

**How to Attract Students to Mathematics**

PAGE 3

**High School Students Learn About the Humanities and College Life**

PAGE 4

**Program Empowers Elementary Science Teachers**

PAGE 5

**Warming Up to STEM Courtside**

PAGE 5

**Saturday Seminars Provide a Framework for Teaching Asian Culture**

PAGE 6

**Why Play is Important in Early Education**

PAGE 7



**ON A MISSION TO MAKE A DIFFERENCE:** Rice senior Blaque Robinson has led several outreach programs to help students be the first in their family to attend college.

**Inside:**



**STEM GOES TO THE HOOP:** See story on Page 5.

## Student Leader Reaches Out

Blaque Robinson is modest and unassuming, but her drive to help others is fierce.

“My life’s mission is to leave whatever place I am in better than when I entered it,” Robinson said. “This is the attitude with which I have approached middle school, high school and college.”

One of her main concerns is to help students, especially low-income students, get into college. Robinson, a senior at Rice, understands and sympathizes with their struggles because she herself comes from a working-class family. When Robinson graduates this May, she will be the first in her family to receive a college degree.

In her four years at Rice, Robinson has worked indefatigably as a volunteer with several educational outreach programs. In her freshman year, she was a coordinator for the Student Success Academy, an orga-

*Continued on Page 2 >>*

## The Taste of Justice

Carly Thomsen wants students to consider food a social justice issue.

“Food is one site through which racism, classism, sexism, ableism, nationalism and heterosexism get reproduced,” she said. “Food justice is social justice.”

Thomsen is a postdoctoral fellow at Rice’s Center for the Study of Women, Gender and Sexuality (CSWGS). Last fall, she taught a course called *The Future of Food: Feminist, Queer and Critical Approaches*.

In her course, she said, she wants students to think about how food becomes politicized. “I want them to explore how feminist and queer theory can be useful analytics for examining issues not typically thought of as feminist or queer concerns — such as food politics and food justice,” she said.

Beyond readings and discussions described by students

*Continued on Page 3 >>*

nization at Rice that encourages poor students to seek a college degree. Her job was to recruit college students to consult with high school students about college readiness. She also encouraged high school students to develop long-term goals and to hold themselves accountable for success.

As a sophomore, Robinson was elected co-vice president of the Black Student Association and in that capacity helped organize a program to help black freshmen adjust to campus life. She also developed an alumni career day to provide black upperclassmen with mentorship and internship opportunities.

That same year, as if her extracurricular activities weren't enough, she co-founded

"Robinson is a phenomenal leader," said Simmons-Pino. "She is selfless and nothing that she does is for the accolades. She simply does them because she wants to create change where she feels it is needed. Her motivation to help those who need it stems from her values, morals and background."

Robinson was born in Milwaukee, Wisc. Her mother attended two years of college before she dropped out and eventually went to work for the Wisconsin Electric and Gas Company. Her father dropped out of high school, then got a GED and now works with the Milwaukee Public School Building Services. Knowing the value of an education, her parents sent Robinson to preschool

Martin Luther King Jr.

When Robinson applied to Rice, she sought the help of QuestBridge, a nonprofit program that links brilliant, low-income students with educational and scholarship opportunities at select universities. She applied to Yale and Emory as well, but Rice was her first choice because of the school's high academic standards and its location in the South. She wanted to be close to her grandmother, who lives in Port Arthur, Texas.

At Rice, Robinson has proven to be an excellent student. She is majoring in sociology, boasts a 3.9 grade point average, is working on an honor's thesis and has worked as a research assistant for a couple of professors.

"Robinson is a wonderful student, exactly the kind that professors dream of," said Jenifer Bratter, associate professor of sociology. "She's thoughtful, consistently well prepared and clearly takes what she learns to heart. Not only does she have a sharp understanding of our social landscape but she is a critical thinker who enjoys pursuing answers."

