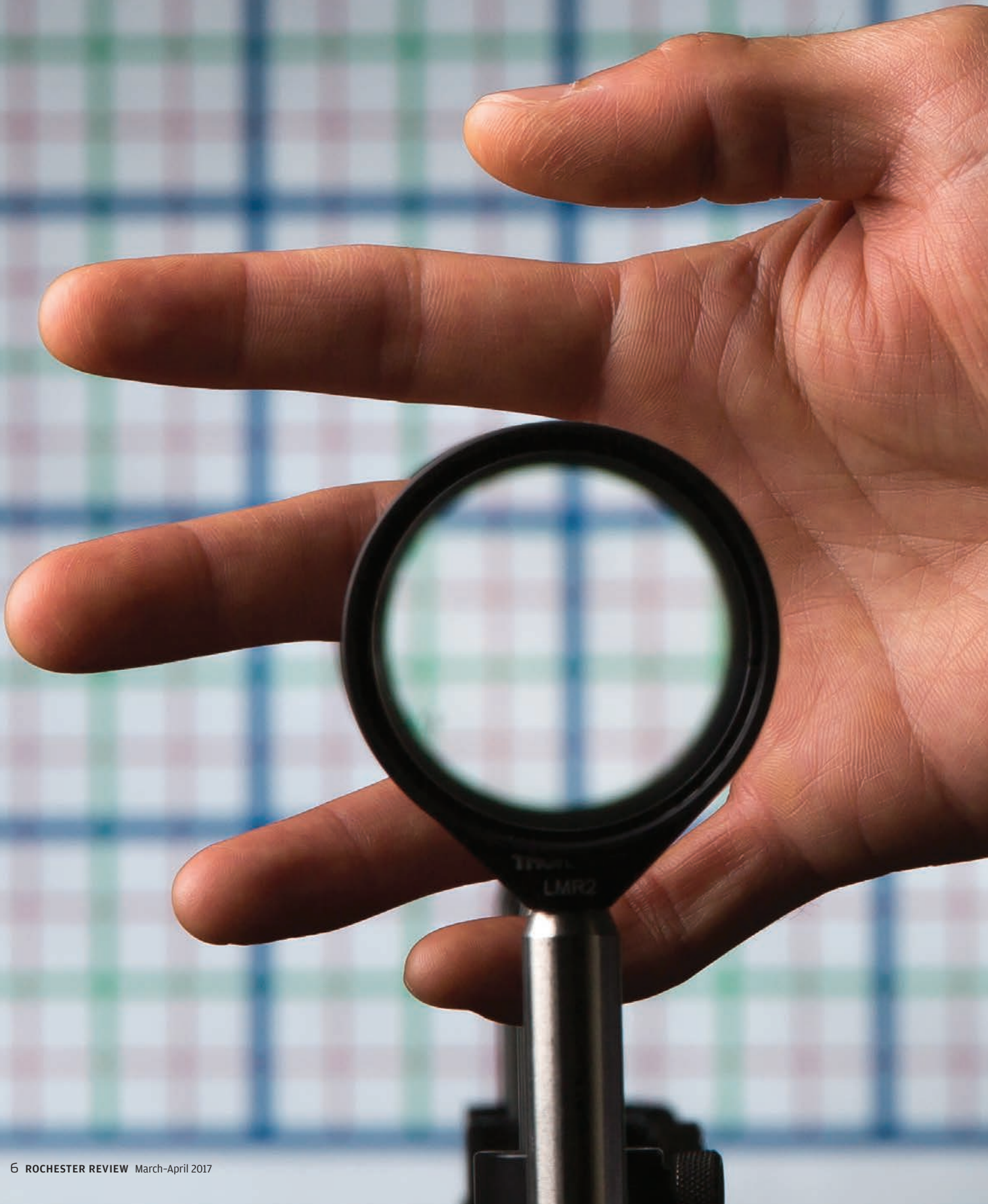
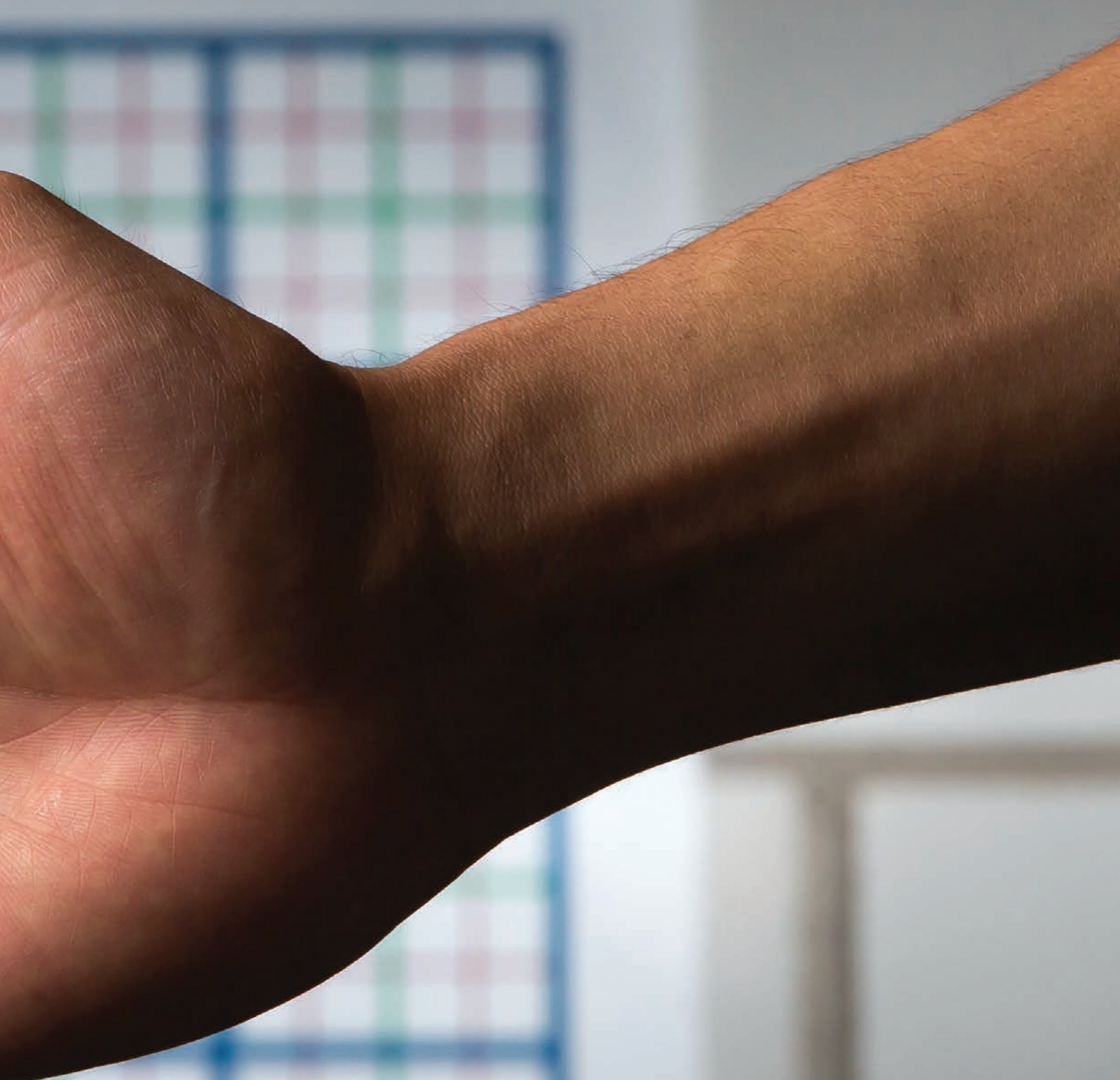


In Review





TECHNOLOGY TRANSFER

Patented Perspective

ROCHESTER CLOAK: A research project that uses inexpensive, readily available lenses to cloak objects from view has received a patent. Physics professor John Howell and then graduate student Joseph Choi '16 (PhD) first demonstrated the array of lenses in 2014 and have since worked to refine it. Known as the "Rochester Cloak," the system is formally known as the "Paraxial Cloak Design and Device"—at least that's what the U.S. Patent Office called it when issuing Patent No. 9,557,547.

