

# In Review







## COGNITIVE SCIENCE

### Breaking Good

SPIN CYCLE: Yellowjacket pitcher Rob Mabee '15 and catcher Nolan Schultz '17 help demonstrate the science behind why a curve ball can be baffling to so many baseball hitters. According to new research by Duje Tadin, associate professor of brain and cognitive sciences at Rochester, and colleagues at the Ulsan National Institute of Science and Technology in South Korea, the brain uses a neurological algorithm much like that used by global positioning systems to estimate the path of the ball as it comes toward the batter. But the spin given the ball by the pitcher relative to the position of the batter often confuses that algorithm, making the flight of the ball seem to arc much more sharply than it actually does.

COMPOSITED SEQUENCE OF PHOTOGRAPHS BY ADAM FENSTER





## ENTREPRENEURSHIP

### Rising to a Challenge

**SOCIAL SETTING:** The Dalai Lama greets Simon Business School students Mikayla Hart '16S (MBA), Cesar Quijano Serrano '15S (MBA), and Robert Kauffman '16S (MBA), along with (from left) Duncan Moore, vice provost for entrepreneurship; Joel Seligman, president and CEO; and Michael Wohl, associate director of social entrepreneurship, after the inaugural Tibetan Innovation Challenge in New York City this summer. The new intercollegiate social entrepreneurship competition, sponsored by the University, asked students from across the country to propose business ideas to help alleviate economic challenges facing Tibetan refugees. Placing third, the Simon students proposed a plan to provide Tibetans living in India with financial training and access to capital.

PHOTOGRAPH BY ADAM FENSTER







# INVESTING IN MANUFACTURING, INNOVATION AND JOBS

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## NATIONAL LEADERSHIP

### First in Photonics

LEADING LIGHT: Vice President Joe Biden announced this summer that Rochester will be the headquarters of the American Institute for Manufacturing Integrated Photonics. Known as AIM Photonics, the institute will bring together universities, companies, and federal agencies in a consortium whose goal is to advance optics-based technology for defense, commercial, consumer, and research applications in much the same way that integrated circuits transformed those fields over the past 40 years. The latest addition to the National Network of Manufacturing Institutes, an initiative launched by President Barack Obama, AIM Photonics is slated to receive more than \$600 million in funding from federal, private, and state sources, including \$250 million committed by New York Gov. Andrew Cuomo. Rochester was selected in a Department of Defense competition based on a proposal put together by an academic and industry consortium that spans 18 states and includes the University, SUNY Polytechnic Institute, RIT, MIT, the University of Arizona, the University of California–Santa Barbara, and Columbia University. PHOTOGRAPH BY ADAM FENSTER



# MANUFACTURING, INNOVATION AND JOBS

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## INVENTION

# On Your Marks, Get Set... Hack!

With just 36 hours to invent a new app, Thomas Pinella '18 and Dylan Wadler '18 took first place with Message in a Bottle at RocHack's second annual hackathon.

Interview by Kathleen McGarvey

They say good things come to those who wait—but for competitors in DandyHack's Spring '15, Rochester's second annual "hackathon," there was a lot of pressure for ideas to come together quickly. Sponsored by RocHack, a student group of "computer enthusiasts," the event was open to any college student and drew about 94 participants. Teams of up to five people were invited to take advantage of the tools in Ronald Rettner Hall for Media Arts and Innovation to build anything—software projects are traditional in hackathons, but hardware and other projects were welcome. Thomas Pinella '18, a computer science major from Winchester, Massachusetts, and Dylan Wadler '18, a mechanical engineering major from Huntington, New York, took first place with Message in a Bottle (mibNote.com), a social media site designed to allow users to leave notes for others to find based on a global positioning system.

## What is a hackathon, and what's it like to compete in one?

*Pinella:* People either get together in small teams or work individually to create a unique project within a small period of time—36 hours, in our case. It can be very intense, and extreme lack of sleep is to be expected, but at the same time, it's a lot of fun, and the end product makes it worth it.

## How did you develop the idea for Message in a Bottle?

*Pinella:* Originally we wanted to do something with hardware. Our first great idea was to build a motorized skateboard you could sit on that uses your phone as a steering wheel—essentially, a small car. But we soon realized we had neither the time nor the resources to complete this. After scratching a dozen other ideas—including Morse code encoded text messages, and an Etch-a-Sketch app—we finally decided to make mibNote.com. It was one o'clock in the morning, we were tired of thinking of ideas, and Dylan really wanted to do something with GPS coordinates.

## How does it work?

*Pinella:* When you go to mibNote.com, the site begins tracking your GPS coordinates to within six decimal places—approximately an 11-centimeter accuracy—and it will display notes that have been written near your location. You can leave your own notes by specifying a category, which we call tides (personal, business, travel, and so on), and attaching your signature—basically a pseudonym—to it. All notes are anonymous.

*Wadler:* There are also no users, so anyone could just go on and

**BOTTLED UP:** Dylan Wadler '18 (this page) and Thomas Pinella '18 (opposite) won Rochester's second annual "hackathon" with their social media website, Message in a Bottle (mibNote.com), which allows users to leave notes for others to find based on GPS location.



post a note. It encapsulates the idea of not really knowing who the sender is and just receiving a note in a bottle. That's where the name comes from.

#### **How would you like to develop it further?**

*Pinella:* First, we want the site to look prettier. Eventually, we also want to add a revenue-making part so that we can pay for more hosting and make some profit. We were thinking that businesses could pay a monthly subscription that would allow them to leave notes advertising their businesses, and it would give them added features, such as being able to add images to their notes.

*Wadler:* I am going to work on an app for the Pebble smart-watch, possibly alongside an app for Android phones. That way more people could use mibNote without having to access a web browser.

#### **How did being in the hackathon influence the app you developed?**

*Wadler:* Coming up with ideas is always difficult, but with constraints I find that something awesome can come out of it. Having almost no time to complete our project, let alone think of an idea, couldn't have been replicated outside the hackathon.

*Pinella:* Without the hackathon, there's no way I would have spent close to eight hours trying to think of a cool idea to pursue.

**Without the hackathon, there's no way I would have spent close to eight hours trying to think of a cool idea to pursue... How can you procrastinate when you know that you have less than 36 hours total to create something from scratch?—Thomas Pinella '18**

It acted as a catalyst and helped keep us focused. How can you procrastinate when you know that you have less than 36 hours total to create something from scratch?

#### **What advice do you have for people interested in competing?**

*Wadler:* You don't have to reinvent the wheel. I know it's by far the most interesting to do, and probably rewarding, to go and write all your code from scratch, or build something out of raw materials—but you just can't in such a narrow time frame. Hacking is the idea of taking things around you and making something new out of them, so don't be afraid to break things. Take baby steps. You'll get to your end-goal if you get there in increments.