Ruth Lopez Turley, a Rice sociology professor, will always remember the day that Robinson walked into her Social Inequality class and led a conversation about the recent shooting of unarmed black men by police officers. "The conversation ended up taking over much of the class," Lopez Turley said. "I'm sure students will remember that more than any lecture."

After she graduates from Rice, Robinson hopes to pursue a doctorate in sociology and become a community activist either through the professoriate or through the creation of her own nonprofit organization.

"It is my goal," she said, "to give first-generation students, black students and black women the spaces they need to find out what their voices are and how to express them whether through activism, making connections with others in the community or through leadership."

**DAVID D. MEDINA**

Director  
Multicultural Community Relations  
Public Affairs

**"Robinson is a phenomenal leader. She is selfless and nothing that she does is for the accolades. She simply does them because she wants to create change where she feels it is needed. Her motivation to help those who need it stems from her values, morals and background."**

**— Ciara Simmons-Pino**

Generation College, a program at Rice that supports first-generation college students of all ethnicities achieve their educational goals. The program also helps middle and high school students become the first in their families to attend college. As part of that program, Robinson oversaw a project that brought more than 100 middle school students to the Rice campus for a college readiness session. She also developed a workshop to acclimate first-generation students to Rice, and in her junior year, Robinson volunteered in the Mentorship Project in which she coached more than 200 high school students in a college essay-writing workshop.

When her roommate, senior Ciara Simmons-Pino, asked for help with an outreach event for the National Society of Black Engineers (NSBE), Robinson jumped right in. She spent all day guiding eight high school students in preparing for engineering and leadership contests. The team won second place and enough money to attend a national NSBE conference.

and encouraged her to read all the time. She attended The Golda Meir School, an elementary, middle and high school for the gifted and talented in Milwaukee.

When Robinson was in eighth grade, her mother, fourth grade teacher and principal worked together to get her into the University School of Milwaukee, one of the top college preparatory schools in the country. There, Robinson ventured into one of her first major efforts to make a change for the better. The high school, according to Robinson, lacked recognition of black culture and did not celebrate Black History Month. "My father instilled in me from a young age not to be afraid of anyone and, especially, not to be afraid to speak my mind," Robinson said.

So with the support of a teacher, Robinson created a program for Black History Month in which students presented a series of discussions during assembly about key black leaders and their philosophy through different eras. The program became so popular that school officials instituted a holiday in honor of



as “fascinating” and “awesome,” participants engaged in a variety of activities throughout the semester: visiting the Last Organic Outpost, an urban farm in the Fifth Ward; taking a field trip to the Humble Hearts Farm; and sharing foods that carried special meanings for them.

“I made vegetarian wontons for the class and talked about how this recipe has changed over time to accommodate a traditional Chinese recipe to my vegetarianism,” said junior Elaine Shen, who took the class.

Students had many reasons for signing up for the course, but most were like senior Zoe Matranga, who said she “couldn’t wait to find out how seemingly disparate things like food and feminism linked together.” Thomsen’s class is the first of its kind to be offered at CSWGS, and the conversations it generated clearly struck a chord with the students enrolled. The course was funded through a grant from the Center for Engaged Research and Collaborative Learning.

Each student was required to engage in a substantial activist project that approached food justice from the perspective of feminist and queer theory. These projects were presented at a public symposium at the end of the semester, and many will continue to have

effects on campus in the future. For example, seniors Karina Farias and Meredith Glaubach worked with Rice’s Housing and Dining to label local foods in the campus serveries.

“H&D said that one-third of our food budget goes toward local foods,” Glaubach said. “We want students to start thinking about where their food is coming from, who is cooking it and what are the ethics of the food they are eating.”

Elaine Shen’s final project was a zine documenting the individual projects of everyone in the class, which will be distributed on campus later this semester. “I hope it will make students think about the food they eat in the serveries more critically, instead of passively walking through it for 19 meals a week,” Shen said. “I learned that food can’t be taken for granted in a variety of contexts and can oftentimes link disparate communities.”

