



Junior Soo Jeong Hwang

Finding Inspiration in Unexpected Places

Skilled at science, she also enjoys singing in French class

Soo Jeong Hwang knew early she'd attend Rutgers and study molecular biology and biochemistry.

At East Brunswick High School, she excelled in science and participated in the competitive Waksman Student Scholars program based at Rutgers University–New Brunswick.

"I was well aware of the opportunities at Rutgers," says Hwang, whose sister graduated from the university in 2014.

Now a junior in the **School of Arts and Sciences Honors Program**, she says her undergraduate experience has been transformational in ways she never could have predicted: she sang French songs in class, traveled to the Netherlands to visit Rutgers' sister university, and even learned a modern Japanese martial art.

"You go more to train yourself and build discipline rather than to fight," she says of Kendo, a tradition that uses bamboo swords and protective armor.

As a science student, there were also unexpected benefits. She became an active member of the Molecular Biology and Biochemistry Society.

"I found that organizing events is one of my strengths," she says. "I help schedule guest lectures, faculty-student mixers, and trips to New York City."

One of her most surprising and memorable experiences came during a French class, Uri Eisenzweig's "Songs of Modern France."

"We actually sang in class," she says. "It was amazing how the class came together to perform at the end of the year—in front of guests. It was really fun, and really liberating!"

Hwang was 11 when her family moved from Seoul to New Jersey. Her parents, both of whom had earned university degrees in Korea, run a laundromat in Newark.

"It's very hard work," Hwang says. "I will always be grateful to them."

Hwang works in the laboratory of biologist Monica Driscoll, who examines the aging process. Driscoll's lab explores what happens at the tissue and cellular levels as animals grow old. The long-term goal is to identify genes that extend or limit healthy aging. "It's a very compelling research mission," Hwang says.

Last March she journeyed to the Netherlands with other honors students to visit the University of Utrecht for an Honors Program Colloquium that celebrated Rutgers' 250th anniversary.

"At Rutgers, it feels like anything is possible," she says.

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Serving in Student Government, He Developed Skills for Success

Learning leadership, communication, and compromise

Yash V. Dalal is a financial advisor, skilled at analyzing global markets; building rapport with clients; and making sound, evidence-based decisions.

The 1992 Livingston College graduate spent years developing his talents, starting his career in the pricing department of a major pharmaceutical firm and then attending Boston College for his M.B.A.

But it was as a liberal arts undergraduate at Rutgers University–New Brunswick that Dalal developed the broad range of analytical, critical thinking, and communication skills that continue to give him an edge in the highly competitive field of global finance.

Reflecting back on his undergraduate years, Dalal says one of his key experiences took place outside the classroom: serving as an elected representative to the Livingston College Government Association.

"I was involved in student government at Rutgers from the first possible day to the last possible day," Dalal says. "That's where I gained leadership experience, learned how to debate, and practiced expressing my ideas to my fellow students and to university leaders."

One of his signature accomplishments remains in place today. In the early 1990s, Dalal and two other students went before the Board of Governors to propose changing the name of Kilmer Campus to Livingston Campus.

"To make a presentation to the Board of Governors—that was huge," he says. "The skills you get from researching, writing, and presenting your ideas can

translate to any job you do in the future."

Dalal remains committed to liberal arts. He recently began serving on the Dean's Advisory Council for the **School of Arts and Sciences**.

Dalal grew up in Bergen County and attended Ramsey High School. His parents had emigrated from India in 1968.

"My parents are the true American story," he says. "They came here with a college education and \$500 and they lived the American dream."

When it came time to enter college, Dalal was interested in business but decided on an education in the arts and sciences. He majored in economics, a topic he found intellectually fascinating and that helped propel him toward his career in financial services. He has been with a global securities firm for nearly 18 years, currently serving as executive director for wealth management.

"Understanding inflation, GDP, and unemployment was very helpful in starting my career," he says. "And it was at Rutgers where I gained that foundation."

He also took many history courses and minored in political science, amassing a wide base of knowledge that he still draws upon in his work, which is influenced by global events, like the Brexit vote.

