

Washington University School of Medicine

**Digital Commons@Becker**

---

Washington University Record

Washington University Publications

---

12-3-2009

**Washington University Record, December 3, 2009**

Follow this and additional works at: <https://digitalcommons.wustl.edu/record>

---

**Recommended Citation**

Washington University Record, December 3, 2009. Bernard Becker Medical Library Archives.  
<https://digitalcommons.wustl.edu/record/1197>.

This Article is brought to you for free and open access by the Washington University Publications at Digital Commons@Becker. It has been accepted for inclusion in Washington University Record by an authorized administrator of Digital Commons@Becker. For more information, please contact [vanam@wustl.edu](mailto:vanam@wustl.edu).



# Record



Washington University in St. Louis

Dec. 3, 2009

record.wustl.edu

## Complete genome of corn sequenced by WUSTL scientists

By CAROLINE ARBANAS

In recent years, scientists have decoded the DNA of humans and a menagerie of creatures but none with genes as complex as a stalk of corn, the latest genome to be unraveled.

A team of scientists led by The Genome Center at the School of Medicine published the completed corn genome in the Nov. 20 journal *Science*, an accomplishment that will speed efforts to develop better crop varieties to meet the world's growing demands for food, livestock feed and fuel.

"Seed companies and maize geneticists

will pounce on this data to find their favorite genes," said senior author Richard K. Wilson, Ph.D., professor of genetics and of molecular microbiology, director of The Genome Center and leader of the multi-institutional sequencing effort.

"Now they'll know exactly where those genes are. Having the complete genome in hand will make it easier to breed new varieties of corn that produce higher yields or are more tolerant to extreme heat, drought or other conditions," Wilson said.

Corn, also known as maize, is the top U.S. crop and the basis of products including breakfast cereal, toothpaste, shoe polish

and ethanol.

The corn genome is a hodgepodge of some 32,000 genes crammed into just 10 chromosomes. In comparison, humans have 20,000 genes dispersed among 23 chromosomes.

The \$29.5 million maize sequencing project began in 2005 and is funded by the National Science Foundation and the U.S. Departments of Agriculture and Energy.

The genome was sequenced at the University's Genome Center. The overall effort involved more than 150 U.S. scientists with those at the University of Arizona,

Cold Spring Harbor Laboratory in New York, and Iowa State University playing key roles.

The group sequenced a variety of corn known as B73, developed at Iowa State decades ago. It is known for its high grain yields and has been used extensively in both commercial corn breeding and in research laboratories.

The genetic code of corn consists of 2 billion bases of DNA, the chemical units that are represented by the letters T, C, G and A, making it similar in size to the human genome, which is 2.9 billion

See **Genome**, Page 2

## National champs — again

### Volleyball captures 10th national title with comeback win over archrival Juniata

The Washington University volleyball team captured its 10th NCAA Division III national title Nov. 21 by defeating top-ranked Juniata College, 3-1.

"From the time that you see us step out on the court, with the intensity and the emotion and the focus that we have, this is easily one of the greatest success stories I have ever been a part of," coach Rich Luenemann said.

Sophomore middle hitter Lauren Budde was named the most outstanding player of the championship tournament after leading the Bears with 15 kills and five total blocks in the victory over Juniata. Sophomore outside hitter Kristen Thomas and freshman libero Kelly Pang joined Budde on the all-tournament team.

"I think that it is very important to keep in mind that even though we have several girls on the team who have won at nationals and been in this position before, a majority of the girls on the court were freshmen and sophomores," senior captain Laura

Brazel said. "And for them to come out and play at this level was amazing."

It was the third national title for Luenemann, who also led his team to the pinnacle of Division III volleyball in 2003 and '07. The title match marked the sixth time Luenemann has guided a team to the national championship match, and he improves to 3-3 all-time in national title contests and 43-8 in all NCAA tournament competition.

One of the most intense rivalries in the country, the match marked the fifth time WUSTL and Juniata have met to decide the national championship, with the Bears holding a 3-2 edge in those meetings.