PHOTOGRAPH BY ADAM FENSTER



SOLAR TECHNOLOGY
Rockin' the Boat

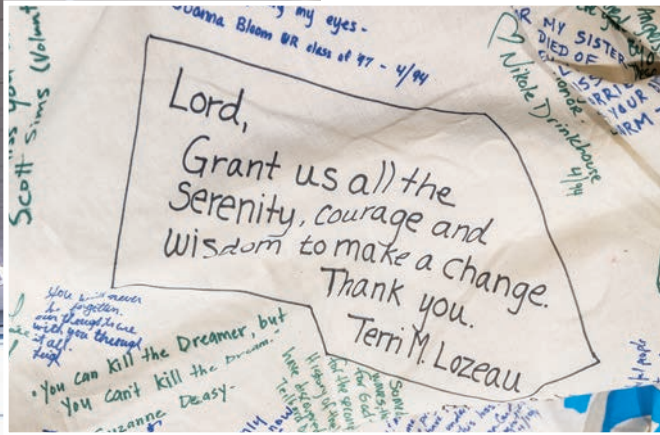
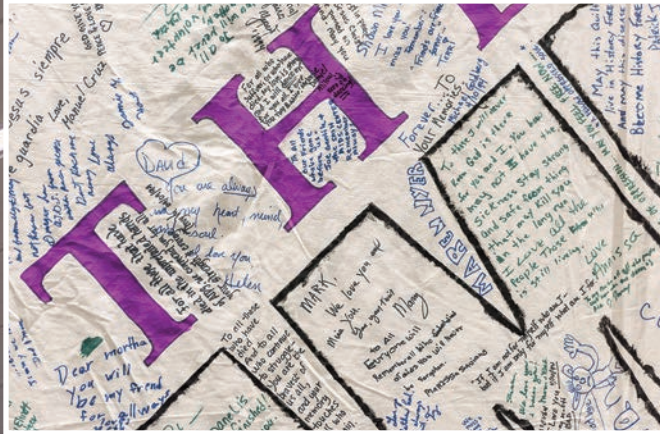
SOLAR SYSTEM: A team of students—(clockwise from lower left) Ariane Hasbrouck '19, Andrew Gutierrez '19, Edward Ruppel '17, Ben Martell '19, Chris Dalke '19, and Matt Dombroski '17—work on the hull of their entry for this spring's Solar Splash competition. Participants in the competition, held this June in Dayton, Ohio, are challenged to design a boat that can propel itself through water using only solar power. PHOTOGRAPH BY ADAM FENSTER





UNIVERSITY OF ROCHESTER

THE
NAMES
PROJECT
APRIL 8, 9 & 10
FIELD HOUSE



PRESERVING HISTORY
Fabric of Time

MEMORIAL MOMENT: A 12-foot square panel bearing signatures and comments from members of the University and the Greater Rochester communities—many of whom had family members and friends who died of AIDS—went on display in Rush Rhees Library this winter. With messages ranging from political calls for bureaucracies to “wake up” to deeply personal tributes —“Jim, You will never be forgotten. I was more because of you.”—the panel was originally signed in 1994 as part of the national Names Project AIDS Quilt, which was then on display in the Goergen Athletic Center. The panel was saved by Linda Dudman, associate director of health promotion at University Health Service. After a week on exhibit in Lam Square in the library, the panel was deposited in the Department of Rare Books, Special Collections, and Preservation.

PHOTOGRAPHS BY ADAM FENSTER



VISIONARY: William Blake's work has inspired musicians, authors, and even television advertisers.

ART & LITERATURE

An 'Immortal Hand'

Romantic-era poet William Blake has left fingerprints all over contemporary pop culture.

By Jeanette Colby

Poet and artist William Blake created some of the most indelible work of the Romantic era. But for more than two centuries, his works posed a technical challenge. Literary critics claimed Blake's writing, and art historians, his illustrations—with neither camp able to do justice to the full body of his work.

Two decades ago, the William Blake Archive—sponsored by the University with the Library of Congress and the University of North Carolina at Chapel Hill—set out to take advantage of the possibilities of digital media. For the first time, the archive fully brought together Blake's writings and illustrations, as he had originally produced them. The archive—coedited by Morris Eaves, a professor of English and the Richard L. Turner Professor of Humanities at Rochester—now holds almost 7,000 images from 45 of the world's research libraries and museums, and a transformative redesign, launched in December, makes the site more accessible than ever before. The redesigned archive was recently nominated for an international Digital Humanities Award, in the category of Best Digital Humanities Tool. It complements the leading academic journal for Blake studies, *Blake/An Illustrated Quarterly*, which is also coedited by Eaves and marks the 50th anniversary of its founding this year.

But you don't need to consult the archive or the journal to feel Blake's influence, which pervades popular culture through music, literature, film, and television. **R**

Visit the William Blake Archive at Blakearchive.org.



English heavy metal singer Bruce Dickinson, lead singer of Iron Maiden, released a solo album, *The Chemical Wedding*, in 1998. Inspired by Blake, the recording features songs such as "The Book of Thel" and "The Gates of Urizen."

Nick Cave and the Bad Seeds recorded "A Weeping Song," in response to Blake's poem "Laughing Song," for their 1990 album, *The Good Son*.



The 1981 movie *Chariots of Fire* took its name from a line in Blake's "Jerusalem," and Sir Hubert Parry's musical setting of the poem played in its final scene. Parry's work has been featured in many other films, too, including *Four Weddings and a Funeral* (1994), *The Loneliness of the Long Distance Runner* (1962), and *The Man Who Fell to Earth* (1976).



"My Blakean Year" was written and recorded by Patti Smith in tribute to the poet, part of her 2004 album, *Trampin'*.



In the 1982 science fiction movie *Blade Runner*, protagonist Roy Batty recites a variation of a verse from Blake's *America a Prophecy*.

Film & Television



Actor Kit Harrington recites Blake's most famous poem, "The Tyger," in a recent television ad for a car made by the auto company Infiniti.

Music

The band U2 released the album *Songs of Innocence* in 2014. The group is expected to release a follow-up album, *Songs of Experience*, this year.



The band the Doors took its name from a phrase in Blake's 1970 illuminated book, *The Marriage of Heaven and Hell*: "If the doors of perception were cleansed every thing would appear to man as it is, infinite." Their debut album includes the song "End of the Night," inspired by Blake's poem "Auguries of Innocence": "Some are Born to sweet delight / Some are Born to Endless Night."

