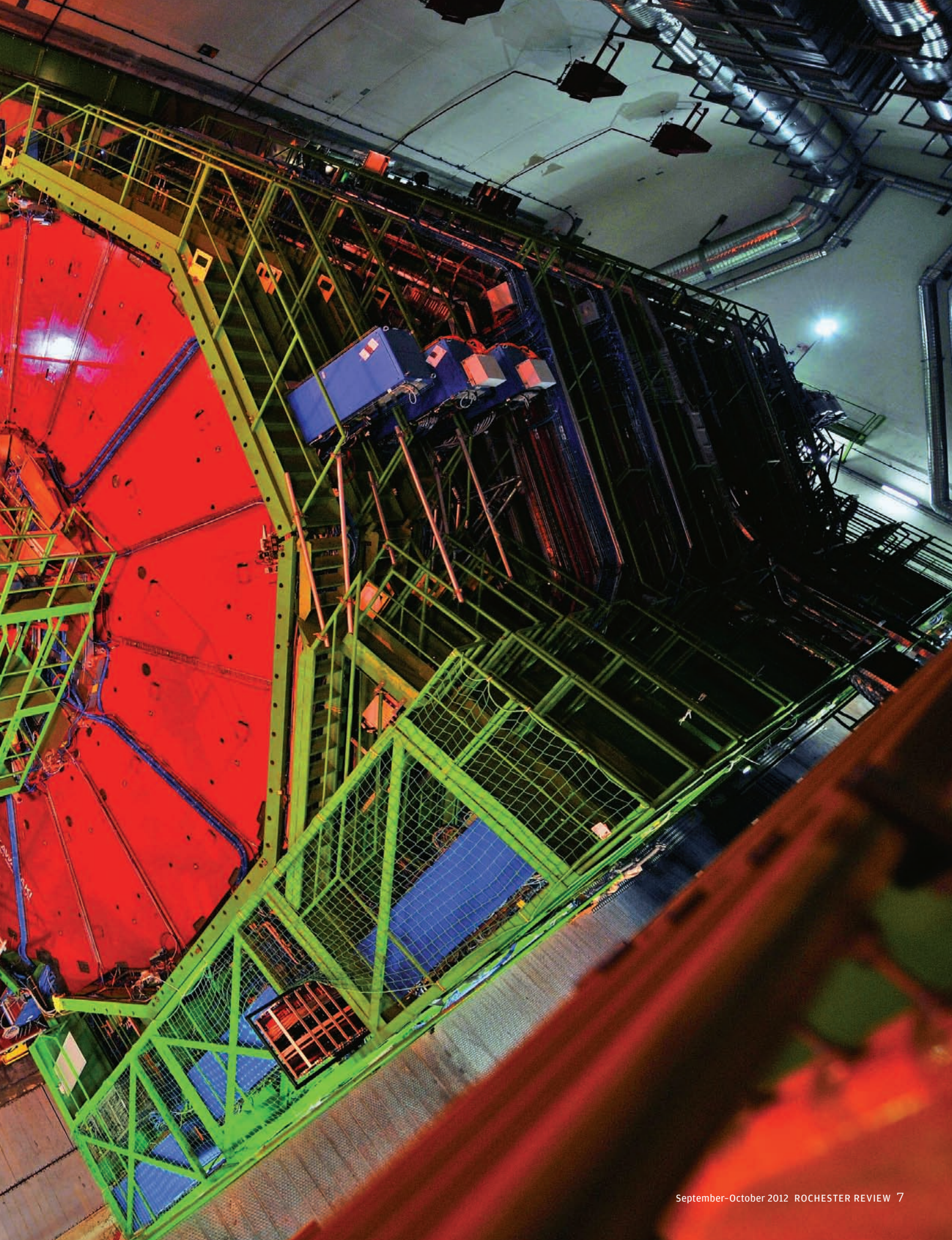


HIGH-ENERGY PHYSICS

Betting on a Boson

COLLISION COURSE: Several Rochester scientists were part of an international team whose work on the Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider in Switzerland and France produced evidence this summer of a particle believed to be the long-sought Higgs boson. The work by Rochester's Arie Bodek, Regina Demina, Paul Slattery, Aran Garcia-Bellido, Pawel deBarbaro, and Sergei Korjenevski helped support a nearly 50-year-old theory by Carl Hagen, professor of physics at Rochester. Hagen was one of six researchers who published similar papers in 1964 that predicted the existence of the subatomic particle. **PHOTOGRAPH BY REX FEATURES/AP IMAGES.**



MEDICAL STUDENTS

Life Savers

RESCUE TEAM: First-year medical students Sarah Nevarez, Bridget Hughes, and Lindsay Wahl earned praise from City of Rochester rescue personnel and School of Medicine and Dentistry officials for their help in an effort to rescue two children and their father from the Erie Canal in August. The students, only in their third official day at the medical school—along with David Lambert, senior associate dean for medical student education, and Adrienne Morgan, senior director of the Center for Advocacy, Community Health, Education, and Diversity—rushed to the canal after the man lost control of the children's stroller and it rolled down an embankment and dropped into the water.