While the course has ended, it continues to inspire conversations about food justice on



**A FOOD COURSE LIKE NO OTHER:** Students explore food as politics and social justice.

Rice’s campus, as well as in the students’ lives. Matranga has become a vegetarian and joined a community-supported agriculture, and Glaubach is in India studying food justice and nongovernmental organizations.

“This is work,” Glaubach said, “that I would not be doing without having taken this class.”

**BAIRD CAMPBELL**

E-newsletter and Website Editor  
Center for the Study of Women, Gender  
and Sexuality

## How to Attract Students to Mathematics

**Engaging young students’ interest in mathematics is a well-known problem for educators. But the Department of Mathematics at Rice University may have found the solution.**

Every summer, the department sponsors two summer outreach programs funded by the National Science Foundation for students from the Houston Independent School District.

The Patterns, Math and You program is aimed at middle school students and focuses on developing both math skills and math intuition through numerical experiments and group discussions. The program is facilitated by Tony Varilly-Alvarado, assistant professor of mathematics, and Richard Shadrach, a G.C. Evans Instructor at Rice.

“Mathematics is often taught by giving students examples and having them practice procedures for homework,” said

Varilly-Alvarado. “This is common when students are learning to solve equations. But if students could experiment with numbers to figure out patterns and equations, they would discover that algebra isn’t so abstract after all.”

The typical high school math curriculum is filled with math courses such as algebra, geometry, precalculus and calculus so there is often little time for classes to explore the use of mathematics to tackle interesting real-world problems. During the Rice Program in Mathematics (RPIM), high school students are guided through interesting and accessible topics such as game theory, cryptography and graph theory. The program is taught by Andy Putman, an associate professor of mathematics; Neil Fullarton, a G.C. Evans Instructor; and students from the Department of Mathematics at Rice.

Recently, two Sharpstown High School students from last year’s program requested that the RPIM group send representatives to the school’s annual Fantastic Learning

Opportunities Fair to talk about the Rice math programs.

These programs inspire students to take demanding high school math courses and to continue their postsecondary education in a STEM (Science, Technology, Engineering, and Mathematics) field. Both programs are extremely popular as noted by the huge waiting lists to participate. Students who made it into the programs compliment the engaging and informative activities, and their parents clamor to get younger brothers and sisters into these programs.

■ For more information about the Patterns and RPIM programs, please see visit <http://math.rice.edu/Outreach/HighSchoolPrograms/Patterns/index.html> and <http://math.rice.edu/Outreach/HighSchoolPrograms/RPiM/index.html>.

**BONNIE HAUSMAN**

Department of Mathematics  
Technical Web Specialist

## High School Students Learn About the Humanities and College Life

Since 2008, the Civic Humanists program at Rice’s Humanities Research Center has brought high school students from the Houston area to visit campus, learn about humanities research and experience college life.

This year, the program expanded to reach more students and emphasized two distinct themes: the medical humanities and arts and culture. Over the 2015 fall semester, several field trips tailored to these themes were offered with help from the program’s new civic humanist fellows.

Abby Good, a doctoral candidate in the English department, introduced students to the medical humanities through an exploration of outbreak narratives. Good’s interactive lesson educated students about how specialized medical research connects to public portrayals of disease and health in contemporary society and literature. Students then put their knowledge of outbreak narratives to work.

After a beautiful walk across campus to Fondren Library, they met Amanda Focke and Rebecca Russell of Fondren’s Woodson Research Center and Philip Montgomery and Sandra Yates of the Texas Medical Center library. Students viewed two presentations of special archival collections, with fascinating artifacts from Houston’s long medical history.

Focke showed students the first recorded journal in Houston, *The Epidemic of 1878* by K. DePelchin, documenting her experiences of caring for yellow fever patients.

Montgomery and Yates presented numerous medical instruments and artifacts from the 1800s for student inspection. Rice Medical Humanities, a student-run organization, sent officers to assist with the field trips, enriching the overall experience.