*Pinella:* I can now see the advantage of having an idea of what you want to do before the hackathon begins. That way, you can get started immediately. But don't let not having an idea stop you from competing in a hackathon. It's still a lot of fun, and you will probably think of something that you otherwise never would have thought of doing. But whatever your idea is, pursue it and finish it. The last 10 percent of a project can be the most difficult to complete, but also the most rewarding and the most important. A finished project is almost always more impressive than a half-finished project, even if it was a great idea. And get at least a few hours of sleep—it helps. ®











## VISUAL ARTS

## Artistic Acquisitions

New works highlight the Memorial Art Gallery's post-WWII collection.

Mickalene Thomas is earning an international reputation for her artistic vision of what it means to be a woman in the 21st century. In work that explores traditional notions of beauty, gender, race, and representation, the Brooklyn-based visual artist and film maker has earned wide praise not only for her vibrant, elaborate paintings, but also for her complex vision and deft allusions to art history and classical genres.

Her *Portrait of Qusuquzah #6* (2015), a work in acrylic, enamel, oil, and rhinestones on a wood panel, is one of nine recent acquisitions by the Memorial Art Gallery that were introduced this summer as part of the first major reinstallation of the gallery's collection of postwar and contemporary art in several decades. Also added to the collection were works by Monir Shahroudy Farmanfarmaian, Hung Liu, and the late Beauford Delaney.

Jonathan Binstock, the Mary W. and Donald R. Clark Director of the Memorial Art Gallery, says the new works take their place in the gallery's long artistic narrative.

"The beauty of these acquisitions is how well they fit into MAG's historical collections. They can be exhibited together, in the context of a modern and contemporary art installation, or inserted into other areas of the museum, as provocative foils that expand the conversation on the relevance of art, both past and present, for contemporary audiences."

Thomas's work, along with *Convertible Series, Group 10* (2011), a mirrored wall sculpture by Farmanfarmaian, *Three Fujins* (1995), an allegorical painting by Liu, and Delaney's *Charlie Parker* (1968), will remain on view as part of the permanent collection installation. **B**



**FIRST LOOK:** Thomas's *Portrait of Qusuquzah #6* (2015) (opposite), Liu's *Three Fujins* (1995) (top), and Farmanfarmaian's *Convertible Series, Group 10* (2011) are on display this fall.





## Under the Armor

A new book by historian Richard Kaeuper takes a broad look at chivalry through a resolutely medieval lens.

Gallant knights on horseback, banners unfurling before stirring tournaments—today’s popular notions of the chivalric world are profoundly influenced by people in the 19th century who saw the Middle Ages through a romantic haze, says Richard Kaeuper, professor of history.

And he is out to change that.

Kaeuper has devoted his career to it, with books such as *Holy Warriors: The Religious Ideology of Chivalry* (University of Pennsylvania, 2009) and *Chivalry and Violence in Medieval Europe* (Clarendon Press, 2001). Now he’s completing a book, commissioned by Cambridge University Press, called *Medieval Chivalry*, which looks at the concept generally.

The way people for the past couple of centuries have thought of chivalry isn’t the way medieval knights experienced it. Chivalry

was a violent, often grisly, phenomenon. “It’s hands-on cutting and thrusting. It’s a very bloody profession, and they admire it to excess,” he says. But he also insists that chivalry is more than a timeless warrior code.

Though its influence is still felt, chivalry is specific to a historical period—from roughly the second half of the 11th century into the 16th century—and it underpins medieval society in many ways. “It’s an immense topic that goes everywhere,” he says.

The term “chivalry”—unlike “feudalism”—is a medieval one, and an essential concept for the age. It denotes “deeds of great valor performed by knights,” he says. But it also refers to

the collective body of knights present in an action and—most important—a set of ideas and practices. He writes that “virtually every medieval voice we can hear accepts a chivalric *mentalité* and seems anxious to advance it (and often to reform it toward

some desired goal) as a key buttress to society, even to civilization.”

Chivalry is “pretty much a French creation,” and then it moves through Western Europe. The English, the Italians, the Spanish, and the Germans not only adopt it but make it their own.

He identifies three phases of chivalry. The first, he calls “knighthood before chivalry”—the beginnings of the military profession in the period before

kings and other noblemen would have called themselves knights. In the second period, such high-born men begin to cultivate an identity as knights. Tournaments come into being and literary romance and epic flourish. And in the third phase, which he calls “chivalry beyond formal knight-hood,” the influence of chivalry pervades society. By then, it’s a “set of ideas that organizes thought and behavior.”

Kaeuper uses five “model” knights to guide readers through the concepts of his book: cross-Channel, 13th-century hero William Marshal; 14th-century king of Scotland Robert Bruce; 14th-century French knight and author Geoffroi de Charny; late 14th-century Castilian warrior Don Pero Niño; and 15th-century English knight and author Thomas Malory, still famous for his *Le Morte*

**HANDS-ON: A 19th-century depiction of Robert Bruce killing Sir Henry Bohun at the Battle of Bannockburn on June 24, 1314.**



d'Arthur. All the figures—whose lives illustrate changes over time in chivalry and its geographical range—are the authors or subjects of a major textual work. “They’re active participants” in the chivalric world, he says.

As a historian, Kaeuper finds enormous value in literary texts. “I use a lot of miracle stories, as well as standard imaginative literature,” he says. “They’re important—because they are imaginative, because they show what people are worried about, what they’re hoping for.”

The title of his book is deliberate because Kaeuper wants to emphasize that what he is examining is medieval chivalry, not post-medieval chivalry or neo-Romantic chivalry. Describing his task as “cutting a path through the thickets of Romanticism,” Kaeuper says that people in the 1800s in England and continental Europe, and to a lesser extent, the United States, looked back to the Middle Ages in a search for national identity and in an effort to escape problems of modernity.

“Far from dark,” he writes, “the medieval past was not only colorful and fascinating, but too important and too useful to be ignored. The romantic revivers did not and perhaps could not recognize that they were altering the original drastically and investing it with meanings that would have surprised its first practitioners.”

According to Kaeuper, the chivalric world resonates still—and he feels its power as it touches on issues of violence, religion, governance, and more.

“It’s a scary subject, because it’s so serious,” he says. “The editor of one of my books wrote to me and said, ‘This isn’t just about the Middle Ages. This is a modern book.’ That’s not the goal. My goal is to understand the Middle Ages. But you can see how it applies.

“If you start thinking modern as you go into the past, you distort the past. If you start with the past and see if it informs the present, I think you’re on the right path.” —Kathleen McGarvey

## The Inner Ear: A Beautiful Sensor

A Rochester engineer explores the biomechanics of a remarkable biological structure.