PHOTOGRAPH BY BRANDON VICK





SCHOOL OF
MEDICINE &
DENTISTRY
UNIVERSITY OF ROCHESTER
MEDICAL CENTER



ATHLETICS

Light House

FIELD WORK: The Yellowjacket men's soccer team practices under new lights at Fauver Stadium in late August as Rochester's athletics teams gear up for the season with some revamped facilities. In addition to the lights at Fauver, lights have been installed at Towers Field—along with an artificial turf surface for baseball—and the Palestra's basketball court has been refinished. Under way are renovations to the Speegle-Wilbraham Aquatic Center. **COMPOSITE PHOTOGRAPH BY ADAM FENSTER**



Home, Sweet, Flexible Home

New River Campus residence hall opens.

A new residence hall for sophomores, juniors, and seniors opens this fall. O'Brien Hall, named for President Emeritus Dennis O'Brien, completes a four-building residential area, Jackson Court, named for President Emeritus Thomas Jackson. The hall is distinctive for its number of study rooms and lounges on upper floors and flexible common areas for meetings, event planning, and music and dance recitals. O'Brien Hall is targeted to meet Leadership in Energy and Environmental Design (LEED) gold certification standards—a first for the River Campus.

Single Rooms
Single rooms are available on floors two through five.

Performing Arts Rehearsal Room
Designed for student dance groups, the room features a sprung floor, mirrors, bars, and an audio system.

Floors two through five are hidden so details on the first floor can be shown.

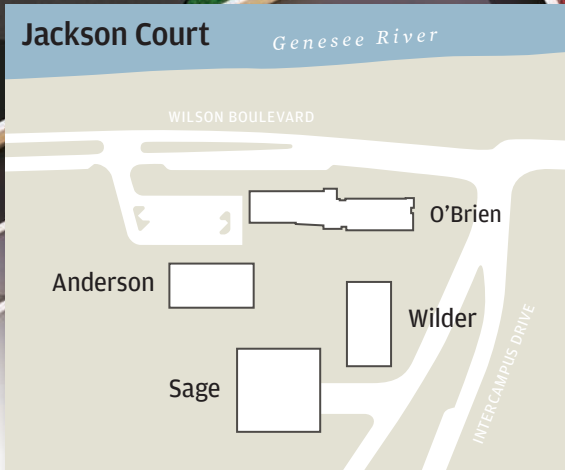
Main Entrance

Conference Room
Provides meeting space for large groups, with movable furniture and an LCD display.

Fireplace
Designed to draw students outside for more of the year and foster community.

Music Room
Up to 25 people can make music together in the room.

Parking

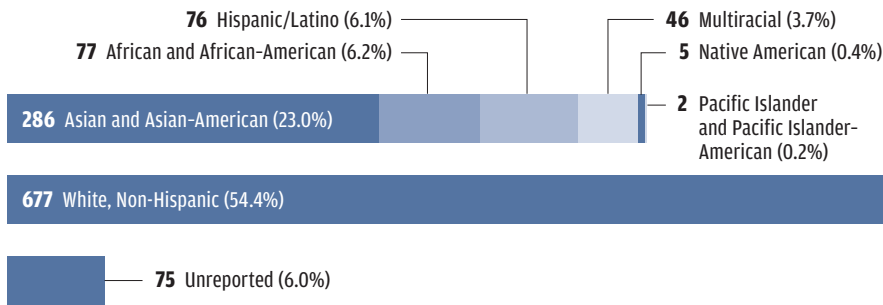


Class of 2016

The largest freshman class ever on the River Campus arrived in late August, with more than 1,230 students. Undergraduate enrollment for the academic year is about 4,650 students, having grown 22 percent in the past decade due to increases in retention and recruitment.

Ethnic/Racial Identity

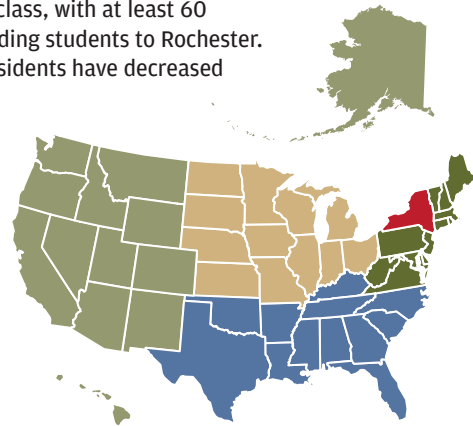
The Class of 2016 is the most diverse to date. According to data from the Common Application—an application used by more than 400 colleges and universities—there are 185 underrepresented minority students in this year’s freshman class, up from 154 last year.