Things didn't start out positively for the Bears. Too many errors, both forced and unforced, cost the team the opening set in an 18-25 loss. The team rallied to win the next

three sets 26-24, 25-17 and 25-21.

Serving was a weakness for WUSTL in the first set, but it was a strength in the

See **Volleyball**, Page 2



Erin Albers (left) and Laura Brazel hoist the championship trophy after the Bears won their 10th national title in volleyball.

## WUSTL economists forecast slow recovery in 2010

By MELODY WALKER

Positive third-quarter economic statistics have been greeted with cheers and proclamations that the "Great Recession" is over, but Steven Fazzari, Ph.D., professor of economics in Arts & Sciences and associate director of the Murray Weidenbaum Center on the Economy, Government, and Public Policy, is not convinced that it's time to celebrate.

Consumer spending, the engine that fueled economic growth for the past two decades, is "out of

gas," Fazzari said. "I continue to worry that the household sector cannot support growth over the next few years the way it did before the recession."

With consumer spending accounting for 70 percent of the gross domestic product (GDP), he considers it a "matter of arithmetic" that the economy will stagnate over the next few years if American households curtail their spending and borrowing to repair their balance sheets.

"We may see a good quarter here or there," Fazzari said. "But

there is no obvious source of medium-term sales growth for business in the next few years to replace the recent consumption boom."

Fazzari documents the extended consumer shopping spree that fueled economic growth in a paper published last year with recent WUSTL graduate Barry Cynamon titled "Household Debt in the Consumer Age — Source of Growth and Risk of Collapse."

The research shows how consumer spending was accompanied by a dramatic rise in household indebtedness over the past 20 years. "We were funding consumption with unsustainable growth in household debt," Fazzari said.

His research argued that household spending created a source of growth for the economy but he also predicted a risk of collapse due to excessive debt — a forecast that proved to be prescient of the massive home foreclosures, bank

See **Economists**, Page 6

## United Way drive exceeds expectations

By JESSICA DAUES

Thousands in the St. Louis community will benefit from the generosity of Washington University's faculty, staff and retirees.

The University has raised \$601,468 in its United Way of Greater St. Louis campaign, surpassing its stated goal of \$600,000.

"I am deeply appreciative of all of those in the Washington University family who chose to give to the United Way this year," Chancellor Mark S. Wrighton said. "It is very touching to see so many people willing to lend their support to those in our community who need it most."

WUSTL's campaign kicked off in September and reached its targeted dollar amount in mid-November, helping the United



Way of Greater St. Louis exceed its 2009 goal of raising \$66.5 million. The United Way has raised approximately \$67.1 million in 2009.

"Every year, the University community steps up its efforts to support United Way-funded agencies, and 2009 has been no exception," said Ann Prenatt, vice chancellor for human resources and campaign chair.

"The United Way and the University are grateful to faculty, staff and retirees who opened their hearts and wallets to help others these past few months," Prenatt said. "Through

See **United Way**, Page 2

## Record to go all-electronic

The Record, which is distributed in both print and digital formats, will go entirely digital in January 2010 to improve timely communications to the University community and to reduce printing costs.

The last issue of the print Record will be Dec. 10. The Record will resurface in its all-digital format when classes resume in January.





**An Olin feast** Dean Mahendra Gupta, Ph.D., the Geraldine J. and Robert L. Virgil Professor of Accounting and Management, welcomes young Ryan Mohasin (center) and his parents, Mohasin Mithu (left), an Olin MBA student, and Farzana, to the 15th annual Olin Thanksgiving Dinner at the Knight Center Nov. 26. Students, faculty, staff, alumni and their families — a total of 530 guests — dined on a traditional meal of turkey and all the fixings. A few statistics from the chef: The kitchen prepared and served 260 pounds of turkey, 100 pounds of white potatoes and 120 pounds of sweet potatoes. They ran out of turkey legs, but no one left hungry. The dessert tables were brimming with pies, cookies and candy, and there was the always-popular soft-serve ice cream. The Olin Thanksgiving tradition was initiated by former dean Stuart Greenbaum, Ph.D., the Bank of America Emeritus Professor of Managerial Leadership, to share the American holiday with international students.