Nearly four decades ago, English researcher David Kemp discovered that the human inner ear not only receives but also generates sounds as part of its normal functioning.

The finding led to the standard method now used to screen hearing in newborns. But even now, scientists are not sure how or why these “otoacoustic emissions” occur.

Jong-Hoon Nam, assistant professor of mechanical engineering and of biomedical engineering, hopes to provide answers to that and other mysteries of the incredibly complex sense of hearing. His lab is combining computer simulations with a novel microfluidic chamber to focus specifically on the organ of Corti. The organ—a complex, truss-like strip consisting of inner and outer hair cells, a basilar membrane and supporting cells—plays a key role in converting sound-generated oscillations in the cochlea’s fluid-filled chambers into electrical signals that go to the brain.

“The biomechanics of the

organ of Corti have been under-investigated,” he says. “We would like to know how the complicated structure of the organ of Corti contributes to the overall function of the cochlea.”

With support from an NIH grant that could total \$1.8 million over the next five years, Nam hopes to lay groundwork that could eventually lead to better hearing aids or more finely customizable implants. Because the inner ear can process a wide range of both frequencies and loudness, understanding its processes might lead to more sensitive pressure transducers and other engineering applications. “Engineers continually obtain ideas from biological systems,” Nam says. “And the inner ear is a beautiful sensor, operating over a remarkably wide range.”

Nam and his lab will employ novel experimental and computational approaches, including the development of a microfluidic chamber that imitates the physiological conditions of the cochlea. That’s designed to help “address

the pivotal question in cochlear research—how outer hair cells, the cochlear amplifier, work within the organ of Corti.”

Nam’s team is also developing a computational model that incorporates the physical, electrical, and fluid mechanical properties of the organ of Corti and the entire cochlea. Members of the group are developing the computer codes themselves because no commercial program provides an easier way to solve such problems.

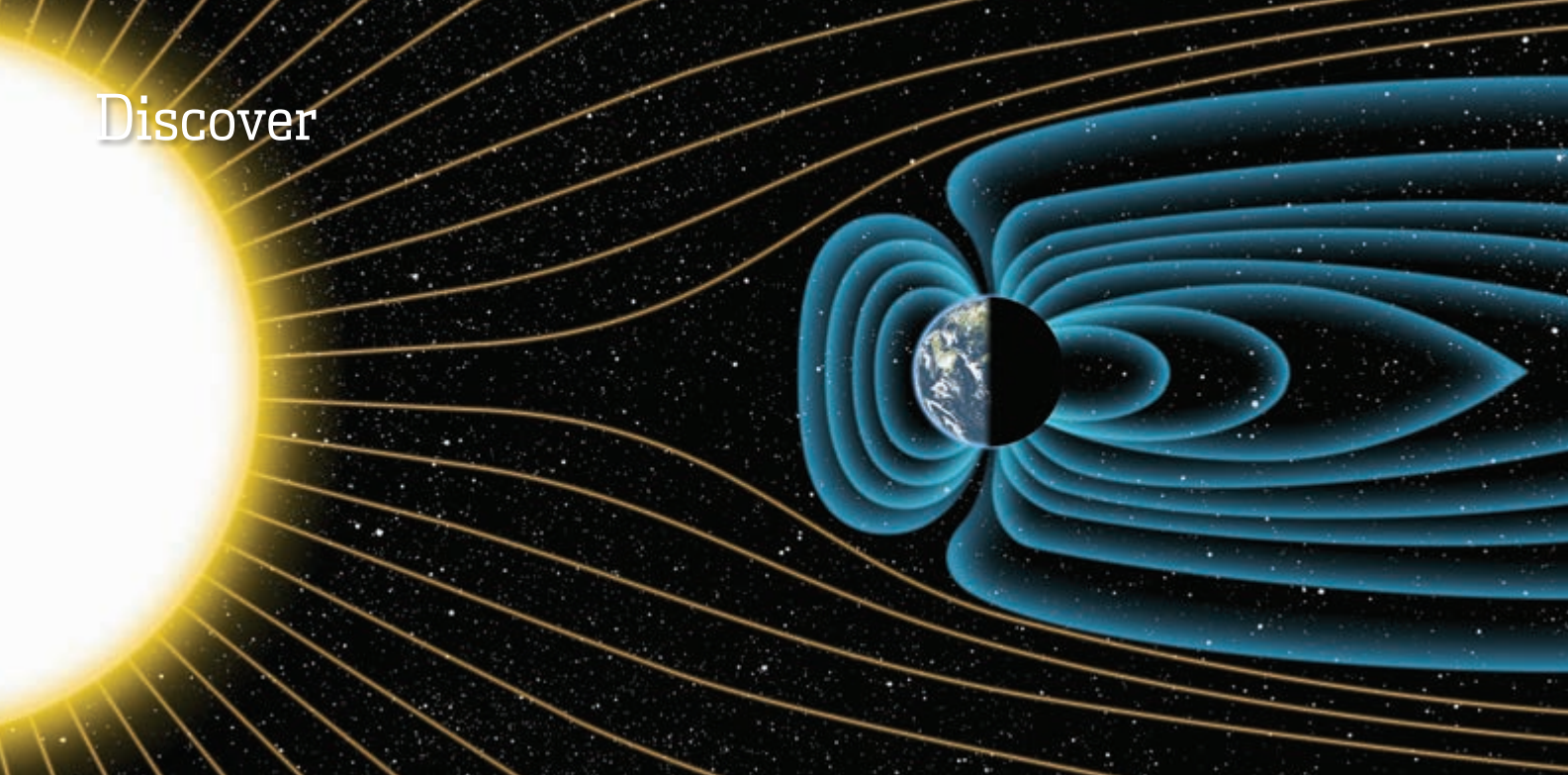
Nam notes that much of the historical research on the inner ear has occurred at two extremes of scale: the macro biophysics of the cochlea as a whole, and the physiology of individual cells and molecules. By focusing on the multicellular physics of the organ of Corti, and the electromechanical interaction between outer hair cells and the microstructures around them, Nam hopes to “bridge” previous findings and provide a “new integrative paradigm of hearing research.”

—Bob Marcotte



**HEAR, HEAR:** Ibrahim Mohammad '17—a Xerox Engineering Research Fellow in the lab of Douglas Kelley, assistant professor of mechanical engineering—built and tested a laboratory model to simulate the movements of the inner ear’s hair cells in support of Jong-Hoon Nam’s project.





**FIELD SHIELD:** An artist's depiction (not to scale) of Earth's magnetic field deflecting high-energy protons from the sun four billion years ago

## Probing Earth's Magnetic Shield

Since 2010, the best estimate of the age of Earth's magnetic field has been 3.45 billion years. But a researcher responsible for that finding has new data showing the magnetic field is far older.