Geography

It's also the most geographically diverse class, with at least 60 countries, 48 states, and Puerto Rico sending students to Rochester. As a share of the class, New York state residents have decreased from 39 percent last year to 36 percent.

Region	Total	Percent
New York State	448	36.1
Other Northeast	280	22.5
Midwest	70	5.6
South	132	10.6
West	146	11.8
China	79	6.4
Other International	87	7.0



SOURCE: OFFICE OF ADMISSIONS

A Class Record for Diversity

By Kathleen McGarvey

THE CLASS OF 2016 IS THE MOST DIVERSE class Rochester has ever welcomed, in terms of background and other measures, says Jonathan Burdick, dean of undergraduate admissions and financial aid for Arts, Sciences & Engineering.

While definitive numbers won't be known until after the data is collected from first registration, the class is also on track to be the biggest, with an estimated class membership of at least 1,230 students, a slight majority of whom are male.

A growing share of the class—and the largest ever total number of students—are from traditionally underrepresented

ethnic and racial groups. “We will have achieved enrollment shares of more than 5 percent each for Latino and African-American students,” Burdick says, calling that attainment “at the least a higher platform from which to continue expanding Rochester’s reach into all communities and Rochester’s relevance to rising aspirations and expectations among historically underrepresented groups.”

Students are also coming from farther away: 90 percent of the growth of this year’s class, compared to those of a year or two ago, is from students coming from the western and southern United States, as well as students who are U.S. citizens enrolling straight from living abroad.

Double Rooms

Some doubles share a private bath with another double.



AUDIO & MUSIC ENGINEERING

At the ‘Intersection of Science, Engineering, and Music’

New major in audio and music engineering aims to make its grads the ‘gold standard’ in evolving fields.

By Bob Marcotte

IMAGINE WALKING INTO A BOOTH, HAVING your picture taken, and walking out not only with a photo but also with a computer-generated, algorithmic melody uniquely yours—based on the features of your face.

That’s one of the projects Kedar

Shashidhar ’15 of Corning, N.Y., has been working on.

It’s an example of the “intersection of science, engineering, and music” that Mark Bocko, professor and chair of electrical and computer engineering in the Hajim School, and Dave Headlam, professor of music theory at the Eastman School, had in mind

▲ **STUDIO SOUND:** Professors Mark Bocko (bass), Dave Headlam (piano), and Jack Mottley (booth), and PhD student Stephen Roessner (drums) test a new recording studio in the Computer Studies Building, a space that provides opportunities to work with technologies involving sound.

when they first began talking about a new major in audio and music engineering.

Designed to leverage Rochester’s hallmark strengths in engineering and music—both at the Eastman School and in the College’s Department of Music—the major was approved by the faculty last spring and is being offered for the first time this fall.

Along with a new major in digital media studies, the audio and music engineering major offers students an opportunity to explore the evolving fields of digital technology through multidisciplinary research and learning.

Both majors will move into the new Ronald Rettner Hall for Media Arts and Inno-

vation, now under construction between Wilson Commons and Morey Hall, in fall of 2013.

The chance to combine his passion for music with technology caught Shashidhar's attention. "I've always had that more technical mindset," Shashidhar says. The degree "complements who I am as a person and where I want to go in life."

Bocko, who is an affiliate faculty member at the Eastman School, says the demand for traditional audio recording engineers employed by professional recording studios has declined, largely because advances in audio technology have made it possible for people to invest a few thousand dollars and put together an excellent home recording studio of their own. Headlam says even when live music is recorded in a superior acoustical setting like Eastman's Hatch Recital Hall, much of the processing can now be done on a laptop.

At the same time there's a burgeoning need for sonic media engineers in areas such as the video game industry, which is now larger than the music industry, according to Bocko and Headlam.

"You have hours and hours of screens and material in a major video game," Bocko says. "Scoring all of that with music in a way that's interesting and not repetitive is quite a challenge."

Students trained in audio and music hardware and software design could very well end up finding efficient ways to use computers to generate more satisfying soundtracks, he says.

But they'll likely be working in teams with marketing and design people who'll have to ensure that the music being produced appeals to people, Headlam adds.

That's why there will be two versions of the major.

One version, leading to a bachelor of science degree, carries a heavier load of engineering and technology classes, and will be the preferred preparation for students who wish to pursue "hard-core" engineering careers in hardware and software design and development. The other version, leading to



DIGITAL HOME: Scheduled to be open in fall 2013, the Ronald Rettner Hall for Media Arts and Innovation will be home to students studying digital media as well as engineering.

CAMPUS LIFE

Introducing Rettner Hall

The new home for media arts and innovation will be named for Ronald Rettner, a University trustee who provided the lead gift for construction of the building.

Approved for construction this summer, Ronald Rettner Hall for Media Arts and Innovation will feature an engineering fabrication lab where students can build project prototypes, a multipurpose learning studio, group study areas, and exhibit space.