## Volleyball

**WUSTL has 17 team national titles**

— from Page 1

match overall.

"Any time that you can serve tough, that means you make the other team's setter run the offense from the 10-foot line, which means you put their offense in jeopardy," Luenemann said. "Our serving was an incredibly important part of this game. It kept Juniata attacking off the net, and it kept them from using their fast options."

Seniors Erin Albers and

Brazeal will graduate with two national championships, becoming the first senior class to do so since WUSTL ended its string of six straight national championships in 1996.

"With both teams, it was an amazing experience because the team really came together toward the end of the season," Brazeal said.

"This year especially, we started off with great team chemistry from the beginning, and that is what made this season amazing for me — and I think for the other girls as well," she said.

Thomas hit .333 in the national championship match, tallying 12 kills, five digs and two service aces. She reached

double-digit kills in all three matches at the NCAA championship.

Pang, who was named the American Volleyball Coaches' Association Division III National Freshman of the Year, compiled 30 digs in the title match. She also increased her WUSTL single-season record dig tally to 702, shattering the old mark of 606 set by Nicole Hodgman in another national championship season, 2003.

This title is the latest in an impressive run for WUSTL athletics. The Bears now have won 17 team national championships in school history (10 volleyball, four women's basketball, two men's basketball and one men's tennis).

## Genome

**Corn plant has more than one genome**

— from Page 1

letters long.

But that's where much of the similarity ends. The challenge for Wilson and his colleagues was to string together the order of the letters, an immense and daunting task both because of the corn genome's size and its complex genetic arrangements. About 85 percent of the DNA segments are repeated. Jumping genes, or transposons, that move from place to place make up a significant portion of the genome, further complicating sequencing efforts.

A working draft of the maize genome, unveiled by the same group of scientists in 2008, indicated the plant had 50,000-plus genes. But when they placed the

many thousands of DNA segments onto chromosomes in the correct order and closed the remaining gaps, the researchers revised the number of genes to 32,000.

"Sequencing the corn genome was like driving down miles and miles of desolate highway with only sporadically placed sign posts," said co-investigator Sandra Clifton, Ph.D., research associate professor of genetics. "We had a rudimentary map to guide us, but because of the repetitive nature of the genome, some of the landmarks were erroneous. It took the dedicated efforts of many scientists to identify the correct placement of the genes."

Interestingly, plants often have more than one genome, and corn is no exception.

The maize genome is composed of two separate genomes melded into one, with four copies of many genes. As corn evolved over many thousands of years, some of the duplicated genes were

lost and others were shuffled around. A number of genes took on new functions.

Corn is the third cereal-based crop after rice and sorghum — and the largest plant genome to date — to have its genome sequenced, and scientists now will be able to look for genetic similarities and differences between the crops.

"For example, rice grows really well in standing water, but corn doesn't," said co-investigator Robert Fulton, research instructor in genetics. "Now, scientists can compare the two genomes to find variations of corn genes that are more tolerant to wet conditions."

The United States is the world's top corn grower, producing 44 percent of the global crop. In 2009, U.S. farmers are expected to produce nearly 13 billion bushels of corn, according to the U.S. Department of Agriculture.

The corn genome data is freely available to the public at [maizesequence.org](http://maizesequence.org).

## United Way

**Pledges will be accepted throughout the year**

— from Page 1

our campaign, during a particularly trying economic period, we will be making a significant contribution to the financial support of agencies that provide vital services and programs.

"I also would like to thank our campaign leaders and volunteers

for their hard work and support of this campaign," Prenatt said.