John Tarduno, professor in the Department of Earth and Environmental Sciences and a leading expert on Earth's magnetic field, and his team say they now believe the field is at least 4 billion years old. The findings were published in the journal *Science*.

The magnetic field helps to prevent solar winds—streams of charged particles shooting from the sun—from stripping away the Earth's atmosphere and water that make life on the planet possible.

A record of that field's direction and intensity can be found in minerals from the earliest periods of Earth's history. Tarduno's new results are based on a record of magnetic field strength fixed within magnetite found in zircon crystals—formed more than a billion years ago—from the Jack Hills of Western Australia.

"We know the zircons have not been moved relative to each other from the time they were deposited," he says. "As a result, if the magnetic information in the zircons had been erased and re-recorded, the magnetic directions would have all been identical."

Instead, he found that the minerals revealed varying magnetic directions—convincing him

that the intensity measurements recorded in the samples were as old as four billion years. The findings support previous zircon measurements that suggest an age of 4.4 billion years for the magnetic field.

In a separate study, a team led by Tarduno found that a region of the Earth's core beneath southern Africa may play a special role in reversals of the planet's magnetic poles. Thanks to their knowledge of ancient African practices—in this case, the ritualistic cleansing of villages by burning down huts and grain bins—the researchers were able to assemble data about the magnetic field in the Iron Age. When burning, the clay floors reached a

temperature of more than 1,000 degrees Celsius, hot enough to erase the magnetic information stored in the magnetite and create a new record of the magnetic field strength and direction at the time of the burning.

Reversals of the North and South Poles have occurred irregularly throughout history, with the last one taking place about 800,000 years ago. Once a reversal starts, it can take as long as 15,000 years to complete. The new data suggests the core region beneath southern Africa may be the birthplace of some of the more recent and future pole reversals.

Results of the study were published in the journal *Nature Communications*. —Peter Iglinski

## Young Adults' Social Lives Can Predict Midlife Well-Being

It's well known that social connections promote psychological and overall health. Now research shows that the quantity of social interactions a person has at age 20—and the quality of social relationships at 30—can bring benefits later in life.

The 30-year longitudinal

study, published in the journal *Psychology and Aging*, shows that frequent social interactions at age 20 provide psychological tools to be drawn on later: they help people figure out who they are, the researchers say.

Surprisingly, the study suggests that having a high number

of social interactions at 30 doesn't have psychosocial benefits later.

But 30-year-olds who reported having intimate and satisfying relationships also reported high levels of well-being at midlife. Meaningful social engagement was beneficial at any age, but

more so at 30 than 20.

Cheryl Carmichael '11 (PhD) conducted the research as a doctoral candidate. She's now an assistant professor of psychology at Brooklyn College and the Graduate Center, City University of New York.

—Monique Patenaude



## Nursing Home Care for Minorities Improves

While disparities continue to exist, the quality of care in nursing homes with higher concentrations of racial and ethnic minority residents has improved—and the progress appears to be linked to increases in Medicaid payments.

That's according to a new study published in the journal *Health Affairs* and led by Yue Li, associate professor in the Department of Public Health Sciences.

There are an estimated 1.3 million older and disabled Americans receiving care in some 15,000 nursing homes across the country. Over the past 20 years, the number of African-American, Hispanic, and Asian residents of nursing homes has increased rapidly, and now accounts for nearly 20 percent of people living in U.S. nursing homes. But the institutions remain segregated, and homes with high concentrations of racial and ethnic minorities tend to have more limited financial resources, employ fewer nurses, and provide a lower level of care.

State Medicaid programs are the dominant source of funding for nursing homes, providing roughly half of total payments for long-term care. In recent years, states have tried to influence the quality of care by increasing reimbursement rates and linking those payments to improvements.

In a study using data from more than 14,000 nursing homes from 2006 to 2011, the researchers found that reported deficiencies in clinical and personal care and safety declined in nursing homes with both low and high concentrations of minorities. They also compared these trends to state Medicaid reimbursement rates and found that an increase of \$10 per resident per day was associated with a reduction in the number of reported clinical-care deficiencies.

—Mark Michaud

## Stress in Low-Income Families Can Affect Children's Learning

Children living in low-income households who endure family instability and emotionally distant caregivers are at risk of having impaired cognitive abilities, according to new research from the Mt. Hope Family Center.

The study of more than 200 low-income mother-and-child pairs tracked levels of the stress hormone cortisol in children at ages two, three, and four. It found that specific forms of family adversity are linked to both elevated and low cortisol levels in children—and kids with

such levels, high or low, also had lower-than-average cognitive ability at age four.

Family instability includes frequent changes in care providers, household members, or residence.

Such instability, the researchers say, reflects a general breakdown of the family's ability to provide a predictable environment for children.

"We saw really significant disparities in children's cognitive abilities at age four—right before they enter kindergarten,"

says lead author Jennifer Suor, a doctoral candidate in clinical psychology. "Some of these kids are already behind before they start kindergarten, and there is research that shows that they're unlikely to catch up." She adds that the findings support the need for investment in community-based interventions that can strengthen parent-child relationships and reduce family stress early in a child's life.

The study was published in the journal *Child Development*.

—Monique Patenaude



**GREAT EXPECTATIONS:** Babies' brains respond not just to what they see, but also to what they expect to see, a kind of neural processing formerly thought only to happen in adults.

## Babies' Expectations May Help Brain Development

Infants can use their expectations about the world to rapidly shape their developing brains. That's the finding of researchers at Rochester and the University of South Carolina, who performed a series of experiments with infants five to seven months old. Their study showed that portions of babies' brains responsible for visual processing respond not just to the presence of visual stimuli, but also to the mere expectation of such stimuli.

That type of complex neural processing was once thought to happen only in adults, not in infants, whose brains are still developing important neural

connections. The study was published in the *Proceedings of the National Academy of Sciences* and was led by Lauren Emberson while she was postdoctoral fellow at Rochester's Baby Lab. She is now an assistant professor in psychology at Princeton. Richard Aslin, the William R. Kenan Jr. Professor in the Department of Brain and Cognitive Sciences and codirector of the lab, also authored the study.

The researchers exposed one group of infants to a sequential pattern that included a sound—like a rattle or a honk—followed by an image of a red cartoon smiley face. Another group saw and heard the same things but

without any pattern. After a little more than a minute, researchers began omitting the image 20 percent of the time.

By using light to measure oxygenation in regions of the babies' brains, the scientists were able to see activity in the visual areas of the brains of infants exposed to the pattern—even when the image didn't appear as expected.

"There's a lot of work that shows babies do use their experiences to develop," Emberson says. "That's sort of intuitive, especially if you're a parent, but we have no idea how the brain is actually using the experiences."