Bob Dylan collaborated with Allen Ginsberg in 1971 to record two Blake poems as songs: "Nurse's Song" and "A Dream."

Allen Ginsberg also recorded the album *Songs of Innocence and Experience* "by William Blake, tuned by Allen Ginsberg," released in 1970.

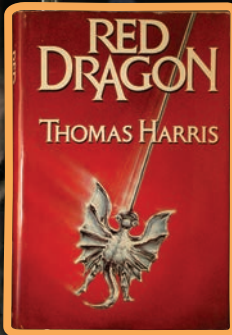


In Salman Rushdie's 1988 novel, *The Satanic Verses*, characters discuss *The Marriage of Heaven and Hell*.



Like the Doors, Aldous Huxley borrowed Blake's phrase for his 1954 book, *The Doors of Perception*, a collection of essays about his experiences with the drug mescaline.

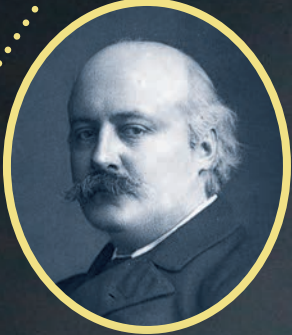
Literature



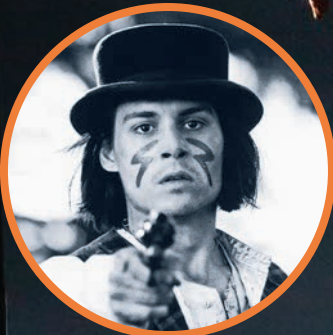
Blake's painting *The Great Red Dragon and the Woman Clothed in Sun* and his poem "Auguries of Innocence" both play a prominent role in the 1981 novel *Red Dragon* by Thomas Harris, which introduced the character Hannibal Lecter, best known from Harris's sequel, *The Silence of the Lambs*.



In 1916, Sir Hubert Parry set to music Blake's short poem "Jerusalem"—from the preface to his epic poem "Milton," composed between 1804 and 1811—and the piece was quickly embraced by a war-weary England. On the centenary of Blake's death in 1927, some called for its adoption as the country's national anthem.



Johnny Depp plays a character named William Blake in the 1995 movie *Dead Man*, which features lines from "Auguries of Innocence," *The Marriage of Heaven and Hell*, and his unfinished poem, "The Everlasting Gospel," as well as Blakean themes and symbols.



Children's author Maurice Sendak, most famous for his 1963 picture book, *Where the Wild Things Are*, frequently acknowledged Blake's influence on his work. He was also a significant Blake collector.

HUMANITIES CENTER

Whither Democracy?

Finding the meaning in human events, at a teach-in.

The presidential election of 2016 raised some difficult questions about democracy and citizenship. Depending on whom you asked, the election of Donald Trump as president signaled the fragility of American democracy, the beginning of a frightening descent into racial and ethnic nationalism, and a rejection of science and reason; or a populist revival spearheaded by newly energized rural and small-town voters who rightly believed that they and their communities had been maligned, as well as written-off or harmed outright by the policies of self-satisfied coastal elites.

Parsing the meanings and implications of watershed human events—through open debate—is a big part of the mission of universities. In February, with that mission in mind, the Humanities Center held Knowledge and Citizenship: A Teach-In.

As co-organizer Joan Saab, chair of the Department of Art and Art History, noted, contemporary American (and global) politics teaches, if nothing else, that “history matters, and culture matters.”

The event was inspired by, but not explicitly about, the 2016 elections. Faculty in disciplines such as English, history, anthropology, and art and art history spoke about their research in response to a call from organizers for work that broadly relates “to the current sociopolitical climate.” Faculty members discussed with attendees the relationship between art and propaganda; the challenge of a free press; the role of intellectuals in a democracy; and whether events such as Trump’s election and the success of the Brexit movement were part of a global backlash against “neoliberal elitism.”

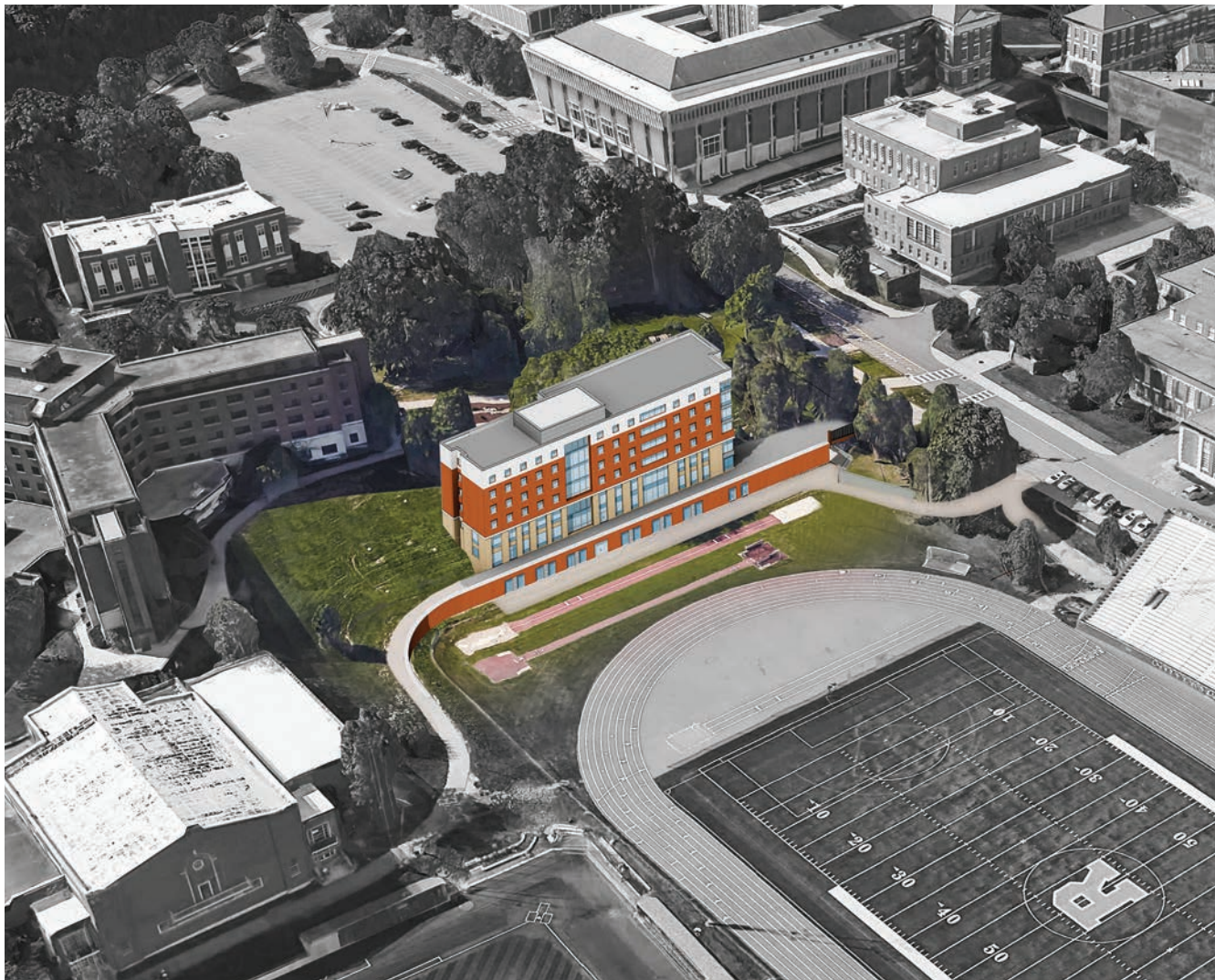
It’s no secret that universities are designed to further science and foster reason, and that they tend to embrace pluralism—which, in the 21st century, also means globalism. But within those parameters, there’s plenty of room for disagreement, discussion, and soul-searching. Said Joan Rubin, the Dexter Perkins Professor in History and director of the Humanities Center: “The humanities teach us the value of critical thinking, of inclusion, of empathy. The humanities teach us also about our connections to other people across time and geography, and we learn as well about our differences.”