Although WUSTL has reached its goal, it will continue to accept pledges throughout the year. Employees are encouraged to pledge online through HRMS Self Service. Pledge cards also are available. To request a pledge card, contact Lisa Caress at 935-6087 or [caresslisa@wustl.edu](mailto:caresslisa@wustl.edu).

Last year's WUSTL drive raised more than \$637,570, exceeding the stated goal of \$600,000, and helped the United Way of Greater St. Louis raise

\$68.4 million in 2008.

Ninety percent of contributions to the United Way of Greater St. Louis — one of the country's highest assistance rates — go directly to nearly 200 organizations that provide services for people living in 16 Missouri and Illinois counties.

Such services include job counseling and job training, affordable child care, disaster relief, violence prevention and more.

For more information about the United Way, visit [stl.unitedway.org](http://stl.unitedway.org).

## WUSTL Dining Services to serve CIW grape tomatoes

Washington University Dining Services will only serve

Florida tomatoes grown on farms that have agreed to a code of conduct for ethical treatment of workers, announced Nadeem Siddiqui, dining services manager.

Dining Services obtains tomatoes grown locally when possible, but in the winter, it purchases tomatoes from year-round producers.

The code of conduct was devised by the Coalition of Immokalee Workers (CIW), an organization of farm workers that strives to create more humane working conditions and labor standards in Florida. The only farm to agree to the CIW code of conduct this winter grows primarily grape tomatoes, Siddiqui said.

While this means WUSTL diners won't see full-sized tomato slices or wedges in their sandwiches or salads this winter, it also means the tomatoes the campus community will eat — in salads, sauces and other foods — will have been harvested by workers paid a fair wage under ethical working conditions.

The change at WUSTL is the result of a decision by Bon Appetit Management Co., the contractor that provides dining services on the Danforth Campus, to only serve CIW tomatoes.

The CIW code requires that workers be paid a fair minimum wage, that a process be established for workers to pursue complaints without fear of retribution, that worker safety processes be improved, and that third-party monitoring be implemented to ensure that the code of conduct

is followed.

Florida grower Alderman Farms became the first company to sign the code of conduct and is the only grower that will supply tomatoes to Bon Appetit's Washington University account. The company grows primarily grape tomatoes, meaning that other varieties of tomatoes will not be available on the Danforth Campus for the next few months.

Dining Services chefs have crafted alternative menu items to replace full-sized tomatoes, including sweet and sour spiced chutney, tomato-free salsas and grape tomato salsas and adding spinach and red peppers as sandwich options and grape tomatoes at salad bars.

As grape tomatoes or similar substitutions are available on all dishes that formerly contained sliced tomatoes, prices have remained unchanged.

Bon Appetit is the first food service company in the country to sign the agreement with the CIW.

The new tomato policy follows in the footsteps of other environmentally and socially responsible practices established by Dining Services and Bon Appetit.

Those practices include using local products when possible, showing the connections between food choices and climate change, and serving only sustainable seafood, cage-free eggs, Fair Trade bananas and antibiotic-free chicken, turkey breast and hamburger meat.

For more information, call Jill Duncan at 935-5028.

## University College to host spring Preview Night Dec. 10

By JESSICA DAUES

University College, the evening and summer program in Arts & Sciences, will host a Preview Night at 7 p.m. Dec. 10 in Holmes Lounge in Ridgley Hall.

Preview Night features speakers who will discuss class and program offerings, admissions requirements and financial aid. Spring semester classes at University College start Jan. 19, 2010.

"Preview night is the most vivid and efficient event for someone considering University College specifically or returning to school generally," said Robert E. Wiltenburg, Ph.D., dean of University College.

"We gather together current students and faculty, program coordinators and University College advisers to provide information and reflection on all aspects of the adult education experience: academics, programs,

costs, career planning, etc.," Wiltenburg said.

Preview Night is open to the public. A special breakout room will be available for University College to answer questions specifically geared to WUSTL employees.