The building will also contain sound and video recording studios, high-end computers, and 3-D printers, the latest manufacturing technique to convert



Ronald Rettner

digital design software into actual models.

The building—to be located between Wilson Commons and Morey Hall—is scheduled to be ready for classes by fall 2013. That's when students pursuing newly designed majors in digital media studies and in audio and music engineering will be able to tinker at will in the three-story structure.


Designed by the Boston-based architectural firm of Goody Clancy, the 18,900-square-foot building will be open 24 hours a day to accommodate students' creativity and innovation—at whatever hour inspiration strikes.

—Valerie Alhart

a bachelor of arts degree, will be less technically comprehensive, emphasizing creation of audio content and leaving room for students to complete a dual major in, for example, music or brain and cognitive sciences or in engineering disciplines.

John Covach, professor and chair of the College music department and professor of theory at the Eastman School, says that the new major and facilities will help meet the increasing demand for music courses and performance. "The interest in music among Rochester students is really remarkable," he says.

Shashidhar once dreamed of playing saxophone for a living, then gravitated toward the more secure job prospects of chemical engineering—until he heard Bocko describe the new major at an orientation session. Now he's looking forward to helping break new ground by obtaining a degree many people have never heard of.

"It is really what you make of it," Shashidhar says. "That's one of the things I really like about this major." 

Bob Marcotte writes about the Hajim School for University Communications.

A New Route for Tackling Prostate Cancer

It may be the Peyton Manning of prostate cancer: a protein called paxillin that's essential for the disease to grow and spread throughout the body.

Like any good quarterback, paxillin commands the entire field, controlling cell growth in tumors sensitive to hormone therapy and in tumors that grow resistant to such treatment.

Though in the very early stages, the discovery that paxillin is a major player in prostate cancer is an important first step toward developing a treatment for men whose cancer persists even after the most aggressive treatment. The research was published in the *Journal of Clinical Investigation*.

“The holy grail in prostate can-

cer is to figure out why cells stop responding to hormone therapy,” says senior study author **Stephen Hammes**, the Louis S. Wolk Distinguished Professor in Medicine and chief of the Division of Endocrinology and Metabolism in the Department of Medicine.

Hammes and first author **Aritro Sen**, research assistant

professor in the Division of Endocrinology and Metabolism, found that paxillin can go into the nucleus of a cell, regulating signals that lead to the creation of cancer cells. Taking paxillin out of the nucleus brought growth to a halt in both hormone-therapy-dependent and resistant prostate cancer cells.

—Emily Boynton

What Does It Mean to Be Cool?

Research led by a Medical Center psychologist and published by the *Journal of Individual Differences* has found the characteristics associated with coolness today are markedly different from those of the past.

“I was not prepared to find that coolness has lost so much of its historical origins and meaning—the very heavy countercultural, somewhat individualistic, pose,” says **Ilan Dar-Nimrod**, a postdoctoral fellow in psychiatry, who led the study.

Coolness now is not so broody, he says. “The much darker version of what coolness is, is still there, but it is not the main focus. The main thing is: Do I like this person? Is this person nice to people, attractive, confident, and successful?”

Dar-Nimrod and his colleagues recruited almost 1,000 people who completed a questionnaire on the attributes, behaviors, and individuals they associated with the word “cool.”

A significant number of participants used adjectives that focused on positive traits, such as “friendly,” “competent,” “trendy,” and “attractive.”

The findings could point to possible health implications, says Dar-Nimrod, whose main research interests are the effects of genetics and social environment on decision making and health behaviors.

“Smoking or drug use, for example, could be connected with a view of coolness that includes rebelliousness or a countercultural stance. This can inform future health research on behaviors.”

—Michael Wentzel

REBELLIOUS: In 1955, James Dean was the very definition of cool in *Rebel Without a Cause*.



Mathematicians Hide Waves Inside an Invisible ‘Hat’

Is invisibility, once the stuff of stories, slowly becoming reality? Over the past five years, mathematicians and other scientists have been working on devices that shield small objects from detection by microwaves or sound waves.

Allan Greenleaf, professor of mathematics, and an international team of researchers have come up with a process that would allow practical applications to be performed in a cloaked—or invisible—environment. The findings have been published in the *Proceedings of the National Academy of Sciences*.

Such a cloak could hide a probe needed to take precise sound measurements while letting in just enough sound waves that could be amplified for taking measurements.

They’ve dubbed the system “Schrödinger’s hat,” in reference to the famed Schrödinger’s cat of quantum mechanics.

—Peter Iglinski

PATENTLY SPICY: Rochester scientists have received a patent to use compounds derived from curcumin to fight cancer, acne, baldness, and other conditions.



Patenting Curry's Power Against Disease

The University and two other entities have received a U.S. patent for the use of compounds related to curcumin, the main ingredient of curry, in the fight against cancer, acne, baldness, and other medical conditions.