Jessica Davenport, a doctoral candidate in the religion department, lectured on the themes of art and culture in light of race,

religion and stereotyping. Davenport, partnering with local Houston artist Whitney Sparks, opened each trip with a dynamic talk on art as a source of creative disruption, social commentary and political agency.

Each lecture was followed by a tour of campus art, including visits to Jaime Plensa’s *Mirror* sculpture and the James Turrell *Twilight Epiphany Skyspace*. After the lecture and art tours, students experienced the Anila Quayyum Agha’s “*Intersections*” exhibit at Rice’s Art Gallery, which reflected the artist’s own struggle to invoke the beauty and political complex-

**“My experience at the Civic Humanists field trip was very exciting. Our students were challenged to have deep conversations about race and culture while looking at amazing artworks.”**

**— Deisy Guevara**



**A FRESH LOOK AT CULTURE:** A. Philip Montgomery speaks to Carnegie Vanguard students about the history of Houston’s medical community. B. Students from Sharpstown High School visit the Turrell Skyspace. C. Jessica Davenport comments on “*Intersections*,” an exhibit at Rice’s Art Gallery.

Jamy Champenoy, director of college counseling at Strake Jesuit College Preparatory, said, “The Rice Civic Humanists trip was an exciting and well-planned program that made our ambitious students think critically, participate in college-level discussions and get a glimpse of what it’s like to be a Rice Owl. Additionally, the program shows how studying literature, film, history and sculpture stirs fascination with issues of contemporary worldwide significance.”

This spring, the program will be incorporated in eight schools, offering interactive lectures on the same themes.

■ For information about this program, please see <http://hrc.rice.edu/>.

**MARK SCHMANKO**

Civic Humanist Fellow  
Humanities Research Center

ity of her religious upbringing in Lahore, Pakistan.

Students and instructors engaged in lively dialogue about the power of the arts and medical humanities to help us think beyond our biases and assumptions. Deisy Guevara, an art teacher at Reagan High School, embraced this fresh look at culture: “My experience at the Civic Humanists field trip was very exciting. Our students were challenged to have deep conversations about race and culture while looking at amazing artworks.”

## Program Empowers Elementary Science Teachers

### Elementary science teachers in Houston are strengthening the future of science by participating in the ConocoPhillips Rice Elementary Model STEM Labs (REMSL) Catalyst program.

The ConocoPhillips program provides professional development to elementary science educators who need creative and engaging STEM (Science, Technology, Engineering and Mathematics) experiences for their students.

Since 2006, the Rice Office of STEM Engagement has served as the centralized headquarters for supporting STEM programs at Rice University. The department has serviced hundreds of elementary science teachers through the ConocoPhillips REMSL program.

Teachers attending the Catalyst program previously participated in yearlong professional development in which science content, leadership and pedagogy made an impact in the teaching and delivery of best science practices.

With the success of the ConocoPhillips REMSL program, there was a demand for continued professional development that focused specifically on problem-solving and creativity, and thus Catalysts was created.

The new program introduces its participants to the Engineering Design Model, a series of steps that collaborative teams use to guide them as they solve problems. Through a series of five problem-based learning experiences, interns are challenged to design and create complex structures and products. This model serves as the foundation to encourage problem-solving in elementary science classrooms in hopes of developing a genuine understanding of the thinking processes involved in design, technology and engineering.

Another component of the ConocoPhillips REMSL Catalyst program is its commitment to developing the role of teacher-leader within elementary educators. Catalysts are given several opportu-

nities throughout the school year to serve as a volunteer within the science community. The experience gives the teachers an opportunity to share their own science expertise, gain new skills and serve as a “catalyst” for change.

The ConocoPhillips Catalyst program is one that is highly sought after with only 30 applicants accepted each year. Because of the generous support of the ConocoPhillips Foundation, the Texas Regional Collaborative and the Toshiba Foundation, participants not only walked away with lessons for their students, they received free science materials that support the replication of the activities within their classroom.