Most University College undergraduate classes are free to full-time, benefits-eligible WUSTL employees with one year or greater length of service before the first day of classes. The tuition benefit also covers 50 percent of graduate course costs. For more information about tuition benefits, visit [hr.wustl.edu](http://hr.wustl.edu).

A light dinner and dessert will be served.

To R.S.V.P., call 935-6777 or visit [ucollege.wustl.edu/preview](http://ucollege.wustl.edu/preview).

For more information about Preview Night or University College, contact Katina Truman at 935-6777 or [krtruman@artsci.wustl.edu](mailto:krtruman@artsci.wustl.edu).

## Record

Founded in 1905 • Washington University in St. Louis community news

Volume 34, Number 16

Associate Vice Chancellor Steven J. Givens  
Executive Editor Susan Killenberg McGinn  
Editor Leslie Gibson McCarthy  
Associate Editor Neil Schoenherr  
Assistant Editor Jessica Daues  
Medical News Editor Beth Miller  
Calendar Coordinator Angela Hall  
Print Production Carl Jacobs  
Online Production Tammy Ritterskamp

### News & Comments

(314) 935-5293  
Campus Box 1070  
[record@wustl.edu](mailto:record@wustl.edu)

### Medical News

(314) 286-0119  
Campus Box 8508  
[millerbe@wustl.edu](mailto:millerbe@wustl.edu)

### Calendar Submissions

Fax: (314) 935-4259  
Campus Box 1070  
[recordcalendar@wustl.edu](mailto:recordcalendar@wustl.edu)

Record (USPS 600-430; ISSN 1043-0520), Published for the faculty, staff and friends of Washington University. Produced weekly during the school year, except school holidays, and monthly during June, July and August by the Office of Public Affairs, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, MO 63130. Periodicals postage paid at St. Louis, MO.

### Where to send address changes

Postmaster and nonemployees: Record, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, MO 63130. Employees: Office of Human Resources, Washington University, Campus Box 1184, One Brookings Drive, St. Louis, MO 63130.

### Reprint permission

Articles may be reprinted with permission and with appropriate credit to Washington University in St. Louis Record.



## School of Medicine Update

# Recovery act funds new flu drug discovery center

BY GWEN ERICSON

**S**chool of Medicine scientists are investigating a new way to fight the flu.

Funding has been received largely through the American Recovery and Reinvestment Act (ARRA) to establish a drug discovery center that will look for compounds that enhance the body's natural virus-killing mechanisms to overcome the flu.

Each year, government agencies work with scientists to develop new flu vaccines to block large-scale flu outbreaks. The vaccines have to be modified yearly because flu viruses constantly change their basic components so the body's immune system can't recognize them.

But the researchers, headed by Michael J. Holtzman, M.D., believe they can identify drugs that enhance the body's resistance to a large range of respiratory viruses. That means these drugs could

prevent or treat many different seasonal flu viruses and the 2009 H1N1 flu virus as well as the common cold and other respiratory viruses.

The ARRA provided nearly \$2.5 million through the National Institute for Allergy and Infectious Diseases to support this research.



Holtzman

"In past research, we've shown that we can defeat flu viruses in mice and in human cells by genetically modifying the interferon-signaling pathway so that it's more effective in fighting viral infections," said Holtzman, the Selma and Herman Seldin Professor of Medicine and director of the Division of Pulmonary and Critical Care Medicine. "So now we are trying to

develop drugs that would mimic the effects that we saw in mice and cells."

Interferon signaling is one of the main ways the body stops virus infections. Interferons secreted by infected cells set off a series of responses that activate virus-attacking immune cells and help stop viral replication. Holtzman and his colleagues found a way to ramp up interferon-signaling mechanisms in mice and protect them from respiratory virus infection.

Then the scientists studied which genes became more active in mice and human cells when they enhanced the interferon-signaling pathway. With the new funding, they are taking the next step and building automated systems to look for drugs that replicate the effect of turning on those genes.