—KAREN MCCALLY '02 (PHD)

For more about the Humanities Center and its programs, visit Rochester.edu/humanities.



“KNOWLEDGE AND CITIZENSHIP”: During a teach-in at the Humanities Center this winter, faculty members presented and discussed research related to the sociopolitical climate in the United States and abroad. The daylong session was titled “Knowledge and Citizenship.”



STUDENT LIFE

New Residence Hall Set to Open This Fall

Genesee Hall features living spaces for freshmen, new locker rooms, and other facilities.

By Sara Miller

A new residence hall that's rising near Fauver Stadium is scheduled to open in time for this fall's arrival of the Class of 2021.

The 72,000-square-foot building, named Genesee Hall, overlooks the University's Brian F. Prince Athletic Complex. Featuring four residential floors for about 150 freshman students, the building will also include meeting rooms for study groups and workshops, a new locker room facility, and training rooms for athletics programs.

STADIUM SITE: Located between Fauver Stadium and Susan B. Anthony Halls, a new residence hall will feature living space for about 150 freshmen and new locker rooms for men's and women's outdoor athletics programs.

The new building follows O'Brien Hall, completed in 2012, as the newest undergraduate residence to be built on the River Campus since 1968.

The facility's top four floors of residential space will feature single and double bedrooms; the main level will be dedicated to academic and student life services with meeting rooms and offices.


In the residential space, architects designed a bathroom area in the center of each floor with six individual, fully equipped bathrooms—each pod containing a private shower, sink, and toilet.

Additionally, the building will include three single bedrooms with attached handicapped-accessible bathrooms in compliance with standards set by the Americans with Disabilities Act.

The lower, field level of the building, called the Varsity House, will feature new locker rooms for men's and women's outdoor athletics teams as well as sports medicine and team equipment rooms.

The project is targeting LEED Silver (Leadership in Energy and Environmental Design) designation.

Among the sustainable features of the building are water-efficient fixtures in key areas, designed to reduce water usage by 45 percent, and the implementation of an energy model to address the challenge of providing an abundance of fresh air to a variety of spaces, such as the locker rooms.

The concept for the project is by Ayers Saint Gross, Architects and Planners. The design build team is the Pike Company in association with SWBR Architects. 



HUMANITIES

Longing for Liszt

Pianist and composer Franz Liszt brought star power to 19th-century music.

By Kathleen McGarvey

More than a hundred years before Beatlemania, audiences went wild for pianist and composer Franz Liszt, in thrall to his charisma and dramatic musicianship. Women vied to garner scraps of his hair or clothes or broken piano strings. German poet Heinrich Heine, his contemporary, invented a term for the sensation he created: “Lisztomania.”

“It was a very similar phenomenon” to the Beatles craze, says Robert Doran, an associate professor of French and comparative literature. “His sex appeal, his looks, his magnetism—all those things became important, as they’d never been important for a musician before.”

But by no means was Liszt all flash and flamboyance. “Some commentators consider him to be the greatest musician of the 19th century—greater even than Beethoven in terms of all-around musicianship, and in terms of his impact on performance,” Doran says.

When he died in 1886, at age 74, Liszt left behind some 1,400 works. He created the symphonic poem and wrote instrumental music, piano works, and sacred choral music. He produced new sounds and effects that relied on extreme technical prowess at the keyboard. He was an unrivaled musical transcriber who, by arranging others’ symphonic works for the piano, made music more accessible to a general public. And his influence reverberates in the works of composers such as Bartok, Grieg, Saint-Saens, Tchaikovsky, and Rachmaninoff.

In collaboration with Eastman School of Music faculty Jonathan Dunsby, a professor of music theory, and Ralph Locke, a professor emeritus of musicology, Doran was the principal organizer of a three-day international symposium on Liszt and virtuosity that was held at the University in

CAPTIVATING: Franz Liszt (left, in a portrait by Henri Charles Lehmann) played in ways intended to excite audiences—and succeeded, as shown (top right) in a caricature by Theodor Hosema of an 1842 concert in Berlin.

TRENDSETTER

Liszt List

Franz Liszt—who once famously declared “*Le concert, c’est moi*”—changed classical music in a dizzying number of ways:

First “star” of the musical world

Inventor of the public concert tour

Coiner of the term “solo recital”

Inventor of the master class

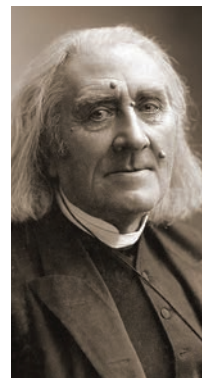
Creator of many of the conventions of modern piano performance, including the pianist entering from the wings, playing in profile to the audience, and performing from memory

Performer and composer who pushed the boundaries of piano technique to their limits

Most important **musical transcriber**, who made music newly accessible to the public

Champion of the musical avant garde of his day

—Kathleen McGarvey



MAESTRO: Liszt’s innovations are taken for granted today.



early March. It brought together some of the world’s leading Liszt scholars and scholar-performers—including Alan Walker, author of a monumental three-volume biography—to consider the ways in which Liszt transformed virtuosity. The conference was among this year’s Humanities Projects, a program that champions work by Rochester faculty in all humanistic fields.

A child prodigy who studied piano with Beethoven’s former student Carl Czerny and with composer Antonio Salieri—best known to modern audiences as the protagonist of *Amadeus*—Liszt took over the financial support of his family at age 15, after the death of his father. But grief drove him from the stage, and he considered a clerical life. Among the influences that called him back was hearing violinist Niccolò Paganini perform. The young man determined to achieve the same level of virtuosity on the piano that Paganini had on the violin.

He set forth on his career at a time when music was taking on a much more expansive social role. Formal musical performances had been the territory of the aristocracy; in the 19th century, with the rise of bourgeois culture, a concert-going public emerged. “People were learning, appreciating, and enjoying music—and supporting it monetarily, so that you could start to make a lot of money from it,” says Doran. Liszt launched one of the first concert tours, the forerunner of today’s “worldwide tours.” Because the apparatus of touring didn’t yet exist, Liszt did everything, from booking the venue to advertising the concert, before he took the stage.

His deft management of the business side of performing didn’t detract from popular adulation of his artistry. “He basically incarnated what we now call the modern virtuoso,” Doran says. And audiences claimed


for music a newly lofty status. “It was the exaltation of genius, musical genius, that gave the musician a new social status,” he says.