"In my field, every day can bring a new challenge," he says. "And a well-rounded Rutgers education had prepared me to meet them head-on."

Yash V. Dalal LC '92

ROUNDUP Things You May Not Know about the School of Arts and Sciences

20 FACULTY IN THE NATIONAL ACADEMY OF SCIENCES



In 2016, **Alexander Zamolodchikov**, professor of physics and a member of the high energy theory group in the **School of Arts and Sciences**, became Rutgers' newest member elected to the prestigious National Academy of

Sciences for his groundbreaking research in theoretical and mathematical physics, focusing on quantum field theories and statistical physics, most notably in the areas of conformal and integrable quantum field theories.

Day of Revolutionary Thinking



A Day of Revolutionary Thinking is a universitywide showcase of alumni success and scholarship marking Rutgers' 250th birthday on November 10, 2016. This culminating program of Rutgers' yearlong anniversary commemoration will connect alumni leaders, designated as Rutgers 250 Fellows, with current students and faculty, creating a continuum from Rutgers' proud past to its promising future. Visiting alumni will present talks, classes, and seminars throughout the day allowing for a variety of educational experiences. Visit the 250.rutgers.edu website in mid-October to view the full schedule of speakers and register to attend one or more of the many presentations. Then stay for a fun-filled evening of festivities and fireworks!

117 FULBRIGHT STUDENT GRANTEES SINCE 2008

Sean Smith, SAS '15, spent the 2015-2016 academic year in Taiwan as a Fulbright Grantee, teaching English at an elementary school on the islands of Kinmen, just off the coast of southeastern China. "It was an amazing and enormous learning experience," says Smith. "The pivotal part was overcoming language and culture barriers and helping students learn and grow." Smith is back at Rutgers this year, finishing up a master's program at the Graduate School of Education. He's in a dual certification program for elementary education and special education K-12.



Rutgers Fulbright Grantee Sean Smith, back row, right, with his Taiwanese students.

A FOCUS ON THE FUTURE OF GRADUATE EDUCATION

Noted anthropologist wants to do more to support graduate students and faculty

Dorothy Hodgson, a professor of anthropology in the **School of Arts and Sciences**, is taking on new responsibilities in the administration of graduate education across Rutgers University–New Brunswick. Hodgson has been named senior associate dean for academic affairs at the Graduate School–New Brunswick, which oversees nearly 4,000 students and 120 Ph.D. and master's programs. A veteran scholar who has held numerous leadership positions, Hodgson discusses how her new responsibilities help her fulfill her longtime mission of supporting graduate students.

Q: How does your new role fit into the overall structure of Rutgers?

A: The Graduate School–New Brunswick is responsible for graduate curriculums across all the departments and schools of Rutgers University–New Brunswick. So when someone in Arts and Sciences proposes a new graduate course, we are the central body that evaluates that proposal. We also provide key services and programs, such as GradFund, which helps students find research grants and fellowships.

Q: What drew you to this job?

A: Providing mentoring and support across the disciplines. In anthropology, I've mentored my graduate students as well as students more broadly in my capacities as advisor, committee member, graduate director, and chair. When I served as graduate director, it was important for me to establish policies and create programs to better support our students.

Q: What are some of the key areas in which graduate students need more support?

A: All universities need to watch their attrition rates—the numbers of students leaving before getting their degrees—and keep them as low as possible. There's much we can do at the level of admissions. And there are many steps we can take to support the diverse student body we have now. For example, we're in the process of working on a leave of absence policy to provide more flexibility to graduate studies. Graduate students are adults, facing all the challenges adults face. They are often parents or have parents or partners they are caring for.



Q: What about career support? There is a lot of anxiety about the availability of academic jobs.

A: Yes, when you think about the current state of graduate education, the question becomes: how can we train students early on to think and prepare for other types of opportunities beyond the academy? In anthropology we held regular workshops where alumni who worked in government, non-profits, and advocacy organizations talked about their own experiences and provided great advice to current students.

