nancy Salzer '73 (MA), Rochester

Your experience in the Wide Horizons Program beautifully captures its stated goals: "To develop enthusiasm for intellectual pursuits; to provide opportunities for high school students to acquire new ideas through contacts with recognized scholars; to provide a setting in which exceptionally able high school students may think, question, discuss and exchange ideas with others."

Although similar programs had been launched elsewhere, as far as was known at the time, ours was a unique initiative for involving a college or university.

Led by Byron Williams, then the Earl B. Taylor Professor of Education, Wide Horizons had its first "class" in 1957. The target audience was students in the local high schools, especially those in more rural areas. Planning for the program involved teachers and principals from the public schools in Rochester, and in Monroe and Wyoming counties along with faculty and staff from the University.

Wide Horizons students engaged with a veritable Who's Who of University faculty, including professors of English Kathrine Koller and Hyam Plutzik, Glyndon Van Deusen (history), Vera Micheles Dean



FULL ENGAGEMENT: An early member of the former department of education, the multilingual Frances Horler helped establish ties between the College and Rochester schools as well as the Wide Horizons Program, which was designed to engage area young people with the University.

(political science), J. Edward Hoffmeister (geology), Glenn Wiltsey (political science), Frances Horler (education), and Colin Turbayne (philosophy).

According to a 1962 press release, you and 174 other students and teachers from 34 schools had a dinner event in September in Cutler Union, then were divided into five groups and met there for seven monthly sessions; faculty traveled to sessions with students in Wyoming County.

Professor Vishniac joined the University in 1961 and had yet to perfect his "Wolf Trap," a device to obtain soil samples on the surface of Mars; the session you recall with him was entitled "Space Microbiology and Life on Other Planets."

A pioneer in the study of moods, Professor Vincent Nowlis led "Common Sense Psychology vs. Scientific Psychology."

Professor Perkins retired in 1954, but perhaps he filled in on "Leadership and Its Problems" for Van Deusen. You can test your memory for their voices—Perkins's distinctive New England accent, especially—on the Living History website.

Professor Williams retired in 1967 and the Wide Horizons program ran through 1968; other programs were started at that time to engage high school students in the city especially, and continue today in the form of Upward Bound and other initiatives.

Thanks for the Answers

Many thanks to those who wrote in with the words (and corrections) to your class yells and songs in response to questions I posed in the September-October issue. They have been added to http://rbscp.lib.rochester.edu/yells.

And an extra chorus of thanks to John Tobin '64 who telephoned to sing me a bit of "Rex" and shared a source for the music: Songs for Swinging Housemothers will be added to the collection. John's memories of swimming for "Speed" have been added to http://livinghistory.lib.rochester.edu.

The mystery of the mug remains, but thanks to Michael Garfield '58 for some insight and the offer of his Kappa Nu mug—it seems as if 'Jane" might be the name of a Theta Chi girlfriend.

Need History?

Do you have a question about University history? Email it to rochrev@rochester.edu. Please put "Ask the Archivist" in the subject line.



ATTABOY! Rochester teammates congratulate No. 87 Daniel DiLoreto '19 after he caught his first career TD pass on a fake field goal attempt during a 24-17 homecoming victory against Merchant Marine on Meliora Weekend.

HIGHLIGHTS

Football Posts Record Start

Yellowjacket fall sports teams look to the postseason.

By Dennis O'Donnell

The Yellowjackets staged two dramatic rallies in consecutive home games in October, and the football team improved its record to 5–2 with two games left in November.

Rochester defeated the U.S. Merchant Marine Academy, 24–17, during Meliora Weekend.

Two weeks later, the Yellowjackets produced three touchdowns in the last 7:37 for a 33–30 victory over Union College.

In just his third career start, quarterback Justin Redfern '16 completed 21 of 35 passes for 384 yards and four touchdowns

against Union. He was not sacked and did not throw an interception. Farid Adenuga '16 caught three TD passes and Kyle Allegrini '18 had the game winner—a 50yard catch-and-run with 2:05 remaining.



TOP TEAMS: Led by graduate student Victoria Stepanova and junior Annie Peterson (above, left to right) along with senior Catherine Knox, the Yellowjacket women's cross country team has finished among the top at several competitions this fall.

Redfern stepped into the starter's role when Dan Bronson'18 suffered a hand injury against St. Lawrence on October 3.

Redfern's yardage total was the second highest in school history, behind Jeff

Wittig '86, who threw for 398 yards against Denison in 1984. Redfern and Bronson both put their names into the Rochester record book this year with four TD passes in a game. Bronson did it against Alfred State on November 19—with all four TD passes coming in the first quarter of a 61–0 victory.