—Monique Patenaude





**TEAMWORK:** Children and families helped celebrate the groundbreaking of a new UR Medicine building on the South Campus that will house outpatient imaging services as well as the new William and Mildred Levine Autism Clinic.

## Imaging Sciences, Autism Building Gets Under Way

A new building on the University's South Campus will house state-of-the-art outpatient imaging facilities, as well as the region's first stand-alone clinic to integrate care of autism with pediatric neuromedicine and child and adolescent psychiatry services.

Ground was broken in late August for the 90,000-square-foot, three-story building. Home to outpatient imaging and

interventional radiology clinics, as well as autism, neuromedicine, and behavioral health pediatric programs, the building will allow those services to move from the Medical Center to a more easily accessible location along East River Road and I-390. The first two floors will be devoted to imaging, including spacious, private patient areas with advanced technology for

diagnostics and treatment. The third floor will house the new William and Mildred Levine Autism Clinic. Supported by a \$1 million gift from the William and Mildred Levine Foundation, the clinic will offer care in a child-friendly environment that meets the physical, sensory, and environmental needs of children.

The \$28 million building will be completed in early 2017.



## Specialties Rank among 'Nation's Best'

Four adult specialties at Strong Memorial Hospital have been named to *U.S. News & World Report's* 2015-16 ranking of the top 50 programs in the nation. The rankings consider data on nearly 5,000 eligible hospitals, only 137 of which had one program or more on the list.

Strong was recognized for diabetes and endocrinology (34th), gynecology (tied for 22nd), nephrology (39th), and neurology

and neurosurgery (41st). It was that program's fifth consecutive year of top-50 results.

The hospital's programs for cardiology and cardiothoracic surgery, otolaryngology, gastroenterology and GI surgery, geriatrics, orthopaedics, pulmonary, and urology all scored in the top 10 percent of eligible hospitals. UR Medicine's Highland Hospital was considered high-performing in gynecology.

## Campus Hosts World Student Conference

About 200 high school students from 20 nations who are studying for highly regarded international baccalaureate degrees spent a week this summer at the University. Rochester was the site of the fourth annual International Baccalaureate World Student Conference.

With a theme of "reaching solutions through play," the conference featured speakers Jane McGonigal, an American game

designer and author, and Bob Mankoff, cartoon editor of *The New Yorker* magazine.

More than 4,000 schools and 70,000 educators worldwide are involved in programs for the international baccalaureate. A 2012 study by the University of Chicago Consortium found that public high school students in the diploma program were 40 percent more likely to attend a four-year college.



## Poet Receives NEA Award

Jennifer Grotz, professor of English and director of the University's translation program, has been awarded a fellowship for literary translation from the National Endowment for the Arts. The fellowship will support the English translation of several poems by the Polish writer Jerzy Ficowski as part of a collaboration with poet and translator Piotr Sommer.

Ficowski was a human rights advocate in his youth and part of the underground movement to destabilize Nazi rule in Poland. Much of his work is focused on the Polish Roma population. He's also renowned for his biography of Bruno Schulz, known as the "Polish Kafka." Grotz is the poetry editor of Open Letter Books and directs the Bread Loaf Writer's Conference in Middlebury, Vermont. Her most recent book of poems, *The Needle*, explores Polish and American 20th-century poetry and their traditions.



**ENGLISH PROFESSOR:** Grotz joined the faculty in 2009.



**PIANO PRIZE:** Brian Le of Silver Spring, Maryland, won this year's Eastman Young Artists International Piano Competition.

## Young Pianists Compete at the Eastman School of Music

Brian Le, a 17-year-old pianist from Silver Spring, Maryland, earned first prize at the Eastman Young Artists International Piano Competition. One of 22 competitors from eight countries taking part in the annual program for 15-to-18-year-olds, Le earned top marks with his performance of the first movement of Frédéric Chopin's Concerto No. 1 in E Minor with the Rochester Philharmonic Orchestra, under conductor Neil Varon.

He received the gold medal, a cash prize of \$10,000, and a spot

on the DiMenna Center Piano Concert Series in New York City. Other honorees were silver medalist Yaowen Mei, 18, of Wuhan, China; bronze medalist Misha Galant, 17, of San Ramon, California; and finalists Tommy Jing Yu Leo, 15, of London, England, and Evelyn Mo, 16, of Oak Hill, Virginia.

Each pianist presented two solo programs of recital repertoire and participated in a master class led by a member of the jury. Five judges—faculty members at universities as well as performers—assessed the competitors.

## Novel, Poetry Earn Best Translated Book Award

A Chinese novel and a collection of Mexican poetry were the top picks for the eighth annual Best Translated Book Awards, administered by the University's literary translation program.

*The Last Lover* (Yale University Press, 2014), a novel by Can Xue and translated from the Chinese by Annelise Finegan, won the top prize for fiction.

Recognized as runners-up in the category were *Harlequin's Millions* (Archipelago Books, 2014) by Bohumil Hrabal, translated from the Czech by Stacey Knech; *Faces in the Crowd* (Coffee House Press, 2014) by Valeria Luiselli, translated from the Spanish by Christina MacSweeney; and *Those Who Leave and Those Who Stay* (Europa Editions, 2014) by Elena Ferrante, translated from the Italian by Ann Goldstein.

*Diorama* (Phoneme Media, 2014), a book of verse by Rocío Cerón, won the poetry category. It was translated from the Spanish by Anna Rosenwong.

The award is the only one of its kind to honor the best original works of international literature and poetry published in the United States during the previous year. It is organized by Three Percent, a website of Rochester's translation program and its translation press, Open Letter Books.



**LITERARY HONORS:** Winners of the Best Translated Book Awards for 2015

## Rochester Earns Designation as 'Storm Ready'

The National Oceanic and Atmospheric Administration's National Weather Service has recognized the University as "StormReady" for its preparedness to handle all types of severe and potentially life-threatening weather. Rochester is the first private university in New York

to earn the certification. The program encourages communities to improve hazardous weather operations by providing emergency managers with clear guidelines.

To be officially StormReady, the Office of Environmental Health and Safety confirmed

compliance with several criteria, including establishing a 24-hour warning point and emergency operations center, promoting public readiness through community seminars, and training severe weather spotters.

Nationally, 164 universities have earned the recognition.



## MELIORA CHALLENGE

## Signature Celebrations

Faculty are appointed to professorships named in honor of alumni and friends.

The University honored the achievements of several faculty members during the 2014–15 academic year with ceremonies to mark their appointments to named professorships. Established through the generosity of University alumni and friends, the professorships are part of a long-standing tradition to celebrate the national stature of Rochester's faculty.