The patent—also awarded to the University of North Carolina at Chapel Hill and

to AndroScience Corp. of San Diego—is for research led by **Chawnschang Chang**, director of the George Whipple Laboratory for Cancer Research at the Medical Center and a cofounder of AndroScience, in which the University owns a stake.

Chang, a faculty member in the Departments of Urology

and Pathology and the James P. Wilmot Cancer Center, is one of many researchers worldwide investigating the potential biomedical benefits of curcumin, the spice that gives mustard and curry their bright yellow colors. Two dozen patents, dating back to 2004, have been issued to the University for Chang's work.

"It's exciting and gratifying to be part of the broad effort to learn about how compounds like ginger and curcumin exert potential health effects, which are well recognized in China and other cultures, and try to harness them to treat people with diseases like prostate cancer," says Chang.

—Tom Rickey

New Huntington Treatment Shows Promise

A new Rochester study indicates that the compound coenzyme Q10 (CoQ) reduces oxidative damage, a finding that hints at its potential to slow the progression of Huntington's disease.

The discovery, which appeared in the inaugural issue of the *Journal of Huntington's Disease*, also points to a new biomarker that could be used to screen

experimental treatments for the debilitating disease and other neurological disorders.

"This study supports the hypothesis that CoQ exerts antioxidant effects in patients with Huntington's disease and therefore is a treatment that warrants further study," says **Kevin Biglan**, associate professor of neurology and lead author

of the study. "As importantly, it has provided us with a new method to evaluate the efficacy of potential new treatments."

Huntington's disease is a genetic, progressive neurodegenerative disorder that affects movement, behavior, and cognition and generally results in death within 20 years of the disease's onset.

Scientists believe that one of the important triggers is a genetic "stutter" that produces abnormal protein deposits in brain cells—deposits believed to inhibit the ability of cells to meet their energy demands.

The result is oxidative stress—and, ultimately, cellular death.

—Mark Michaud

INSTITUTE OF OPTICS

Seeing the Future

Noted optical scientist Xi-Cheng Zhang takes the helm at the Institute of Optics.

By Kathleen McGarvey

AS AN EXPERT IN TERAHERTZ WAVES WHOSE insights are in demand around the world, Xi-Cheng Zhang knows a thing or two about studying waves.

Now he's looking forward to making them, on behalf of the Institute of Optics, as he works with colleagues to reinforce Rochester's reputation as a driving academic force in optics nationally.

In January, Zhang succeeded previous director Wayne Knox, professor of optics and vision science, who was promot-

many great achievements—but we need more.”

As director, he aims to increase undergraduate enrollment and to increase the number of master's degree students. He's also working to increase funding, patents, entrepreneurship, and publications in top journals. Key to all of that is identifying core strengths that make the Rochester program distinctive.

“I'm looking for the unique features of our institute,” Zhang says. To do that, he has been working closely with faculty members and alumni, reaching out to the institute's

“The Institute of Optics has a great reputation, a rich history, and a unique culture. It's the top optics institute in the United States, and one of the top in the world.”—Xi-Cheng Zhang

ed after 10 years to become associate dean of education and new initiatives at the Hajim School.

“The Institute of Optics has a great reputation, a rich history, and a unique culture,” says Zhang, who spent the previous two decades at Rensselaer Polytechnic Institute, where he was founding director of its Center for Terahertz Research and acting head of the Department of Physics, Applied Physics, and Astronomy. “It's the first optics institute in the United States, and one of the top in the world.”

The admiration is mutual. “Xi-Cheng Zhang is an internationally recognized scientist in the field of optics who appreciates the great tradition of our institute, and we very much look forward to the scientific and administrative leadership he will bring to the institute,” Rob Clark, dean of the Hajim School, said upon Zhang's appointment.

But while there's much talk of tradition, Zhang's directorship also marks a new era for the august institute that has granted approximately half of the optics degrees earned in the United States.

“The world is changing, and we have to change as well,” Zhang says. “We have

many graduates through receptions, phone calls, and email exchanges.

“Because we're small, we can't do everything,” Zhang says. But he wants to make decisions from a strategic, visionary perspective, devoting resources, such as the hiring of new faculty, to areas in which Rochester can lead. And some fields of inquiry are simply essential.

“There are some areas which we shouldn't miss, that as an institute of optics, we cannot afford to miss,” he says.

One of those areas is research into terahertz electromagnetic frequencies. Strengthening such research at the University is “one of my major tasks,” he says. “Like many of our faculty who maintain rigorous research programs, I plan to keep a top research profile here. My leadership focus will encompass active research, supervising students, and continuing to achieve significant funding.”