Q: What are some of the first things you plan to do in the job?

A: Listening and learning. I plan to meet with small groups of graduate directors and graduate students so I can learn about their programs and listen to their concerns.

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Access

Excellence in the Arts and Sciences

A Humanities Course Gets Students Thinking about the Unthinkable

"The Coming Apocalypse" explores the human response to trauma

The name of the class is "The Coming Apocalypse." And while that title might conjure up images of bioterrorist attacks or a nuclear strike, this edgy new Signature Course is as focused on how humankind responds to traumatic events and troubled times as it is on the actual threats.

The course, taught by English professor Richard E. Miller, explores the end of the world as it's imagined in a selection of challenging and disturbing books and films, from the 18th-century classic *Sinners in the Hands of an Angry God* to the 2015 movie and Wall Street exposé *The Big Short*.

The sermons, novels, and movies provide a foundation that Miller uses to examine our own anxious and uncertain moment in the 21st century, a time when terrorism, threats to the environment, and economic upheaval weigh heavily on the public consciousness.

"One purpose of the course is to get the students to see that the narratives connect in profound ways to the history of our moment," Miller says. "It's a course where you can talk about prevailing fears. But then what's the response to the fear? Is there a response other than being afraid and feeling powerless?"

One of the novels—*Zone One* by Colson Whitehead—gives students a terrifying glimpse of what panic and powerlessness might look like in latter-day Manhattan, where an infection has turned people into zombies, and authorities employ military means to restore order as well as erect a giant barricade.

Miller connected the book back to the 9/11 attacks and used it as a way to discuss the recent bombings in Belgium and the run-up to the 2016 U.S. presidential election.

"I would have you think about the fact that immediately after Belgium, two of the presidential candidates were instantly on the air and vowing this would not have happened under their watch," Miller tells students. "So, again, Whitehead is playing on this question: 'What does it mean to make Manhattan safe. What does it mean to make America safe? What does it mean to make any space safe?'"

School of Arts and Sciences Signature Courses are foundational courses covering topics of grand intellectual sweep and enduring importance. Other Signature Courses focus on issues such as the environment, food policy, and energy. Two new ones—

(continued inside)



Engaging with the humanities: In the Signature Course "The Coming Apocalypse," students like Siddhartha Oruganti, above, discuss a challenging and provocative selection of books and films and connect them to current times.

(continued from front)

A Humanities Course Gets Students Thinking about the Unthinkable



Professor Richard Miller's Signature Course "The Coming Apocalypse" gets students talking.

"The American Dream" and "Religions Now: 21st Century Controversies"—were introduced in the fall of 2016 by the American studies and religion departments respectively.

For Miller, designing and teaching "The Coming Apocalypse" provided a way to rethink and reassert the role of the humanities, a theme he wrestled with in his book *Writing at the End of the World* (2005, University of Pittsburgh).

"We tell ourselves and our students about the power of reading and writing while the gap between the rich and poor grows greater, the Twin Towers come crashing down, and somewhere some other group of angry young men is at work silently stockpiling provisions for the next apocalypse," Miller writes. "How might reading and writing matter in the new world evolving right before our eyes?"

In "The Coming Apocalypse," which drew some 200 students, he answers that question, in part, by exposing the class to an updated and unorthodox literary canon, introducing the critically acclaimed graphic novel *Watchmen*; Whitehead's zombie novel; and films like *Apocalypse Now*, *Invasion of the Body Snatchers*, and *Rosemary's Baby*. At the same time, Miller assigns classics like *Heart of Darkness* and insists on

a traditionally rigorous approach: quizzes every class, a no-technology rule during lectures, and mandatory participation.

"Studying the humanities is a contact sport," Miller tells students. "The goal isn't 'being right'; it's about developing a richer interior life."

Students who thought the class might be easily quickly discovered otherwise.

"It's a lot of intensive reading, with quizzes and writing assignments in every class," says junior Solomon Kam. "I'm learning to read novels in a different way—to see the connections to our world."

Lashaun Moore, a senior and biology major, agrees.