Establishing endowed faculty positions is a key priority for *The Meliora Challenge*, the University's fundraising initiative that continues through June 30, 2016. As of the fiscal year that ended June 30, a total of 93 new positions had been established during the Campaign. In 2014, the Campaign's original goal of 80 endowed faculty positions was increased to 100.



**Mark Bills**

### Mark Bills

*Hazel Fyfe Professor  
in Economics*

A professor in the Department of Economics and a research associate of the National Bureau of Economic Research, Bills has established a distinguished career as an economist.

A member of the faculty since 1985, he has examined topics such as how wage-setting and pricing contribute to business-cycle fluctuations and measuring the importance of new and better consumer products. He is the associate editor of the *American Economic Journal: Macroeconomics*.

An anonymous donor's bequest honoring the Fyfe Family created the professorship, named in honor of Hazel Fyfe Gallaher '46.

### Sally Norton

*Independence Chair  
in Nursing and Palliative Care*  
A nationally recognized expert on palliative care, Norton has been the principal investigator or coprincipal investigator on



**Sally Norton**

several National Institutes of Health-funded studies that have examined the communication strategies used by clinicians to discuss end-of-life issues.

Codirector for research in the Division of Palliative Care in the Department of Medicine, Norton is a fellow in the American Academy of Nursing.

The professorship was created by the Independence Foundation, which is committed to supporting organizations that provide direct services and support—in broad areas of cultural and arts programming, legal aid, and health and human resources—to those who would otherwise lack access. It's the second professorship established by the Foundation at the School of Nursing.

### Gary Morrow

*Benefactor Distinguished  
Professor*

An authority in cancer control and survivorship, Morrow '77M (Flw), '88 (MS) is credited with building the Cancer Control Program at the Medical Center. That work has resulted in the selection



**Gary Morrow**

of the James P. Wilmot Cancer Center as one of only two cancer centers in the country chosen by the NIH as a hub for a national network of investigators, cancer care providers, academic institutions, and other organizations.

A professor in the Departments of Psychiatry and Surgery at the School of Medicine and Dentistry, Morrow has published widely on topics related to the physical and physiological effects of cancer treatment.

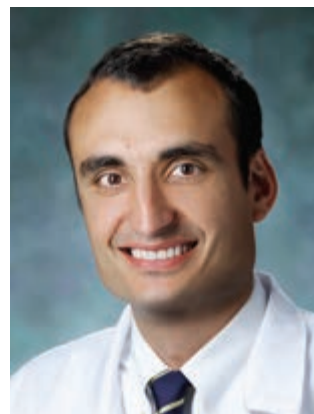
The professorship was established by an anonymous donor.

### Ray Dorsey

*David M. Levy Professor  
in Neurology*

The director of the Center for Human Experimental Therapeutics and the Center for Health and Technology, Dorsey '07M (Flw) is considered one of the nation's leading clinicians exploring the application of telemedicine models to treat patients who have Parkinson's disease.

Widely recognized for his research, Dorsey is part of a Medical Center team that is



**Ray Dorsey**

pioneering the use of smart-phone technology that allows patients with Parkinson's to track their symptoms in real time and share the information with researchers.

The professorship was funded by a gift from Levy's estate to honor his support for the Department of Neurology and research related to Parkinson's.

### Ruth Lawrence

*Northumberland Trust  
Professor in Pediatrics*

Lawrence '49M (MD), '58M (Res) has led a distinguished career as a pediatrician, clinical toxicologist, and neonatologist. In addition to helping pioneer neonatology as a specialty, she is an international authority on breastfeeding and a poison control expert.

The director of the Breastfeeding and Human Lactation Study Center, which she founded in 1985, and the author of *Breastfeeding: A Guide for the Medical Profession*, now in its eighth edition, Lawrence was the founding member and past president





**Ruth Lawrence**

of the Academy of Breastfeeding Medicine.

The professorship was established by an anonymous donor.

### **Richard Phipps**

*Wright Family Research Professor*  
Widely cited for his research on pulmonary disease, Phipps holds faculty positions in the Departments of Environmental Medicine; Medicine; Microbiology and Immunology; Obstetrics and Gynecology; Ophthalmology; Pathology and Laboratory medicine; and Pediatrics.

Phipps has also been recognized for his contributions to understanding B-cell lymphoma, lung diseases, and several diseases with immunity and inflammatory components.

The professorship was established through an estate gift from Chauncey and Simone Wright to support a faculty member conducting medical research at the School of Medicine and Dentistry.

### **Krystel Huxlin**

*James V. Aquavella, M.D. Professor in Ophthalmology*  
An internationally known ophthalmologist, Huxlin is the director of research at UR Medicine's David and Ilene Flaum Eye Institute and has secondary appointments in the Departments of Neurobiology and Anatomy and Brain and Cognitive Sciences.

A member of the faculty since 1995, Huxlin focuses her work on understanding how the adult visual system repairs itself.

The professorship was established through a gift from



**Richard Phipps**



**James Aquavella**

Aquavella, a noted ophthalmologist who has been a member of the faculty since 1977. It is one of two endowed positions he created in 2013 in memory of his late wife, Kay, a nurse and administrator, who was committed to the establishment of the Flaum Eye Institute.

### **James Aquavella**

*Catherine E. Aquavella Distinguished Professor in Ophthalmology*

A clinician and researcher in the University's Flaum Eye Institute for more than four decades, Aquavella is a specialist in cornea and external eye disease. He was the first fellowship-trained corneal surgeon in the United States.

The second of two endowed positions Aquavella established in honor of his late wife, Kay, a nurse and administrator at the Flaum Eye Institute, the professorship will be held by Aquavella in an honorary capacity until the next professor is selected.



**Krystel Huxlin**



**Henry Kautz**

### **Henry Kautz**

*Robin and Tim Wentworth Director of the Goergen Institute for Data Science*

The founding director of the University's Goergen Institute for Data Science and former chair of the Department of Computer Science, Kautz '87 (PhD) has held leadership positions at Kodak Research and AT&T Laboratories.

A fellow of the Association for the Advancement of Artificial Intelligence, Kautz conducts research in social and public health, natural language learning, pervasive computing, search algorithms, and assistive technology.

The position was established through a gift from University Trustee Tim Wentworth and his wife, Robin. One of the couple's daughters is a member of the Class of 2016 and another graduated in 2011. Wentworth Atrium in Raymond F. LeChase Hall, the home of the Warner School of Education, is also named in recognition of the couple's support for the University.

## **Endowed Positions Established**

Several professorships were also established by alumni and friends during the past year.