Appealing to the public meant that virtuosity and public spectacle took on new significance, too. Liszt created the conventions of the modern classical music performance, repositioning the piano in profile to the audience, so that his playing could be better seen—before Liszt, pianists performed with their backs to the audience. It was said that to really hear Liszt, you had to see him. “His performances were also a visual experience,” Doran says.

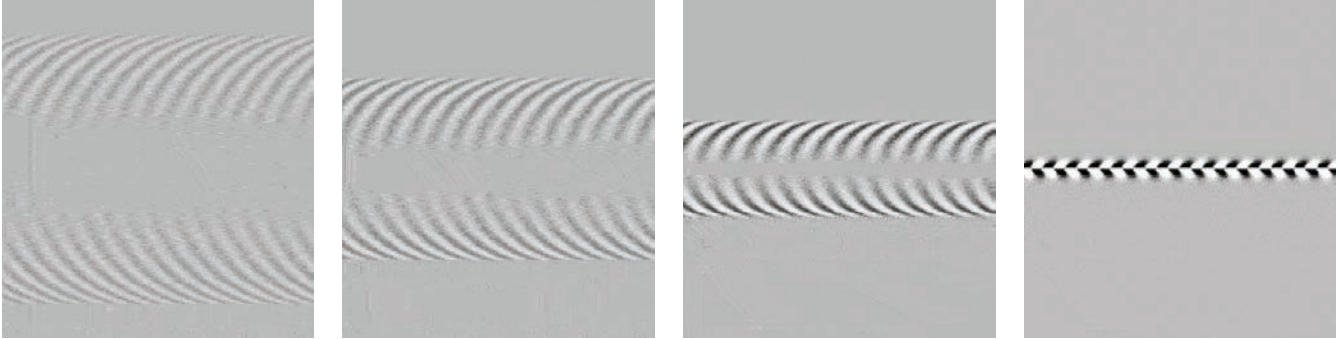
Liszt invented the practice of performing from memory. Playing without sheet music had been considered less than serious, because it looked like improvisation.

And Liszt excelled at improvisation, too. Concerts—which, before he remade them, were more like variety shows—involved a musician playing others’ works, original works, and improvisations. “Often the audience would provide a theme, and then the virtuoso would be called upon to play on it, to make sure that you hadn’t written on it before. It was very important to show that you were able to improvise in the moment,” Doran says.

But in Liszt’s day, virtuosity was in tension with so-called “serious music,” he adds. Liszt was criticized for being too much of a showman, and using virtuosity to bring music down to public tastes. It “often unjustly marred his reputation as a composer,” Doran says. But ultimately, Liszt redefined virtuosity as something artistically potent and not mere showmanship.

“It’s difficult to understand his innovations because we take them all for granted now,” says Doran. 

With reporting by Helene Snihur.



NEEDLES KNOW: A new beam pattern, known as a “needle pulse,” may have applications in imaging as well as manufacturing.

New ‘Needle Pulse’ Beam Pattern Packs a Punch

A new beam pattern devised by Rochester researchers could bring unprecedented sharpness to ultrasound and radar images, burn precise holes in manufactured materials at a nano scale—and even etch new properties onto their surfaces.

These are just a few of the items on the “Christmas tree” of possible applications for the beam pattern that Miguel Alonso, professor of optics, and Kevin Parker, the William F. May Professor of Engineering, describe in a recent paper in *Optics Express*.

The pattern results from what Parker calls “an analytically beautiful mathematical solution” that Alonso devised. It causes a light or sound wave to collapse inward, forming—during a mere nanosecond or less—an incredibly thin, intense beam before the wave expands outward again.

“All the energy fits together in time and space so it comes together—*bam!*—like a crescendo,” says Parker, explosively clapping his hands for emphasis. “It can be done with an optical light wave, with ultrasound, radar, sonar—it

will work for all of them.”

Most traditional beam patterns maintain a persistent shape as long as the source is operating.

However, such patterns are not as intense as the beam created by Parker and Alonso, which the researchers call a “needle pulse beam.”

“It is very localized, with no extensions or side lobes that would carry energy away from the main beam,” says Alonso.

Side lobes, radiating off a beam like the halos sometimes seen around a car headlight,

are especially problematic in ultrasound. “Side lobes are the enemy,” Alonso says. “You want to direct all of your ultrasound wave to the one thing you want to image, so then, whatever is reflected back will tell you about that one thing. If you’re also getting a diffusion of waves elsewhere, it blurs the image.”

In addition to ultrasound, microscopy, radar, and sonar. Alonso says industrial applications might include any form of laser materials processing.

—Bob Marcotte

Rochester Drug Extends Effectiveness of HIV Therapy

A drug developed at the Medical Center extends the effectiveness of multiple HIV therapies by unleashing a cell’s own protective machinery on the virus. The finding, published in the *Journal of Clinical Investigation*, is an important step toward the creation of long-acting HIV drugs that could be administered once or twice per year, in contrast to current HIV treatments that must be taken daily, according to Medical Center researchers.

The drug, called URMC-099, was developed in the laboratory of neurology professor Harris (Handy) Gelbard, the director of the Center for Neural Development and Disease, who has studied HIV/AIDS for the past 25 years.

When combined with “nano-formulated” versions of two

commonly used anti-HIV drugs (also called antiretroviral drugs), the Rochester drug acts by interrupting a process called autophagy, which normally allows cells to get rid of intracellular “trash,” including invading viruses. In an HIV infection, the virus prevents cells from turning on autophagy. But when the new drug lifts the brakes on autophagy, cells are able to digest any virus that remains after treatment with antiretroviral therapy, leaving cells free of virus for extended periods of time.

The finding builds on previous research that Gelbard conducted with Howard Gendelman, a professor and chair of the Department of Pharmacology/Experimental Neuroscience at the University of Nebraska Medical Center. —Emily Boynton



VIRUS VILLAIN: By helping cells unleash their ability to fight viruses, a Medical Center-developed drug may boost HIV-fighting therapies.

Knowing Numbers: A Primate Ability?

Several primate species may be able to use numbers to estimate amounts, according to the latest work of a Rochester lab that's long been exploring how humans develop concepts such as simple counting and complex mathematical reasoning.

In a study published in the journal *Nature Communications*, the team of Jessica Cantlon, associate professor of brain and cognitive sciences, PhD candidate Steve Ferrigno, Steven Piantadosi, an assistant professor of brain and cognitive sciences, and Julian Jara-Ettinger, a postdoctoral researcher in brain and cognitive sciences at MIT, compared number perception for a single task that was performed across a diverse testing population. The results suggest that primates have the ability to distinguish large and small quantities of objects, irrespective of the surface area they appear to occupy.

The new work follows earlier studies led by Cantlon who, early in her career at Rochester, began studying primates in a search for the origins of numeric understanding. In 2013, she, Ferrigno, and colleagues at Rochester and Rochester's Seneca Park Zoo made a surprising discovery: in an experiment using varying quantities of peanuts, baboons (even as young as one year of age) clearly showed an ability to distinguish between large and small quantities of objects.

But the finding raised another



HOW MANY MONKEYS? New Rochester research indicates that rhesus monkeys and other primates can use numbers to estimate amounts.

question. To what extent might that ability be influenced by other dimensions of those objects—such as their relative surface area—in addition to their number?