"At first I thought *Zone One* was going to be all about zombies," she says. "But it actually connects to real life in a way that I didn't think was possible. You think about how humanity is now, not about the gore."

Another novel, *The Circle* by Dave Eggers, showed students the dark side of their tech-centric world by depicting a society shorn of all privacy under the influence of a giant technology company.

"That was eye-opening," says sophomore Christopher Hartley, a computer science major. "The book goes into how we make our entire lives completely open and completely public through social media."

Hartley says the course struck a nerve that spurred him to channel his own creative energy. For his final project, he wrote an intriguing short story in which humanity as we know it is merely a computer simulation.

"I had the idea for the story in my head but didn't quite know how to express it," Hartley says.

"This class gave me the tools to put it on paper."

“Studying the humanities is a contact sport.”

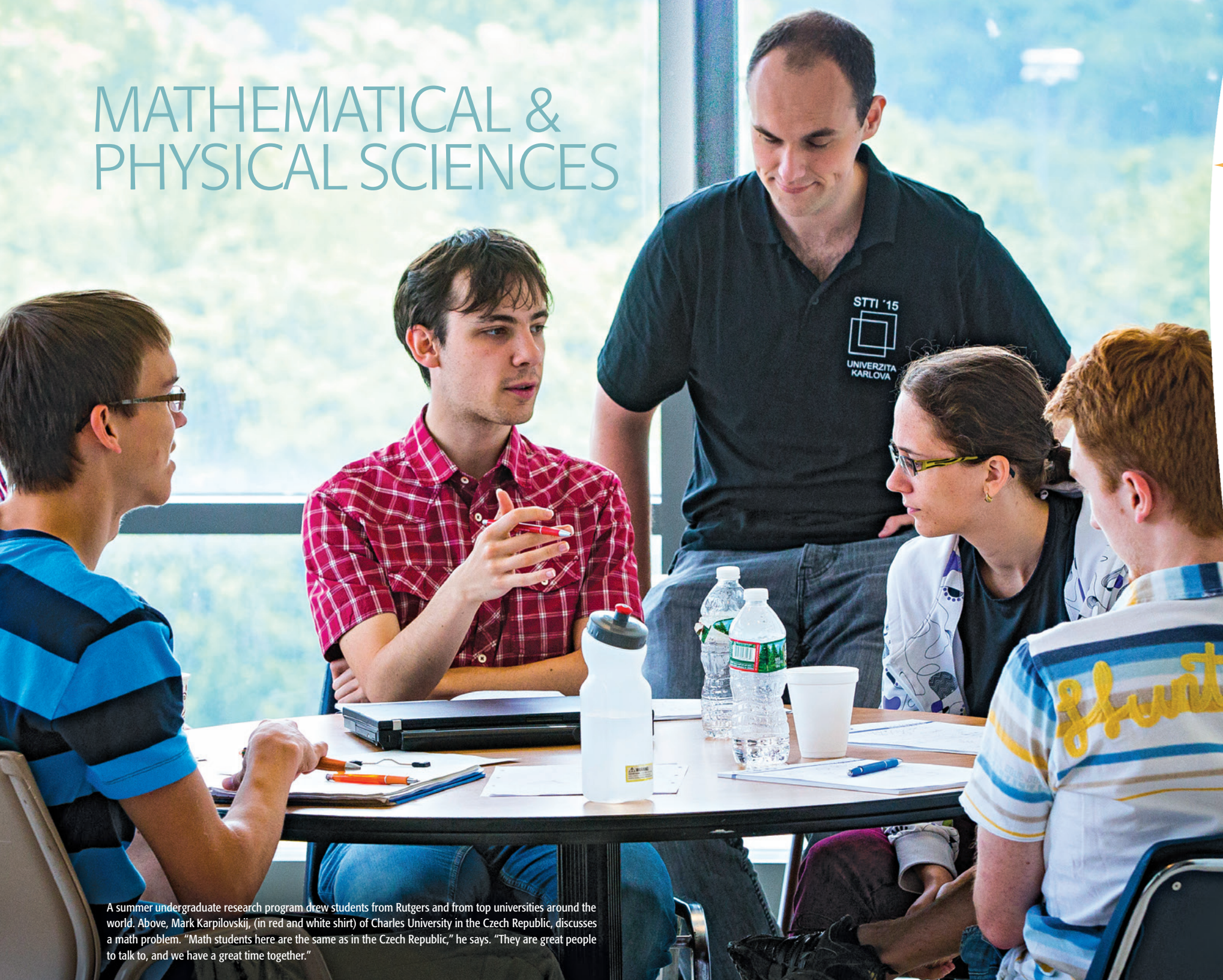
Another sophomore, Matthew Rotolo, produced and acted in a short video for his final project about two men wandering in the post-apocalyptic wasteland, with one eventually murdering the other.