*Tansukh, Sarla and Rajesh Ganatra Professorship in Pediatric Cardiac Surgery*  
Established by Tansukh Ganatra, a former vice chairman and CEO of North Carolina-based US LEC, his wife, Sarla, and his son, Rajesh

*Lawrence N. Chessin, M.D. '58 and Rita R. Chessin Professorship in Infectious Diseases*  
Established by Lawrence Chessin '58M (MD), a retired infectious disease specialist at the Medical Center, and his wife, Rita

*Donald M. Foster, M.D. Distinguished Professorship in Biostatistics and Donald M. Foster, M.D. Professorship in Biomedical Genetics*  
Established through the estate of Donald Foster '50M (MD)

*Martha M. Freeman, M.D. Professorship in Biomedical Genetics*  
Established through the estate of Martha Freeman '44, '45N, '51M (MD)

*Albert and Phyllis Ritterson Professorship*  
Established through the estate of Phyllis Ritterson '55M (MS)

*Edward A. and Alma Vollertsen Rykenboer Professorship in Neurology*  
Established through the estate of Edward Rykenboer, Class of 1912

*Marjorie B. Morris Endowed Professorship in Cardiac Surgery*  
Established by Marjorie Morris, of Clifton Springs, New York

*Professorship in Medical Education*  
Established by an anonymous donor





**LOOKING FOR ANSWERS:** Melissa Mead works to keep the finer points of University history at her fingertips.

## The Archivist Asks Alumni: What's your class yell?

*And other questions about University history from Melissa Mead, the John M. and Barbara Keil University Archivist and Rochester Special Collections Librarian.*

### We're the Class of ...!

At last May's commencement ceremony for Arts, Sciences & Engineering, Board of Trustees Chair Ed Hajim '58 boasted, "Better than good, better than great, we're the Class of Fifty-Eight!"

A few minutes later Senior Class Council President Mehr Kashyap '15 replied: "Not just one 'Jacket, we're the whole hive! Feel the sting of Twenty-One-Five!"

While some in the audience on the Eastman Quadrangle may not have known it, these were two

your own memories of Coach Speegle singing, swimming, and coaching in the comments section on the webpage at [livinghistory.lib.rochester.edu/speegle](http://livinghistory.lib.rochester.edu/speegle).

### A fraternity mug for Jane?

While food is discouraged in Special Collections, the University Archives hold a large collection of dinnerware, from Wedgewood dinner plates with campus buildings emblazoned on them—created in 1951 to stock the pantries of loyal sons and daughters of Rochester—to Boar's Head Dinner commemorative glasses.

There are also fraternity and sorority ceramic mugs, each with the crest of a Greek group painted on one side and a name on the other. We were recently contacted about a 1977 Theta Chi mug, with "Jane" as the imprinted name. Since Theta Chi is a fraternity, is this a nickname or a girlfriend's name?

### Chi Rho, Chi Rho, It's Off to School We Go!

Chi Rho began in 1909 as a sophomore honorary group, with members selected at the end of their freshman year. It took as its logo an Egyptian-style mask, and the identities of the new recruits were concealed by the names of Egyptian kings (Ramses, Ptolemy, Necho, and so forth). Only after the selection of new members were the old ones revealed; later, Dandelion Day became the occasion for the (literal) unmasking.

Why "Chi Rho"? Members of the Class of 1909 had their Greek instruction from Professor Ryland Morris Kendrick, himself a member of the Class of 1889, and son of Professor Asahel Clark Kendrick. The Greek letters do have a Christian symbolism, but perhaps they were intended to signify the word *chrestos* which can be translated as "kind" or "good"—a sophomoric aspiration to *Meliora*?

The group was charged with promoting good fellowship, ensuring that freshmen learned "The Genesee" and other school songs, and with spreading the "Rochester Hello" spirit. But it did not always live up to its good name, and the words Chi Rho "struck terror" in the hearts of "trespassing" (walking on the Quad instead of using the tunnels) frosh.

An ever-better revival of the group occurred in spring 2015, with a dozen rising sophomores once again charged with sharing University traditions and history.

Were you in Chi Rho? If your memories are not too hazy, send them in to teach a new generation about University traditions.



**SONG OF SPEEGLE:** Swimming coach Speed Speegle often entertained students with his memorable song, "Rex, the Piddlin' Pup." While he frequently sang the song with his guitar, the melody has not made its way to the University's archives. Can you hum a few bars?

class "yells," a tradition designed to encourage class spirit that stretches back to 1885. You can find a list at the website: [rbscp.lib.rochester.edu/yells](http://rbscp.lib.rochester.edu/yells).

But the records are silent for many years. Do you remember your class yell? Let us hear it!

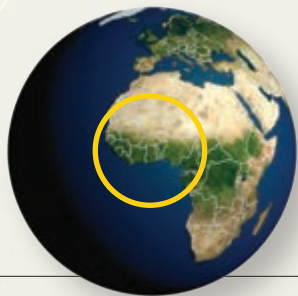
### Do you remember 'Rex'? And can you sing it?

James Speegle '60, '61 (MA), the son of coach Roman (Speed) Speegle, sent me the words to his father's memorable song "Rex, the Piddling Pup," but we have no record of the tune. The lyrics are posted here: [livinghistory.lib.rochester.edu/speegle](http://livinghistory.lib.rochester.edu/speegle). There's also an audio recording of the first dedication of the Speegle Pool in 1977 in what is now the Goergen Athletic Center, and a letter that Coach Speegle wrote to Rochester students serving in World War II (look for his reference to guitar-playing).

If you remember the tune to "Rex," send an email, or a singing telegram. And you can share

### Know the Answers?

Share your story in an email to [rochrev@rochester.edu](mailto:rochrev@rochester.edu). Please put "Ask the Archivist" in the subject line.



## ROCHESTER AND GHANA

### People

- 10** alumni living in Ghana
- 9** students from Ghana in fall 2014
- 41** study abroad students since 1995

### Select Group

The University of Ghana is the latest university to be invited for membership in the **World Universities Network**, a selective consortium of 18 institutions designed to facilitate international scholarly and research exchanges. Rochester has been a member since 2012.

### Mr. Ambassador

**Eugene Cretz '72** served as the U.S. ambassador to Ghana from 2012 until July. A career diplomat, he was ambassador to Libya from 2008 to 2010.

# Global Rochester: Ghana

## *Building a Partnership*

The global terrain of higher education is changing rapidly, says Jane Gatewood, associate provost for global engagement. Emerging economies are investing heavily in postsecondary education, just as the United States is cutting investments.

"At the same time, the challenges we face in the 21st century are really global challenges," she says. Public health and economic issues aren't confined

says Wendi Heinzelman, the dean of graduate studies in Arts, Sciences & Engineering and a professor of electrical and computer engineering, who helped organize the visit.

"We came away from the visit genuinely energized about the possibilities for continued engagement. Actually being at the University of Ghana allowed us to learn about their programs, interact



**INTERNATIONAL VISIT:** A delegation from the University visited colleagues at the University of Ghana last spring to explore educational and research exchange programs.

by national borders. And the demand for higher education grows throughout the world.