The record was set in 1967 by Bob Young '69 against RPI. It was equaled by five other players before Bronson and Redfern did it this year: Greg Conrad '72 vs. Washington in 1971, Dave Boyce '89 vs. Denison in 1988, Kapps Killingstad '10 vs. Gettysburg in 2006, Patrick Keegan '11 vs. St. Lawrence in 2008, and Braezen Subick '12

vs. Union in 2011.

Some trickery helped the win over Merchant Marine. Placekicker Andrew Haber '16 threw a TD pass to tight end Daniel DiLoreto '19 on a fake field goal attempt, which tied the score. Myles Allen '17 rushed for two second-half TDs to pail it down

As November approached, the fall teams were having successful seasons:

Cross Country: The men and women were headed for Waltham, Massachusetts, for the UAA championships on Halloween and the NCAA Atlantic Regional championships in Mount Morris, New York, in mid-November. Dan Nolte was 20th of 231 individuals at the Rowan (University) Border Battle. The women's team placed three runners in the top-10 finishers in the same race: Anne Peterson '17, Catherine Knox '16, and graduate student Victoria Stepanova. They helped Rochester to a third-place finish out of 24 teams.

Field Hockey: Rochester was preparing to host a semifinal game in the Liberty League championships after fashioning a 4–2 league record. The Yellowjackets were 13–4 overall with two games left in October. Goaltender Tara Lamberti '16 had the third-best save percentage in Division III, while Michelle Relin '16 was one of the top scorers.

Rowing: The Yellowjackets had the highest finish among Division III schools in the four-plus coxswain and eight-plus-coxswain at the Head of the Schuykill Regatta in Philadelphia in late October. A Halloween date in the Head of the Fish Regatta in Saratoga, New York, awaited to conclude the fall portion of the schedule.

Soccer: Jeff Greblick '16 scored two historically important goals on October 24 as Rochester defeated Moravian College, 3–0. It was the team's 600th all-time victory. Rochester is just the eighth Division III school to reach the 600-win level among men's programs. The women, who



YELLOWJACKETS

Alumni Inducted into Athletics Hall of Fame

HONOREES: This year's inductees into the University's Athletics Hall of Fame include (back row, left to right): Geoff Long '94 (football), Jim Ritzel '93 (baseball), Seth Hauben '05, '11S (MBA) (basketball), John Biondolillo '84 (golf), John Minora '81 (football); (front row, left to right) Alan Smith '90 (track and cross country), Anni McDonough Zukauskas '98 (field hockey), Erika Smith '04 (basketball), and Leslie Hartman '94 (volleyball).

have been ranked in the regional top 10 for much of the season, had a three-game road winning streak heading into three UAA games—two of them at home. The men were 5–3–5 (0–1–3 UAA) and the women were 8–5–1 (2–2–0 UAA).

Volleyball: Rochester stood at 13–13 overall and secured the No. 6 seed for the

UAA championships in the first week of November at Rochester. The Yellowjackets were 7–0 on their home court through late October. 3

Dennis O'Donnell is director of athletic communications for the Department of Athletics and Recreation.

HONORS

Introducing the Garnish Award Winners

A total of 10 student-athletes have been selected to receive Garnish Scholar Awards, the highest honor presented by the Department of Athletics and Recreation to recognize the academic achievements and athletic skills of students.

An alumni committee organized by the Friends of Rochester Athletics reviews nominations of students from varsity teams and selects a handful each year as Garnish Scholars.

The 2015-16 academic year's honorees are: **Neil Cordell** '16, a double-major in economics and political science from York, England; squash.

Boubacar Diallo '16, a mechanical engineering major from Bignona, Senegal; outdoor track and field.

Jennifer Ford '16, a chemical engineering major from Webster, New York; volleyball.

Megan Fujiyoshi '16, a double-major in brain and cognitive sciences and psychology from Hopkinton, Massachusetts; lacrosse.

Evan Janifer '16, a financial economics major from Montclair, New Jersey; baseball.

Catherine Knox '16, a mechanical engineering major from Worcester, Massachusetts; cross country and track and field.

Tara Lamberti '16, a psychology major from Penfield. New York: field hockey.

Victoria Luan '16, a chemistry major from South Surrey, Canada; swimming.

Matthew Mender '16, a biomedical engineering major from Glens Falls, New York; football.

Benjamin Shapiro '16, an English major from Scarsdale, New York; tennis.

The Garnish program was created in honor of Lysle (Spike) Garnish, coach and mentor to Rochester student-athletes from 1930 to 1948. He became a trainer and assistant basketball coach in 1931. He was named an assistant baseball coach in 1932, and was an assistant football coach from 1945 to 1948.

-Dennis O'Donnell