"The guy you assume is a protagonist ends up killing a man who is living the same life he's trying to," Rotolo says. "I think that is the true apocalypse."

Miller says the high quality of the students' work shows the course made an impact.

"One of the greatest joys is seeing what students create on their own in response to the course," he says. "I just marvel at what these students can do when you set out a situation that invites them to engage with the most important questions of our time."

MATHEMATICAL & PHYSICAL SCIENCES



A summer undergraduate research program drew students from Rutgers and from top universities around the world. Above, Mark Karpilovskij, (in red and white shirt) of Charles University in the Czech Republic, discusses a math problem. "Math students here are the same as in the Czech Republic," he says. "They are great people to talk to, and we have a great time together."

A SUMMER SPENT SOLVING MYSTERIES AND SEEING POSSIBILITIES

REU program draws accomplished undergraduates eager for research experience

Patrick Chen, a **School of Arts and Sciences** senior, knows the day is coming soon when he'll be focusing his time and energy on his career.

But before he lands that first job, he wants the chance to do something exploratory, open-ended, and out-of-the-box within his field of computer science.

So he participated in a Research Experiences for Undergraduates (REU) summer program run by the Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) at Rutgers University–New Brunswick.

"I feel like there is still a lot more for me to explore, and mysteries to solve," Chen says.

He found just what he was looking for when he stepped inside the Computing Research and Education (CoRE) building on Busch Campus last May. Nearly 40 undergraduates from across the country—and a few from Europe and Asia—had gathered for the same purpose: to explore complex issues in their field, work closely with Rutgers professors, and get a taste of what life will be like at the graduate level.

"We are treated as visiting researchers," says Michael Rudow, a University of Pennsylvania senior. "We're able to experience what it's like to focus completely on research, which is very useful for those of us who are interested in graduate school and those of us debating whether we want to pursue a Ph.D."

REUs are competitive summer programs for undergraduates sponsored by the National Science Foundation and hosted in universities across the country.

Lazaros Gallos, associate director at DIMACS, said his center's REU program stands out from others around the country—both for its size and scope.

"The typical REU has anywhere from four to 10 people," Gallos says. "By combining many programs we manage to have a bigger group, which provides more extensive social interactions, and exposure to more ideas. The students get a bigger experience."

The fourth floor of the CoRE building serves as the program's hub. Students work at their computers, meet with mentors, gather for discussions in common areas, and munch on pizza at lunch. This year's students arrived from Boston College, Brown University, Loyola University, and other schools, as well as



Patrick Chen (right), a Rutgers computer science student, engages in deep dialogue with Professor James Abello over what they described as one of the top six problems in the field of combinatorial geometry.

from Charles University in the Czech Republic and from Khon Kaen University in Thailand.

Mark Karpilovskij, one of the Czech Republic students, says it's his first time in the United States.

"It turns out that math students here are the same as in the Czech Republic," he says. "They are great people to talk to, and we have a great time together."

Anshu Patel, a mathematics major at the College of New Jersey, worked with Arts and Sciences chemistry professor Wilma Olson on a project that stretched her knowledge by combining multiple disciplines. She is interested in computational neuroscience, and may attend medical school.

"I wanted to up my game," Patel says. "This has been a milestone in my progress."