Curiosity first drew him to terahertz waves—he was intrigued because so little was known about the frequency, which lies on the electromagnetic spectrum between mid-infrared and microwave bands. But when NASA contacted him after the crash



of the space shuttle *Columbia* to find out if terahertz technology could be used to identify defects in the shuttle's thermal insulation, Zhang's interest expanded to a drive for applications.

These are early days for research on the terahertz spectrum, but because the waves can go through many common, non-

▲ VISION: Zhang, who took over as director of the Institute of Optics this year, says he wants to make decisions from a strategic, visionary perspective, devoting resources, such as the hiring of new faculty, to areas in which Rochester can lead.



metallic materials, the work shows promise for applications in a wide variety of areas, from security and defense—identifying explosives and other dangerous chemicals from a distance of up to 30 meters away—to pharmaceuticals and art restoration and conservation.

For example, terahertz technology “has potential for homeland security applications,” he says, allowing airports to move away from backscatter x-rays, a method that has raised public concerns about privacy and safety.

The likely usefulness of terahertz waves for defense and homeland security has

brought Zhang international attention. He recently retired as chair of a pair of NATO organizations, and this summer he received an honorary professorship from Moscow State University, recognition that has been awarded sparingly to scientists.


Participation in research of such immediate global interest has kept Zhang on the move. “I traveled 290,000 miles one year,” he says. “It’s 230,000 miles to the moon. There are a lot of meetings and organizations interested in terahertz technology.”

While at Rensselaer, Zhang established a company, Zomega Terahertz Corporation, dedicated to developing and estab-

lishing terahertz-technology applications. He hopes to help encourage entrepreneurship at the institute, where, he notes, there is already a long history of establishing companies by faculty, alumni, and students and a tradition of strong relationships with industry.

“I feel this is good for society, and good for our institute as well,” he says.

And despite the demanding pace of his research, his eyes are firmly on the plans he’s developing for the institute.

“I have a chance to work with a large group of the best faculty in the world, to achieve our goal together.” 

GENIUS: Marie Rolf says Debussy established a “new compositional paradigm” in works such as his 1905 *La Mer*, a rare autograph manuscript of which is held by Sibley Music Library.

MUSICOLOGY

Who Was Debussy?

This October, the Eastman School will celebrate the 150th anniversary of the birth of composer Claude Debussy with a three-week festival, the Prismatic Debussy. Featuring concerts, lectures, and master classes, the festival will explore beloved masterpieces, such as his orchestral *Nocturnes*, compositions rarely performed, early songs, and new pieces inspired by the French composer. **Marie Rolf '76E (PhD)**, associate dean of graduate studies and professor of music theory at Eastman, is the festival's artistic director.

What's most important for people to know about Debussy?

Debussy was one of the greatest pathbreaking composers who ever lived. Unlike Bach or Mozart, who had the fortune to be born

at the end of the Baroque and Classical eras, respectively, and who built on a pre-existing style, Debussy had to establish a whole new compositional paradigm, one that would honor French tradition but that left the more ponderous aspects of the past and set the stage for composers of the 20th century. Claude Debussy was a genius who changed the musical world forever.

In what ways was he a product of his era?

Debussy was also a man of his time and influenced by a great variety of contemporary

ideas and sources: the literary symbolists Baudelaire, Verlaine, and Mallarmé; the arts of other cultures, including Japan and Indonesia, Spain, and Russia; the café concerts of Paris; ragtime, minstrel songs, shadow plays, the circus. His primary motivation centered on his veneration for nature and his desire to create music that was free, “*en plein air*,” subject to no rules but the laws of pleasure and beauty.

What inspired you to create the festival?

We want to celebrate the composer's eclecticism and original-

ity, but we also want to celebrate the rich talent and resources of the Eastman School. We're fortunate to have gifted students and faculty who interpret Debussy's music as performers and as scholars, and to have access to several Debussy manuscripts and other rare materials in the Sibley Music Library.

During the Prismatic Debussy festival, we aim to present his works in fresh and imaginative ways, showcasing our different ensembles, combining performance with cutting-edge research, and even featuring new compositions inspired by Debussy. So in a sense our festival is a celebration of the creative artistry of Debussy but also of the combined creative resources of our school.

—Kathleen McGarvey



CLIMATE HISTORY

Ice Man Arriveth

Vasilii Petrenko, assistant professor of earth and environmental sciences, is Rochester's first climate scientist—though he says “paleoclimatologist” is a more accurate description. Petrenko works with ice core samples from Greenland and Antarctica to learn about the climate and environment thousands of years ago. Along with observations of contemporary conditions and computer modeling to predict future patterns, study of climatic history is essential to understand what is happening today, he says.

How far back does the ice record go?

In Greenland, we can go back a little over 100,000 years. In Antarctica, the oldest ice core has been dated to about 800,000 years. And we can probably go further back.

What can you learn from the ice samples?