"We call it genome-guided drug screening — a new method of drug development that is being

done in very few places in the world," Holtzman said. "We're putting together a specialized high-throughput system using robotic equipment that can very rapidly screen many different compounds."

Holtzman and his colleagues are defining the body's response to the 2009 H1N1 virus. They are using human airway cells grown in the laboratory to understand why the virus is pathogenic and what is

unique about its way of infecting its host.

"The virus has a way of subverting the body's antiviral response," Holtzman said. "By analyzing the genes whose activity changes when the virus infects cells, we can find genes responsible for infection and resistance."

This information will feed into the genome-guided drug screening system to identify drugs effective against the 2009 H1N1 flu virus.

## Mutation linked to pediatric brain tumor may pave way for targeted treatment

BY MICHAEL C. PURDY

**S**chool of Medicine researchers have linked mutations in a gene to a benign pediatric brain tumor, a finding that will help scientists seek drug treatments that block growth of the tumors.

"Now that we understand the signature mutation in these common pediatric tumors, we can think about designing treatments that alter the pathway that gene controls," said David H. Gutmann, M.D., Ph.D., the Donald O. Schnuck Family Professor of Neurology. "That's important because right now we have few treatments tailored to this tumor type."

Gutmann normally studies the tumors, known as pilocytic astrocytomas, in the context of neurofibromatosis 1 (NF1), an inherited condition that is one of the most common tumor predisposition syndromes. But pilocytic astrocytomas also occur sporadically in patients who do not have the NF1 mutation at a rate of about two to three new cases per 100,000 children per year.

To learn whether either condition could shed light on the other, Gutmann's team performed detailed genetic and genomic analyses of tumor samples from 70 patients with sporadic pilocytic astrocytomas and nine patients with NF1. The results appeared in a recent issue of *Neurology*.

An early lead linking the sporadic tumors to changes in a gene called *HIPK2* in a small region of chromosome 7 didn't pan out, but it led the researchers to the nearby *BRAF* gene, which previously had been linked to other cancers.

"*BRAF* was a particularly enticing target because the signaling pathway that it controls is also controlled by neurofibromin, the protein made by the gene that is mutated in patients with NF1," said Gutmann, director of the Washington University Neurofibromatosis Center. "This finding is exciting since a number of drugs are known to inhibit this pathway, some of which are already being tested for their ability to control the growth of other cancers."



Jerry Pinkner, research lab manager in molecular microbiology, with 2½ months of boxes collected from three labs to be recycled. This amount of cardboard would fill half of the regular trash Dumpster that would normally go into landfills, Pinkner said. A pilot recycling program will recycle the cardboard in three medical school buildings.

## Energy-savings drive evolves to sustainability

BY BETH MILLER

**E**arlier this year, the School of Medicine brought together representatives from each department to launch a school-wide energy awareness drive. But the group's enthusiasm and ideas led it to go beyond its initial focus to the broader realm of sustainability.

The Sustainability Awareness Committee (SAC) now focuses on encouraging behavior change and saving money and resources in energy, dining services, recycling and procurement, transportation and sustainable design. The committee will provide information and tools to help the School of Medicine community positively impact all of these areas at work and at home, said Jim Stueber, director of facilities engineering.

The subcommittee, headed by Jerry Pinkner, research lab manager in molecular microbiology, has been hard at work on several initiatives.

The subcommittee, composed of representatives of nine departments on the Danforth and Medical campuses, plans to generate a recommendation list of laboratory best practices on how to save energy.

A recent case study of a lab in the McDonnell Pediatric Research Building showed that about \$2,000 per year could be saved by turning off lab equipment such as water baths, heat blocks, centrifuges and other equipment with heating elements and compressors when not in use. Lighting modifications alone could save nearly \$1,000 annually.

Pinkner said there is another simple change that could save big money.

"Labs could save 40 cents an hour, or \$3,500 a year, by closing the fume hood sashes," Pinkner said. "Leaving them open is like leaving your front door at home open in the summer or in the winter."