Chen, meanwhile, was engaged in deep dialogue with James Abello, a professor of computer science, over what they described as one of the top six problems in the field of combinatorial geometry.

"These young minds are in need of inspiration," Abello says. "I like to bring to them a sense of the beauty in mathematics so they see it's what a musician, composer, or a painter experiences."

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STUDYING HUMAN GENEROSITY AS IT TAKES SHAPE ACROSS THE GLOBE

From Arizona to Mongolia, anthropologists are asking big questions

Rutgers anthropologist Lee Cronk has been working in remote stretches of Arizona and New Mexico, studying the ways in which ranchers are working together to manage the risks of their trade.

One of Cronk's graduate students, Thomas Conte, is even further afield. He's traveling with sheep herders in northern Mongolia, observing how families cooperate to cope with calamity.

Cathryn Townsend, a post-doctoral associate, is in Africa, living and working with farmers devastated by floods and famine yet who retain a strong communal tradition of sharing resources.

The three Rutgers anthropologists are among a group of scholars investigating some of the fundamental questions of human nature: Why, how, and under what conditions do people cooperate and share with each other?

"In a very broad sense we are trying to create a body of empirical work that helps explain human generosity," says Cronk, a professor in the Department of Anthropology in the **School of Arts and Sciences**. "Why are people generous with one another? Why aren't they just selfish?"

Cronk serves as codirector of the Human Generosity Project, a research initiative run by Rutgers and Arizona State University (ASU) investigating examples of cooperation and risk pooling in eight communities across the globe.

"Our research is highlighting cooperation as an ancient practice, essential to the survival of our species," says Townsend, who is working with the Ik people, subsistence farmers in the mountains of Uganda. "In the long term, our work could help bring together divided communities and encourage us all to protect the natural resources that we depend upon for our survival."

Conte will spend most of this academic year in Mongolia near the Siberian border. He'll live in a felt tent and travel over mountain ranges on horseback.

He'll observe the ways that the semi-nomadic herders work together to prepare for devastating winter storms, or *zud*, by cutting and storing hay and building shelters for the animals.

"The fundamental question I'm trying to look at is whether disasters or risks bring people together or drive them apart," Conte says.

The project, funded largely through a grant by the John Templeton Foundation, and codirected by ASU scholar Athena Aktipis, developed from Cronk's longtime interest in the Maasai people of East Africa, who use a system of sharing called *osotua* in which individuals ask their neighbors for help when in need and give to others when asked.

"*Osotua* is really about: 'If you're in trouble, I will help you out,'" Cronk says. "We found it a rich area for research."

Indeed, Cronk's most recent work shows that even American ranchers—celebrated in popular culture for their rugged individualism—have created a network of cooperation in which they help each other with tasks such as branding or shipping, as well as providing support in the event of an injury.

"The ranchers are very individualistic, but they realize that people get in trouble and need help," Cronk says.

Cronk, more accustomed to doing research in African villages, was initially taken aback by the sparsely populated ranchlands of the Southwest, where he had to drive hundreds of miles to get interviews with his subjects.

Still, he said, such challenges come with the job.

"Anthropologists study people where they are," he says. "And if that happens to be in the American Southwest, so be it. We study everybody."

“Why are people generous with one another? Why aren't they just selfish?”

The grazing lands of northern Mongolia is where graduate student Thomas Conte will be exploring how humans cooperate with one another. He will live in a felt tent and travel over mountain ranges on horseback.

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Students Explore the Science and the Spirit of the Mediterranean Lifestyle

An eye-opening and mouth-watering trip to Greece

The Mediterranean diet is everywhere these days, from the cover of splashy health and fitness magazines to the website of CNN medical correspondent Sanjay Gupta.

But last spring a group of Rutgers students and faculty traveled to Greece to get beyond the headlines and fully explore the region's overall culture of healthy living, studying its specific physiological, social, and psychological elements.