One of the things I'm interested in is how the natural methane budget works. Methane is a very potent greenhouse gas, about 25 times more potent than carbon dioxide, and it has two types of sources today: one is natural, and one is anthropogenic—from humans. That source is now considerably

larger than the natural sources, around a factor of 2 to 1. But there's a lot of concern that with global warming, the natural methane budget might ramp up dramatically.

Does the melting ice in Greenland affect your research?

Some of the really large-volume samples that I need to get—some of my samples are a thousand kilograms, or about a ton—I can only get from the edges of the ice sheets because it's impractical to get that much by drilling deep vertical cores.

But the edges are melting very fast, so the ice that's available there is changing. In the Greenland Summit region, which is above 3,000 meters, it's very cold year round—but in the last few years the instances where temperatures have gotten above freezing are increasing, and that creates melt layers in the snow and alters the way that gases are trapped.

We're definitely feeling the influence. In my lifetime we're not concerned about being able to retrieve the deep ice cores because the ice sheets do have a lot of inertia and it takes a long time to melt an ice sheet.

—Kathleen McGarvey



CORE KNOWLEDGE: Ancient ice holds clues for the modern climate.



ORTHOPAEDICS

Do the Shoes Fit?

Judith Baumhauer '09M (MPH), professor of orthopaedics, is president of the American Orthopaedic Foot and Ankle Society—the first woman to lead the organization. She was also the first female faculty member appointed to Rochester's Department of Orthopaedics and Rehabilitation. A medical doctor specializing in orthopaedic foot and ankle surgery, she's one of the nation's few female professors in the field.

What don't we know about our feet?

People assume they're going to wear the same size shoe they wore in college, but actually they're probably wearing a shoe that's too small. Your foot continues to grow throughout your life—it's called periosteal bone growth. More than 80 percent of women are wearing shoes too small for their feet.

Are foot problems seasonal?

In the winter, to get in shape people walk on the treadmill or use other machines. But those machines are a repetitive stress. Sometimes your body can take the repetitive stress and do OK. And sometimes just the action of taking the same step over and over and over again, hundreds of times, gives you an overuse injury. So you can get Achilles

tendonitis, or posterior tibial tendonitis—the tendon that supports your arch. That tendon can be painful around the inside of your ankle. Once it gets to be nice weather, people want to go outside to exercise. This avoids the treadmill but has other injury risks. Walking on uneven ground can make the ankle vulnerable to rolling, resulting in an ankle sprain. I still tell people I like them to walk or run outside because I like them to change up their terrain—it's better for their balance and causes fewer overuse problems.

What do you say to people about high heels?

You want a shoe that's supportive and fits well. Support is a function of shock absorption and arch support. I wear high heels to functions, just like everybody else—but when I get to my table, I kick them off. They're for show, not for use. High heels give you a look—your calf is a little tighter, your back is more arched, your shoulders are back a little bit, your posture is better. There are qualities about high heels that make people feel they look better. And there's value in that—your self-esteem is important. But you have to recognize that it is a look—and they're not the most functional thing.

—Kathleen McGarvey

Scientists Rate University a ‘Best Place to Work’

The *Scientist* magazine has named Rochester one of the best places in the world for scientists to work.

The University is rated 22nd in

the magazine’s worldwide survey of scientists in the life sciences.

At Rochester, that work is done primarily at the Medical Center, as well as in the Departments of

Biology and the Department of Brain and Cognitive Sciences.

The results are based on questionnaires completed by more than 1,000 full-time life scientists

working in academic or non-commercial institutions.

This is the third consecutive year that the University has appeared on the list.

College Prep Center Expands

In its first year, the University’s College Prep Center at East High School in Rochester worked with nearly 700 students, providing advice and assistance and holding workshops about the college admissions process.

This year more students will receive the same support and outreach through a second center at the city’s Benjamin Franklin High School, thanks to a grant from the Max and Marian Farash Charitable Foundation.

The new center will be a partnership between the school and the University’s David T. Kearns Center for Leadership and Diversity in Arts, Sciences & Engineering. The JPMorgan Chase Foundation funds the East High center, which opened last August.

“Our goal is to increase the high school graduation and college-going rates of students across the Rochester City School District,” says Beth Olivares, director of the Kearns Center.



Building Bridges

A newly renovated railroad bridge connecting the River Campus to southwest Rochester neighborhoods opened to walkers, joggers, hikers, and bicyclists this summer. The Erie Lackawanna Pedestrian Bridge, built atop the deck of a railroad bridge constructed in the 1850s, spans the Genesee River approximately 1.5 miles south of downtown Rochester, linking the east and west banks of the river.

Eastman School Joins Partnership for City Music Instruction

Children in Rochester can learn about music in a new program, RocMusic, created this fall by a partnership between the Eastman School, the Eastman Community Music School, the Hochstein School of Music & Dance, the Rochester Philharmonic Orchestra, the Rochester City School District, and the City of Rochester.