Third grade teacher Natalie Johnson from Beneke Elementary in Spring ISD said, “The REMSL Catalyst program has been a tremendous asset to my teaching practice and an invaluable experience to me as an adult learner. As a result of participating in the program, I have been able to deliver STEM-centered science instruction more effectively while maintaining the interest of my students. Not only did the program help me become a better educator, it has enabled me to bring authentic inquiry back into the classroom.”

Nancy Brock, a 25-year veteran science educator from Fort Bend ISD, described the REMSL Catalyst experience this way: “Teachers take on the role of the student with exciting learning activities that can be done in our classrooms. The leadership component allows us to share our love of science with others. The Catalyst program is challenging, fun and awesome overall.”

■ For more information about this and other programs, please visit <http://www.rstem.rice.edu>.

**ERICKA LAWTON**

Assistant Director  
Elementary STEM Education  
Rice Office of STEM Engagement

## Warming Up to STEM Courtside

### The Rice University School Mathematics Project (RUSMP) and Rice Athletics collaborated to provide fun and educational STEM activities for 4,000 students from local elementary schools at the Rice men’s basketball game against St. Thomas University Dec. 17, 2015.

RUSMP demonstrated the science behind parabolic motion (or motion due to gravity) and rectilinear motion (or straight-line motion) was illustrated. The game of basketball provides perfect examples of these motions in shooting, dribbling and passing of the basketball.

The entire RUSMP team led activities for students to explore potential or stored energy and kinetic energy on the move on the basketball court and in the stands. Students in the audience computed math problems inscribed on beach balls that were tossed to demonstrate parabolic motion. Students on the basketball court dribbled, passed and made shots to illustrate the various ball motions. At halftime, students witnessed a drone presentation by Rice’s Center for Engineering Leadership, BP and Trumbull Unmanned.

A parent who accompanied a busload of kids from a nearby school was very enthusiastic about the event, noting that Rice provides fun experiences that are always full of learning for children. A teacher commented that events

such as this one inspire students to pursue STEM courses and careers.

Since 1987, RUSMP has been promoting Rice University’s excellence beyond the hedges in preK–12 education by providing support to precollege institutions across the state. RUSMP continues to be the primary catalyst of sustained, progressive change in education in Houston-area schools and across Texas, offering numerous programs for leaders, teachers and students.

**ANNE PAPAKONSTANTINOU**

Director  
Rice University School Mathematics Project



## Saturday Seminars Provide a Framework for Teaching Asian Culture

For the past 15 years, the Rice Center for Education has sponsored Asia Outreach and Global Education, a professional development program designed to help middle and high school teachers incorporate Asian history and culture into their classrooms.

This professional program taught by Asian Studies faculty is offered through daylong Saturday seminars on the Rice campus. Each module is tailored to areas in which the teachers are interested. In the past, seminars have been offered with content ranging from premodern, modern and contemporary East Asia (China, Japan, Korea and Vietnam) to premodern, modern and contemporary Inner and South Asia (Mongolia, India and Tibet). Some seminars are comparative, such as “The Comparative Modernization of China and Japan” and “Confucianism in Comparative Perspective.” Others are limited to a single topic, such as history, politics, religion, literature and art.

Saturday seminars provide an interpretive framework for under-

tures arrange things, ideas and activities into coherent systems of meaning. The assumption underlying this approach is that an understanding of another culture requires a genuine appreciation of how the people in that culture view the world — how they are socialized to accept a certain vision of the way things are and the way things ought to be. The question then becomes: What sort of cultural logic determines whether something in a given society is perceived as “natural,” “right,” “beautiful” or “true”? Of course, culture is neither static nor monolithic. Nonetheless, within any given social group there are certain broadly shared perceptions, values and inclinations that provide its members with a collective identity.

Globalization refers to the circulation of ideas, people, products and practices within and across borders, in particular, the process by which the people of East Asia have interacted with each other and with the rest of the world. For example, the study of the major intellectual and religious systems associated with “classical” East Asia, including Confucianism, Daoism, Buddhism and Shintoism, show how people,



**BRINGING ASIA INTO THE CLASSROOM:** Saturday seminars provide middle and high school teachers with teaching materials about other cultures.