Based on the case study, if the same level of savings could be reached in all of the 570,000 square feet

of labs at the medical school, the school could save more than \$2 million a year, resulting in a more than 7 percent reduction in energy costs campuswide.

The subcommittee, working with Ivory Reed Jr., director of support services, has launched a pilot recycling program in the McDonnell Pediatric Research Building, which will spread to the Clinical Sciences Research Building (CSRB) and CSRB North. The University pays more than \$70,000 a year to recycling contractors to take away white office paper and aluminum cans, glass and plastics.

"The buildings serving the CSRB trash Dumpster alone produce more than 30 tons of trash a month," Pinkner said. "We feel more than half of this can be recycled, reducing trash expenses and our waste stream to landfills by half and saving another \$60,000 a year."

Under the pilot program, all paper products will be collected and sold for profit. The money made from selling the paper will pay to recycle the glass, plastic, cans and cardboard.

The PC subcommittee, headed by Jill Mantia, director of information systems for the Department of Medicine, has been studying configuration schemes to turn off computers during nonwork hours to save energy without impacting academic and administrative faculty and staff who may log in outside of work hours.

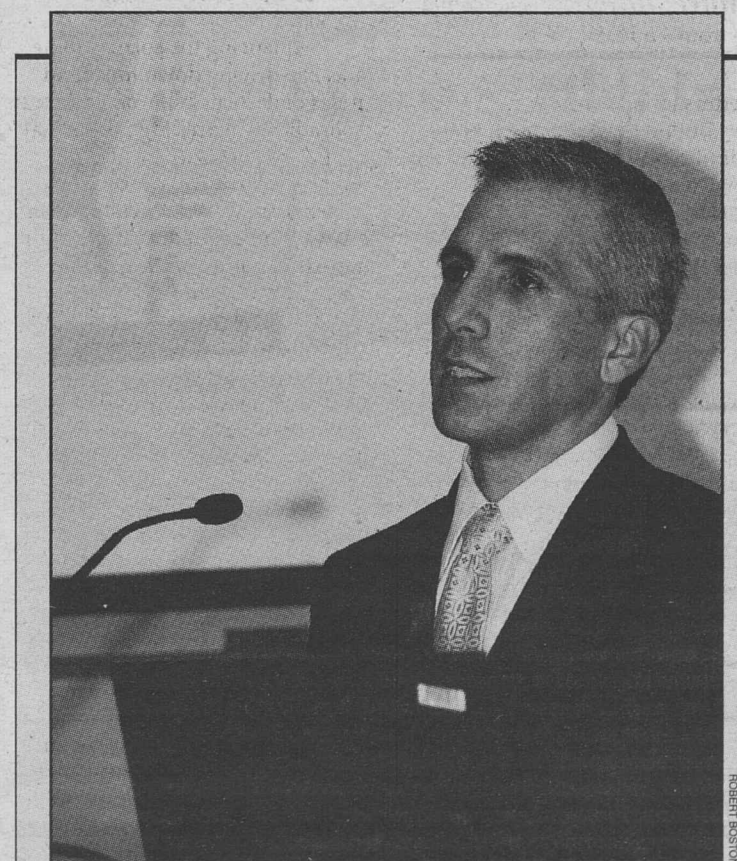
The group is starting with the computers in the 4480 Clayton Ave. building. Using power meters, the team will determine how much energy is saved when it implements the schemes on all the computers in the building, Mantia said.

The group also is looking at implementing its findings on the high number of computers in the Bernard Becker Medical Library.

Once the data is gathered, the subcommittee plans to develop best practices for computing on the campus, Mantia said.

## Annual art show seeks submissions

**T**he School of Medicine will host the Sixth Annual Art Show from Jan. 14-Feb. 11, 2010, in the Farrell Learning and Teaching Center Atrium. The show is composed of works done by School of Medicine students, faculty and staff. Anyone interested in submitting work should contact Andrew Lee at [leand@wusm.wustl.edu](mailto:leand@wusm.wustl.edu). The deadline to submit work is Jan. 8, 2010.