"No one institution can tackle these challenges by itself," Gatewood says. "We have to partner with strong institutions around the globe."

A partnership between Rochester and the University of Ghana is an example of just such a collaboration. The first delegation of scholars and researchers from Ghana will arrive at Rochester this fall, part of a growing effort to build ties with the leading higher educational institution in the west African nation.

In the spring, 12 representatives from Rochester spent three days at the University of Ghana in Accra, exploring how the two universities could work together. The delegation laid

the groundwork for undergraduate, graduate student, and faculty exchanges, public health fieldwork, and research partnerships. "The visit was extremely productive,"

with their faculty and students, and determine where we might partner with them most effectively for both universities."

Members of the group were intrigued by the potential collaborative projects across a range of areas, including public health, nursing, biology, materials science, computer science, electrical and computer engineering, anthropology, archaeology, technology, and historical structures, and others.

Rochester and the University of Ghana have had an exchange agreement for the past five years, and for the past four years two graduate students from Ghana have spent an academic year in Rochester.

Heinzelman says the model was set up to address concerns that students from developing countries sometimes go abroad for doctoral degrees but don't return home.

The one-year visitation program allows students to be exposed to a different system and access different resources, including developing relationships with Rochester faculty. They then return to Ghana and can share what they have learned with their colleagues there.

At the same time, the visits can establish groundwork for ongoing research partnerships when the students return to Ghana.

—Leonor Sierra







## SCOUTING REPORT

# What's the outlook for the Yellowjackets?

A preview of the 2015-16 athletic seasons.

By Dennis O'Donnell

There is promise aplenty on the athletic fields for the coming season.

## Fall

**Cross Country:** The men's team finished 11th at the NCAA Atlantic Regional Run last season. Eric Franklin '17 earned All-UAA and all-region honors. The women's team will be led by Katie Knox '16. She earned All-UAA and all-region honors, then ran at the NCAA championship meet. Eddie Novara takes over as coach of both teams.

**Field Hockey:** Rochester won the Liberty League regular season title last year for the first time in school history. Returnees include All-Americans Tara Lamberti '16 in goal and Michelle Relin '16 on the forward line.

**Football:** The Yellowjackets return the

majority of their starters from last season (5-4 overall record), including the eight who earned All-Liberty League honors last year. Rochester has five home games this season.

**Soccer:** Rochester's men made their ninth NCAA playoff appearance in the last 10 years in 2014 and reached the second round of the tournament. The Yellowjackets were 10-5-4 overall. The women's team finished 6-8-4, relying on a stingy defense that held 13 of 18 foes to one goal or fewer.

**Volleyball:** With six wins in their last eight matches, the Yellowjackets stormed to a 17-19 finish overall, including a sixth place finish at UAAs. Rochester will host the UAA championships November 6 to 7 at the Palestra and Zornow Sports Center. The UAA champion earns an automatic bid to the NCAA playoffs.

## Winter

**Basketball:** The Rochester women finished 15-10 and ended with three wins in the last four games. Al Leslie '18 and Lauren Deming '18 earned All-UAA honors as freshmen. Leslie was the UAA Rookie of the Year, a WBCA All-American, and

the D3hoops.com Rookie of the Year. The men's team was 10-15 overall. Sam Borst-Smith '17 and Mack Montague '17 earned All-UAA honors. Rochester will host the 50th edition of what is now the Wendy's College Classic tournament at the Palestra from December 3 to 5, when the men's semifinalists and finalists tip off. The Palestra will be the site of the 23rd tournament for the women, with Rochester hosting the semifinals and finals as well.

**Swimming and Diving:** All-Americans Vicky Luan '16, Khamai Simpson '17, and Emily Simon '17 return in the pool. Danielle Neu '17, who was an All-American in 2014, is back on the diving board. Rochester's women have won six straight Liberty League titles. The men have won three in a row. Gunnar Zemering '18 was the Liberty League Rookie of the Year last season.

**Squash:** The Yellowjackets have four All-Americans returning to the lineup this year: Neil Cordell '16, Tomotaka Endo '18, Ryosei Kobayashi '17, and Mario Yanez Tapia '17. Rochester beat two No. 1-ranked teams last season (Harvard and Trinity). The Yellowjackets finished fifth at the national championships.

**TOP TACKLE:** Academic All-American Matthew Mender '16 will help anchor the Yellowjackets from his position as defensive tackle on a football team that returns the majority of its starters for the fall season.



**Track and Field:** Both teams had superb indoor seasons with the women finishing third overall at the ECAC championships (the highest finish in school history) and the men winning the New York state team title. In the spring, the men won the state title again. Boubacar Diallo '16 earned All-America honors in the triple jump, finishing fourth at the NCAA meet. Cameron Edwards '16 will try to secure her fourth consecutive trip to the NCAA championships. She's competed three times in the 400-meter intermediate hurdles.

### Spring

**Baseball:** Four of the top six hitters are back. Five All-Liberty League honorees return overall as Rochester aims to improve on its 26-16 finish last season. The Yellowjackets finished third in the Liberty League competition.

**Softball:** For the second year in a row, Rochester won the Liberty League softball title and competed in the NCAA Division III national championships. The Yellowjackets return five players who hit .324 or higher. Eleni Wechsler '17 earned all-region honors for the second straight year. Shelby Corning '17 was named to the ECAC Upstate New York team. Rochester was 29-13.

**Lacrosse:** A clutch late-season win over RIT boosted Rochester into the Liberty League playoffs for the second time in school history. Top scorer Jamie Wallisch '17 was named first team All-Liberty League. Three other all-league honorees will join her on the field this season.

**Golf:** Rochester had three earn all-region acclaim in 2015: Dominick Schumacher '16, G. W. VanderZwaag '16, and Jona Scott '17. All three are back. Rochester won the UAA championship and finished third at the Liberty League championships.

**Rowing:** The first varsity eight finished fifth overall in its race at the New York state championships. The Yellowjackets were third overall at the Liberty League championships. A challenging schedule included a mid-April meet in New England in which three teams ranked sixth or higher.

**Tennis:** Rochester's men were ranked 13th regionally and 40th in Division III overall in an 8-11 finish. Jonny Baker '17 earned second team All-UAA honors after he won all three of his matches at the championships. The Yellowjacket women were 8-10 overall and secured a No. 17 regional ranking. **R**

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



**RETURNING TO LEAD:** UAA basketball Rookie of the Year Ali Leslie '18 (top), All-American field hockey goalkeeper Tara Lamberti '16 (middle), and ECAC All-Star Nolan Schultz '17 return to help lead the Yellowjackets in 2015-16.