Inspired by Venezuela’s “El Sistema” program, RocMusic is a community-based, tuition-free music instruction program for economically disadvantaged youth. The pilot program will teach general music literacy and appreciation to children ages five through eight, and string instruction for children ages 9 to 18, three days a week.

“All children deserve the opportunity to experience the joy of making music,” says Jamal Rossi, RocMusic founder and executive associate dean of the Eastman School. The goal of the program, he says, “is to bring these opportunities directly to children by providing access to musical instruments, high quality instruction, and a safe place to

learn and practice music after school and during the summer months.”

The program is being funded by a \$100,000 seed grant from the Max and Marian Farash Charitable Foundation. The grant will be used to hire a part-time music director and music instructors, as well as to furnish materials and to fund activities.

LANDMARK SEASON

'Proving What We Knew about Ourselves'

The Yellowjackets celebrate the 1987 football season and the lessons of perseverance.

By Dana Hilfinger '10

RAY TELLIER AND HIS ROCHESTER COACHING staff set the stage for the 1987 football season three years earlier. A first-time head coach, Tellier in 1984 had accepted the challenge of rebuilding a program that hadn't posted a winning season in five years. The former offensive coordinator at Brown University focused first on the recruiting trail, bringing in talent from the Northeast.

"We just had to go out and find enough good players, and they would take it from there," Tellier says.

Wins, however, were hard to come by, and the young recruits—as well as the upperclassmen—learned that turning things around would not be easy. Between 1984, when Tellier became head coach, and 1986, the team won just four games.

"A freshman starting two ways says a lot about the nature of the program," says fullback and four-year starter Dan Gioia '88, who recalls starting as fullback and linebacker in at least one game as a freshman.

"We suffered through, and we took our lumps," says Dominic Strada '89, a free safety from Jessup, Pa. "But we worked hard in the offseason. Everybody kept coming back with the attitude that we were going to get better each season. All we needed was for something to happen on the field that proved what we knew about ourselves."

By 1987, that attitude was on full display as the Yellowjackets posted a 9-2 record, setting a record for single-season victories and becoming the only Rochester football team to earn an NCAA playoff berth. The 25th anniversary of the historic season will be celebrated this fall during Meliora Weekend, Oct. 11-14.

The milestone season opened Sept. 12, 1987, with a win over Rensselaer Polytechnic Institute at Fauver Stadium. Ahead on the schedule was a game against Union College, a perennial Goliath in the region.

Gioia, whose high school was near Union, remembers the moment well. "It's the difference between programs with winning records and losing records—winning pro-



grams, like Union, would turn a game that they shouldn't win into a win; losing programs would turn those games into a loss."

"I don't think we had scored a point against them in three years," Tellier says. But on Sept. 19, 1987, the Yellowjackets scored 24, enough to eke out a difficult victory in Schenectady.

"It went from a 'here we go again,' getting behind early, to striking right back and thinking we have a shot," says wide receiver

▲ **SEASON'S CHEER:** Stepping in to his first head coaching job at Rochester in 1984, Ray Tellier (above) led Tommy Sheehan '90 and the Yellowjackets to the NCAA playoffs in 1987, a 25th anniversary milestone that will be celebrated this fall.

er and kick returner Tommy Sheehan '90. "When we beat them, we knew we were for real."

With a balanced, high-powered offense and a tight defense, the Yellowjackets won their first six games for the first time since 1959. The Yellowjackets credit each player's willingness to work as a member of a team.

"There were five or six of us who would pick up the ball and lead either by example or verbally at any given point in a game," Strada says.

At middle linebacker, there was future hall-of-famer Gary Ciarleglio '89. Greg Sutton '89, known as "Mr. Intensity." There was the always reliable kicker Andy Milne '89, who won a number of close games for the team. Sheehan, a sophomore wide receiver, would go on to win conference and All-America honors. And there were senior captains Pete Elliot '89, another linebacker, and Gioia, a fullback.

"I remember after being named captain I had a sit-down chat with Coach Tellier," Gioia says. "He said just lead by example. Work hard and lead by example. And that's what we tried to do."

While the Yellowjackets sustained late-season injuries that proved too difficult to overcome in their NCAA playoff game—a frigid, late November matchup with eventual national champion Wagner—the team's turnaround was undeniable.

"I wished it had happened other times," Tellier says of making it to the postseason. "It was a great accomplishment, for players to grow up and start to believe in themselves."

Twenty-five years later, there's still a sense of accomplishment, one that's tempered by time.

"You really need to understand where we came from," says Strada. "Most of the starters were all juniors and seniors at the time, but we all started from day one as freshmen and sophomores in there playing."

"I look back at being in a team environment and competing—and how that applies to what I do today more than looking back on being on a team that won. That was a snapshot in time and a great thing to be a part of, but it's really about the lessons." 📍

A former editor of the Campus Times, Dana Hilfinger '10 is a freelance writer.