**Saturday seminars provide an interpretive framework for understanding other cultures, as well as concrete examples of how this framework can be employed in history, social science, geography, art and literature. Participants can use the model to put together any number of their own creative lesson plans.**

standing other cultures, as well as concrete examples of how this framework can be employed in history, social science, geography, art and literature. Participants can use the model to put together any number of their own creative lesson plans.

The interpretive framework focuses on two basic themes: ways of world-making and the process of globalization. The seminars also provide teaching materials and concrete suggestions for curricular development.

“World-making” refers to the way that groups of people or cul-

notably, in China, Korea, Japan and Vietnam had responded to these idea systems and to others, including Islam and Christianity. It shows how they are adopting, altering and at times rejecting them in pursuit of their own political, social, economic or religious goals.

■ **For more information about these programs, please see <http://chaocenter.rice.edu/>.**

**RICHARD J. SMITH**

Rupp Professor of Humanities and  
Professor of History

## Why Play is Important in Early Education

What did School Literacy and Culture do when they gathered 70 early childhood teachers and administrators on campus in February to attend The Critical Importance of Play session? They played!

Participants were divided into small groups and given more than 30 minutes to create a structure using different materials, including blocks, boxes and other loose parts. The problem-solving and creativity involved in this playful activity mirrored how children play in the classrooms.

Play is rapidly disappearing from early childhood classrooms across the country. The rate and sequence of a young child's development has not changed, but what has changed are the expectations for what children can and will learn and how they will be taught.

This shift in expectations directly contradicts research about how young children best learn. Research shows that the reduction of play in classrooms has caused children's scores on creativity assessments to decline. The implications of children's decreasing ability to think creatively and problem solve are far-reaching. As a result, The Critical Importance of Play was developed to share well-supported classroom and neuroscience research about the importance of incorporating play into the early childhood classroom. Play, after all, is what a child does best.

**Research shows that the reduction of play in classrooms has caused children's scores on creativity assessments to decline. The implications of children's decreasing ability to think creatively and problem solve are far-reaching.**

The session presenters Karen Capo, director of School Literacy and Culture; Margaret Immel, associate director; and Sarah Brooks, a postbaccalaureate neuroscience intern, shared definitions and stages of play, explained the competencies children develop through play and talked about the neuroscience of play. Participants gained new information about how play affects a child's executive function and self-regulation skills, as well as the impact of various brain reactions when a child is engaged in play.

"This is one of the best presentations I have ever attended," said Sue King, a veteran prekindergarten teacher and mentor for SLC for almost two decades.

Emily Hughes, a prekindergarten teacher, said, "After attending the session on the neuroscience of play, I have a whole new map in which I teach from. My perspective of the way our brains are influenced by play has shifted. Now, when I introduce a new play center to my students, I understand the deeper problem-solving and reasoning that's happening in their brains which gives me even greater purpose in what I do."

With more than 70 teachers and leaders now empowered with the



**PROFOUND PLAY:** Early childhood teachers learn that all work and no play decreases children's ability to think creatively and problem solve.

research that supports the importance of play, School Literacy and Culture hopes that more schools will incorporate play in their early childhood classrooms.

■ To learn more about SLC's mission and programs, please visit [www.literacy.rice.edu](http://www.literacy.rice.edu).

**JORDAN KHADAM-HIR**

Assistant Director, Community Outreach and Education  
School Literacy and Culture



Rice University  
Multicultural Community Relations—MS 700  
P.O. Box 1892  
Houston, TX 77251-1892

Nonprofit Org.  
U.S. Postage  
PAID  
Permit #7549  
Houston, Texas



# AT LARGE



**INSIDE THIS ISSUE:** Students share a meal as they learn about the political aspects of food, such as how food and feminism are linked. See story on Page 1.

**David D. Medina,** Director, Multicultural Community Relations, Office of Public Affairs