For the new study, the group looked at both humans and primates: adults and children in the United States; adults of the Tsimane', a predominately "low numeracy" cultural group that inhabits an area of remote rain forest in Bolivia, and that has been long studied by Piantadosi and Jara-Ettinger; and rhesus monkeys, a species with strong neural and cognitive similarities to humans.

The researchers found that all groups showed a bias toward numbers over surface area in their estimations.

"This shows that the spontaneous aspect of extracting numerical information likely has an evolutionary basis, because this has been seen across all humans and also with other primate species," says Ferrigno.

The study also showed that the bias toward the numerical dimension was strongest in humans compared to primates, and was correlated with increasing age and math education in humans.

—Bob Marcotte

'Chemo-brain' Is Pervasive, Study Shows

The largest study of a condition known as "chemo-brain" shows that women with breast cancer report it's a substantial problem after chemotherapy for as long as six months after treatment, according to investigators at the Wilmot Cancer Institute.

Scientists have known that cancer-related cognitive impairment, which includes problems with memory, attention, and processing information, is an important issue for patients. Yet previous studies have left questions about when and why it occurs and who is most likely to develop the condition.

Led by Michelle Janelsins, an assistant professor of surgery in Wilmot's Cancer Control and Survivorship Program, and published in the *Journal of Clinical Oncology*, the new study compared 581 breast cancer patients treated at clinical sites across the United States and 364 healthy people, with a mean age of 53 years in both groups. Using a well-validated measurement of impairment, investigators found that compared to healthy people, the scores of women with breast cancer exhibited 45 percent more impairment. Over a period of nearly a year, 36.5 percent of women reported a decline in scores compared to 13.6 percent of the healthy women.

—Leslie Orr

Building a Better Microbial Fuel Cell—with Paper

Researchers at the University have made significant progress toward using bacteria to generate an electrical current, a century-old concept known as a microbial fuel cell.

In work published in *ACS Energy Letters*, Kara Bren, a professor of chemistry, and Peter Lamberg, a postdoctoral fellow, report that they have developed an efficient electrode for a fuel cell that relies on bacteria found

in wastewater by using a new preparation of a common household material: paper.

The breakthrough is important because the new electrode is less prone to corrosion and clogging than previous methods.

Until now, most electrodes used in wastewater have consisted of metal, which rapidly corrodes, or carbon felt. While the latter is the less expensive alternative, carbon felt is porous and

prone to clogging.

Bren and Lamberg's solution was to replace the carbon felt with paper coated with carbon paste, which is a simple mixture of graphite and mineral oil. The carbon paste-paper electrode is not only cost-effective and easy to prepare, but also outperforms carbon felt.

In making their electrode, Bren and Lamberg created a layered sandwich of paper, carbon paste,

a conducting polymer, and a film of the bacteria. The paper electrode had an average output of 2.24 amps per unit area, compared to 0.94 with the felt anode.

"We've come up with an electrode that's simple, inexpensive, and more efficient," says Lamberg. "As a result, it will be easy to modify it for further study and applications in the future."

—Peter Iglinski

Federal Judge Jimmie Reyna '75 to Address Commencement

Jimmie Reyna '75, a circuit judge for the United States Court of Appeals for the Federal Circuit and the first Latino to serve on the court, will deliver the commencement address to the Class of 2017 at this spring's ceremony.

During the ceremony on May 21, Reyna will also receive the Charles Force Hutchison and Marjorie Smith Hutchison Medal. It's the University's highest alumni award, presented for career achievements and notable service.

"It is an honor to welcome back to Rochester the Honorable Judge Reyna," said Joel Seligman, University president, CEO, and

G. Robert Witmer, Jr. University Professor. "He is an outstanding judge, esteemed for his integrity and judiciary achievements, as well as his strong commitment to community."

Appointed to the U.S. Court of Appeals by President Barack Obama in 2011 and unanimously confirmed by the U.S. Senate, Reyna is widely recognized as an international trade lawyer respected for his skill in trade policy, business regulation, and compliance law, and has a distinguished track record of leadership in the Hispanic legal community.

He graduated from the

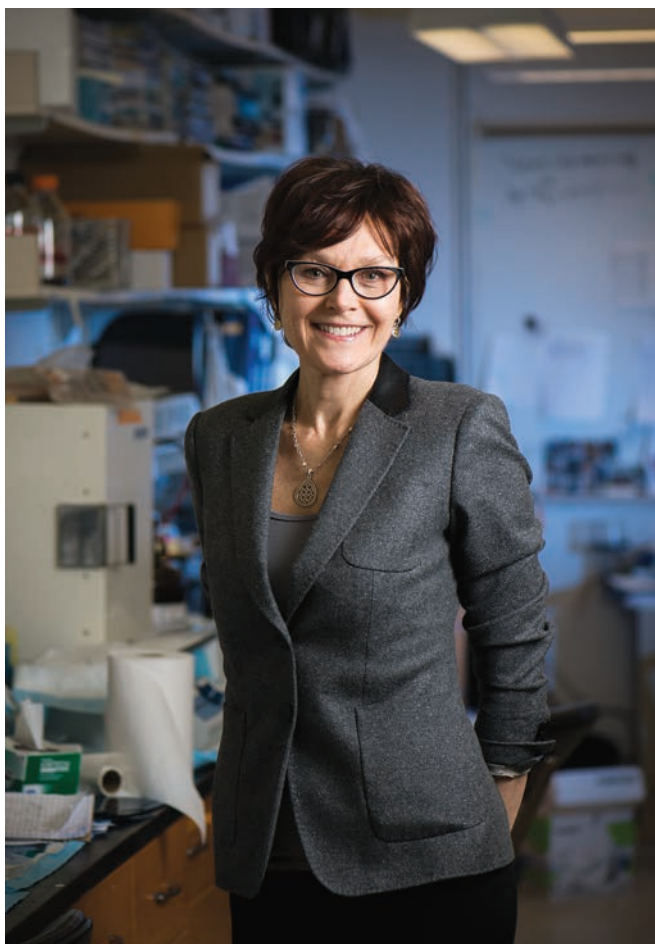
University with a bachelor's degree in history in 1975, at the same time as his wife, Dolores, who earned a bachelor's degree in psychology.

He received a law degree from the University of New Mexico School of Law in 1978. The Reynas' youngest son, Justin, is also a Rochester alumnus, graduating in 1999 with a degree in religion.

Additional information about University commencement ceremonies and related activities is available at Rochester.edu/commencement. The May 21 ceremony will be live-streamed on the web.



HONOREE: In addition to speaking at this spring's commencement ceremony, Reyna will receive the University's highest alumni award.



SCIENCE LEADER: An internationally recognized biochemist, Maquat also is being honored for her work to mentor students, particularly women.

International RNA Society Recognizes Biochemist

Lynne Maquat has been chosen to receive the 2017 Lifetime Achievement Award in Science from the RNA Society.

The international group of 1,000 members is organized to promote research in developmental biology, evolutionary biology, biochemistry, biomedical sciences, chemistry, genetics, and virology as they relate to questions of RNA structure and function.

Maquat was selected in recognition of her biochemical work to unravel what happens in cells during disease and for her work to mentor new generations of researchers and to advocate for young women in the sciences.

Maquat, who holds the title of J. Lowell Orbison Endowed Chair and Professor in the Department of Biochemistry and Biophysics at the School of Medicine and Dentistry, began her professional career studying inherited anemias.