"There are distinct differences between people who live in the Mediterranean region and people from other areas in terms of general health, disease prevention, and healthy aging," says Labros Sidossis, chair of the Department of Kinesiology and Health, in the **School of Arts and Sciences**, who led the two-week "Lifestyles of the Mediterranean" program. "You have to look at the total lifestyle which encompasses diet, physical activity, conviviality, and even spirituality."

The program drew 23 undergraduates and two graduate students, many of whom are considering careers in the health sciences. The students visited olive



kinesiology. "The entire trip was an amazing experience."

The Mediterranean diet typically refers to the eating patterns of Greece, Southern Italy, and Spain, and is known for its use of olive oil, unrefined grains, fruits and vegetables, and fish. Prominent health organizations such as the Mayo Clinic have said the nutritional benefits can reduce the risk of heart disease, stroke, and premature death.

“I will be talking about what I learned for years to come.”

groves, wineries, museums, and historic sites. They attended lectures on the history and evolution of the Mediterranean lifestyle. And they met, cooked, and dined with locals, learning how to prepare balanced and nutritious meals.

"I will be talking about what I learned for years to come," says Ashley Fath, a senior majoring in applied

Fath, who is considering a career in nursing, says the program helped her gain a more sophisticated understanding of food and nutrition. "There's more to healthy food than kale," she says. "It was fascinating learning how the right combination of seasonings eliminates the need for more butter. Or how mixing olive oil with basil, you don't need salt."



Clockwise from top left: Labros Sidossis (wearing hat), chair of the Department of Kinesiology and Health, led students on a two-week "Lifestyles of the Mediterranean" program. Students learned firsthand about the health benefits of a balanced diet, social connectedness, and rigorous exercise.

Building for 21st Century Academics



A new academic building designed for 21st-century research, scholarship, and teaching has opened on Seminary Place facing Old Queens across Voorhees Mall, providing a much-needed new home for many humanities disciplines on College Avenue Campus while nourishing interdisciplinary within the **School of Arts and Sciences**.

"The new building provides a spectacular space that promises to serve as a hotbed for intellectual exchange between members of Rutgers' many world-class research centers in the humanities—from the Center for Cultural Analysis (CCA) to the Rutgers British Studies Center (RBSC) to the Rutgers Center for Historical Analysis (RCHA) located together on the sixth floor," says Seth Koven, who codirects RCHA's current project, "Ethical Subjects," a Sawyer Seminar funded by The Andrew W. Mellon Foundation, as well as the RBSC. "It's a wonderful new space. We're all thrilled."

"We're very excited to be here," says Renée Larrier, chair of the French department. "Our offices were located on Douglass Campus, but most of our teaching took place on College Avenue, which made interaction among our own faculty difficult. Now we're in one location, and the opportunities for meeting and collaborating are greatly enhanced with our colleagues in African, Middle Eastern, and South Asian; Italian; Germanic, Russian and East European; and Spanish and Portuguese languages and literatures." The classics department, the programs in cinema studies and comparative literature, and the Rutgers Oral History Archive will also benefit from the close working relationships created by sharing the new building.

From specialized classrooms with audio, video, and supportive technologies that augment the teaching of languages to the casual gathering spaces with couches and tables for student groups to convene, the building is designed to increase scholarship and the flow of knowledge through both formal and informal education.

19,000 students will attend class daily in eight seminar rooms for small classes and five 300-seat lecture halls that will feature sought after professors for high-demand classes in the humanities as well as fields like economics and psychology, essential subjects to a rich liberal arts and sciences education.

RUTGERS

School of Arts and Sciences

The **School of Arts and Sciences** is the largest academic unit at Rutgers University–New Brunswick providing a comprehensive liberal arts education to more than 20,000 undergraduates. The School upholds the tradition of excellence, first founded 250 years ago by Rutgers College, and continues the expansion of access to outstanding higher education created by Douglass, Livingston, and University Colleges. With more than 750 full-time faculty and more than 70 majors and minors in the humanities, biological, mathematical, and physical sciences, and social and behavioral sciences, Arts and Sciences offers programs of unparalleled breadth and depth combining excellence in teaching with world-class research.

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