She discovered a quality control process that blocks the creation of toxic proteins that cause

disease, a process that plays a part in one-third of all inherited diseases, such as cystic fibrosis and muscular dystrophy, and one-third of all acquired diseases, including a number of cancers.

She is the founding director of the University's Center for RNA Biology: From Genome to Therapeutics.

The National Institutes of Health has continuously funded Maquat's research for the past 34 years.

She's published more than 150 papers and reviews and one of her projects recently received an NIH MERIT award, a highly coveted type of grant that provides long-term, stable support to investigators whose research skills and productivity are distinctly superior, as judged by their peers and leaders at the NIH. Maquat joined the Medical Center's faculty in 2000 and has been a member of the RNA Society since its formation in 1993.

She will accept the award at the society's 22nd annual meeting this June in Prague.

Medical Center to Study Infectious Threats

The Medical Center will receive up to \$9 million from the Centers for Disease Control and Prevention to conduct surveillance and research on infectious diseases over the next five years.

The award renews the University's role as a member of the CDC's Emerging Infections Program, a national network that keeps watch on the activity of several infectious threats and conducts studies that guide policy related to prevention and treatment.

The New York State Emerging Infections Program, based at the Center for Community Health, partners with the New York State Department of Health to track a wide range of diseases that have an impact on the public. The program also evaluates new therapies and prevention methods, such as the use of the HPV vaccine to curtail human papillomavirus infection, to determine effectiveness across the population.

The Rochester region and several counties surrounding Albany comprise the New York State program, one of just 10 sites selected by the CDC. Data from New York are combined with data from sites in California, New Mexico, Minnesota, Tennessee, and other locations. Together, the communities are roughly representative of the U.S. population on the basis of age, gender, race, and health indicators such as population density and poverty level.



GUEST: During her visit, author and educator DeGruy met with students and delivered the annual MLK address.

MLK Speaker Joy DeGruy: 'We Need to Heal'

Nationally renowned author, educator, and activist Joy DeGruy urged students and other members of the University community to recognize the cognitive dissonance that's inherent in a nation whose principles are based on freedom and democracy but that's still living with the legacy of slavery.

DeGruy, an assistant professor at Portland State University and the author of *Post Traumatic Slave Syndrome: America's Legacy of Enduring Injury and Healing* and *Post Traumatic Slave Syndrome: The Study Guide*, said the trauma wrought by slavery

and the slave trade continues to have psychological and biological as well as social consequences for African Americans.

"Trauma is trapped in the DNA, so when I say we need to heal, if we do not heal, we doom future generations," she said during the annual Martin Luther King Jr. Commemorative Address.

A self-described ambassador for healing, DeGruy is an academician in social work with more than 20 years of experience in the field.

She has spent her career amassing evidence of the trauma experienced by slaves, and how

decades of subjugation under Jim Crow resulted in psychic injuries that have persisted in African-American communities across generations.

As this year's speaker, she spent a day on campus meeting with students and faculty to discuss issues of race and civil rights and the responsibility of citizens to speak out against injustice.

She answered questions and talked about her background, her experiences as a teacher, and about fighting injustice.

"Choose your battles," she told students. "But always be who you are."

Financial Times Gives Simon High Marks

The Simon Business School was listed among the world's best business schools in an annual ranking published by the *Financial Times* of London.

In specialty rankings, Simon was second in the world for finance and fifth in the world for economics.

Simon is also ranked 38th

among U.S. business schools (from 41st last year).

The annual survey was based this year on information collected from global business schools and their Class of 2013 graduates.

Business schools are ranked by the *Financial Times* annually based on several criteria: the career progression accrued from

the MBA, diversity, and research. Other factors include placement statistics (such as salary percentage increase and weighted salaries); measures of the diversity of schools' students, faculty, and board members; and statistics of each school's faculty and their research in 45 internationally refereed journals.





GLOBAL VIEW

A Tale of Two Indias

An anthropologist explores the changing landscape of rural India.

By Peter Iglinski

In the early 1990s, Gurgaon was a small city in northern India that blended with the nearby farm fields and villages.

But much has changed since then, as Gurgaon and its environs have been transformed into a financial hub with modern office buildings, condominiums, and luxury malls towering over the former agricultural landscape.

Gurgaon has become one of the premier success stories in the developing nation. But Llerena Searle, an assistant professor of anthropology, says there's more—or less—than meets the eye.

Searle spent 16 months in India interviewing more than a hundred investors, bankers, developers, contractors, architects, marketers, planners, consultants, and others. Her findings, presented in a new book, *Landscapes of Accumulation: Real Estate and the Neoliberal Imagination in Contemporary India* (Chicago), detail the

CITYSCAPES: While some Indian cities like Gurgaon (above) have experienced impressive growth, the changes have exacerbated challenges faced by the poor, a Rochester anthropologist argues in a new book.

factors and the relationships behind the sudden, even spectacular, growth of India's cities, while providing insights into how urban areas are developed around the world.

"While Gurgaon's new buildings look like signs that Indian society has changed and become more global," says Searle, "they are actually speculative gambles, based on stories that predict those social changes."

A Sikh man who invests in the capital region repeated a story that Searle heard often about growing demand for housing and increasing prosperity rates, driven primarily by the IT industry. But Searle's research indicated that the tale is one that real estate developers tell in order to attract investors.

In 2008, only one-half of 1 percent of India's working population actually worked in IT. Ninety-five per cent of the population earned less than \$4,400 per year—far less than the income needed to buy the luxury apartments developers were building.

"Speculation isn't just the madness of crowds," Searle says. "It's a widespread business practice." The practice, as described in the book, has led to fancy golf courses, high-end malls, and ornate corporate headquarters that cater to a shrinking minority of the population.

The practice became more commonplace after 2005, when foreign companies were given the right to invest in real estate, as long as they partnered with local developers.

Of course, a major step in attracting that foreign money was convincing international corporations that India—with a population exceeding one billion—was, indeed, the next big thing.

"The media and the real estate industry both hype a reality that only a fraction of the population could possibly experience," says Searle. "Unfortunately, the end result is construction that exacerbates the dispossession of the poor."

While foreign companies have been eager to profit from construction projects in India, they did not see eye-to-eye with the Indian developers on critical issues, such as construction practices and accounting methods. That has led to uneasy partnerships and tense negotiations.

Examining those partnerships in detail, Searle shows that foreign investment is not just a matter of reducing government regulation. Rather, it relies on attempts to control and standardize building practices, as well as on stories about growth and prosperity. 

Ask the Archivist: Does the de Kiewiet Refugee Scholarship Continue?

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

In 1985–87 there was an active divestment movement around South Africa on campus. As part of that, students (in collaboration with a program started by Bishop Desmond Tutu) created the Cornelis de Kiewiet Southern African Refugee Student Scholarship Fund. This was funded in part by his widow, who donated \$20,000 as a result of a letter from the student organizing group and a vote by the student body to support some of the costs through student activity fees. The rest was covered by the University. There were some students who arrived when I was a senior, but I never heard much about their time at Rochester and how long the program lasted. Obviously with the changes in South Africa in the 1990s the needs and circumstances changed. I was part of this work as a student and am curious. Any idea? —Andrew Fisk '87, Amherst, Massachusetts

In her 2014 history, *Our Work Is But Begun: A History of the University of Rochester 1850–2005*, Janice Bullard Pieterse describes the University's investment and subsequent divestment of South Africa holdings in the 1980s: "The endowment portfolio underwent significant diversification credited with improving its performance. The changes included purchases in large corporations [containing] a handful doing business in South Africa. . . . Three hundred faculty members petitioned for an end to South African investments. Within weeks, the administration's committee on investing and ethical considerations recommended divestiture. . . ."

Students were vocal, vital, and constructive in effecting the change in policy. They formed the South African Action Coalition (SoAAC), and throughout your junior year, there were rallies and petitions, culminating in April 1986, when a Shantytown was erected on the Eastman Quadrangle while a teach-in at the Interfaith Chapel presented lectures, workshops, and a panel discussion.

The SoAAC, along with the Social Concerns Committee of the Interfaith Chapel's Protestant Chapel Community, proposed the establishment of a scholarship fund—named for Rochester's fifth president, Cornelis de

Kiewiet—to support students who were affected by the apartheid system.

Under the proposal, the University agreed to waive tuition for two students, whose room and board would be supported by the de Kiewiet scholarship endowment; additional funds were to be provided by the Bishop Tutu Southern Africa Refugee Scholarship Fund, and the Phelps-Stokes Fund.



UNIFIER: An outspoken critic of the apartheid system of racial segregation, Cornelis de Kiewiet grew up in South Africa. At Rochester, he led the merger of the men's and women's colleges.

Cornelis de Kiewiet was born in the Netherlands and grew up in South Africa; throughout his life, he spoke out against apartheid, lecturing widely and writing *The Anatomy of South African Misery*. During his tenure at Rochester (1951–61), de Kiewiet led the unification of the colleges for men and women and the establishment of the graduate schools of engineering, business, and education. Concurrent with these efforts, he also served as chair of the board of directors of the American Council of Learned Societies, president of the Association of American Universities, and conducted studies for both the Carnegie and Ford foundations on aspects of educational,

political, and social conditions in South Africa. He died on February 15, 1986.

His wife, Lucea Hejinian de Kiewiet, generously (and unexpectedly) contributed toward the scholarship endowment; the balance was funded by the allocation of \$1 of the student activities fee paid by all undergraduates for four years—an unusual and somewhat controversial move, but one which was approved by a student body referendum.

The *Campus-Times* indicates there were two students who started in the fall of 1987; others have followed, but not more than two

at a time so that the scholarship outlay would not outpace the endowment income.

After the dismantling of apartheid in 1994, the wording of the original scholarship was revised, and it is now available to "students of African national origin or descent, with a preference for students of African national origin or descent whose families have experienced dislocation, resettlement, or other economic or political constraints due to conflict in Africa."

Need History?

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

BASKETBALL

Best in Class

Two Yellowjackets named finalists for one of the top awards in college basketball.

Women's basketball forward Al Leslie '18 and men's guard Sam Borst-Smith '17 have helped lead the Yellowjackets since they first stepped onto the floor at the Palestra. Off the court, though, each of them has demonstrated a level of achievement and service that has impressed not only their teammates, but also those across the country who pay close attention to college basketball.


Leslie, a business major from Lancaster, Pennsylvania, and Borst-Smith, an English major from San Pedro, California, were each named this spring as finalists for the Jostens Trophy, considered one of college basketball's top individual awards, recognizing athletic skill, academic achievement, and community service.

Leslie is the first Rochester women's basketball player selected as one of 10 finalists. Borst-Smith is the third Rochester men's finalist.

One of the leading scorers in Rochester women's basketball history (with her senior season remaining), Leslie has earned league and district academic honors. She volunteers with the Lancaster County (Pennsylvania) Project for the Needy, delivering more than 1,500 Christmas dinners to low-income families. A member of the University's St. Sebastian Society, a service organization, she also tutors elementary students at Rochester city schools.

As the Yellowjackets advanced to postseason play, Borst-Smith was leading the Yellowjackets in several categories for 2016-17, including points per game (16.1) and rebounding per game (5.6), and he set a single-season record for steals, with 74. As of early March, he ranked seventh all time in scoring, with 1,460 points.

He's an athletics volunteer for the Go4theGoal Foundation, a group that raises awareness and funds for children with pediatric cancer. He's also a member of the campus chapter of the Fellowship of Christian Athletes and has been active in promoting a campuswide project to raise awareness about racial and gender diversity.

The winners of the trophy will be named March 16 and 17, during the Division III Final Four in Salem, Virginia. 

Postseason Play

Rochester's men advanced to the Sweet 16 round of the NCAA Division III tournament in March, winning their regional match-ups at the Palestra on March 3 and 4. The Yellowjackets, ranked No. 13 in the country, were set to play their sectional matches at Marietta College in Ohio, beginning March 10.

The women's team also earned an NCAA berth. After winning their first round game, the Yellowjackets fell to SUNY-Geneseo to end their season.

Stay up-to-date with Yellowjackets scores and highlights at the website of the Department of Athletics and Recreation: UofRathletics.com.



Alexandra Leslie '18

Forward
Lancaster, Pennsylvania
Business major

Career points:
1,421 (third all-time)

Season leader:
scoring (21.9 points per game); rebounding (9.7 per game); blocked shots (44)

First Team All-UAA
(three consecutive seasons)

Two-time All-America
Preseason All-America
for 2016-17

First Team Academic
All-District III

Two-time UAA
All-Academic Team

Sam Borst-Smith '17

Guard
San Pedro, California
English major

Career points: 1,460
(seventh all time, as of March 6)

Career leader: steals
(210) (first all-time)

Season leader: scoring
(16.1 points per game); rebounding (5.6 per game); steals (74)

First Team All-UAA

UAA Player of the Year

Player to watch: one of six from Division III listed for the Clarence (Bevo) Francis Award for the top Small College Player of the Year



SQUASH SKILLS: Winner of the Skillman Award, Ryosei Kobayashi '17 finishes his squash career as one of Rochester's most decorated players.

HIGHLIGHTS

Tops in Squash

A senior earns collegiate squash's top honor as the team hits the No. 1 spot during the season.

Ryosei Kobayashi '17 was already one of the best to ever play squash at Rochester.

This winter, he took his place among the most decorated in Yellowjackets history after capturing the 2017 College Squash Association Skillman Award.

Intercollegiate squash's highest honor, the award is given annually to a senior men's squash player who has demonstrated outstanding sportsmanship during his entire college career. The award is named for former Yale coach John Skillman, who led the Bulldogs to multiple national titles in more than 40 years of leading the team.

Kobayashi, a business major from Yokohama, Japan, is the second Yellowjacket to win the honor. Benjamin Fischer '12 was named the Skillman winner after the 2012 season.

The award was a capstone to a season in which the Yellowjackets were ranked No. 1 in the country for the first time in the program's history.

Rochester was named to the top spot in late January, after defeating then top-ranked Trinity College.

The Yellowjackets' previous best ranking was second in the country, which came after a loss to Yale in the 2015-16 national championship. That game marked the first appearance by Rochester in the title match in school history.

After a loss to Harvard that knocked the team out of the top spot, Rochester ended the 2016-17 season at No. 5 in the nation, recording 13 wins for the season—the second most wins in a single season in team history. [R](#)