**Outlook for H1N1** Alexander Garza, M.D., assistant secretary for health affairs and chief medical officer for the U.S. Department of Homeland Security, spoke about the H1N1 flu pandemic to faculty, staff and students Nov. 18 at the Farrell Learning and Teaching Center. Garza, a St. Louis native, discussed the role the Department of Homeland Security plays in the national response to H1N1 as well as the outlook for the outbreak.



# University Events

## Annual dance showcase presents bodies in 'Transmotion'

By LIAM OTTEN

Washington University Dance Theatre (WUDT), the annual showcase of professionally choreographed works performed by student dancers, will present "Transmotion," this weekend in Edison Theatre.

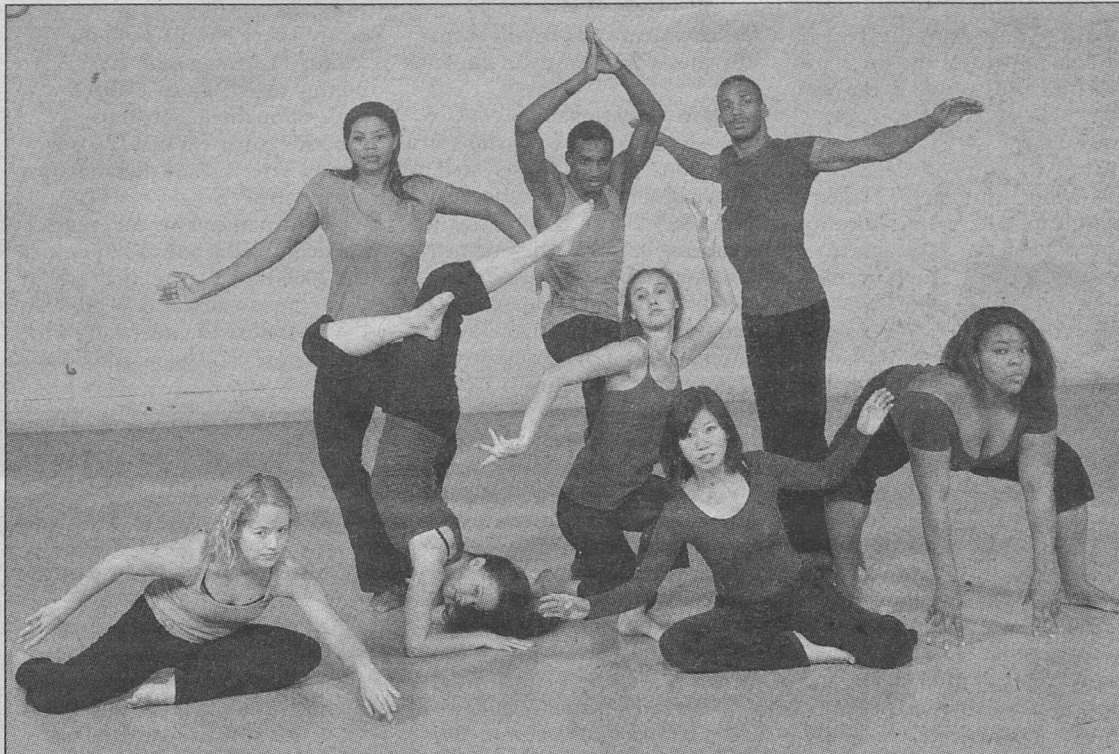
Performances are at 8 p.m. Friday and Saturday, Dec. 4 and 5, and at 2 p.m. Sunday, Dec. 6. The concert, sponsored by the Performing Arts Department (PAD) in Arts & Sciences, features more than three dozen student dancers, selected by audition, in seven original works by faculty and guest choreographers. Pieces range from ballet and contemporary dance to works drawing on Chinese and Native American traditions.

Cecil Slaughter, senior lecturer in dance and director of WUDT, said that the theme for this year's concert grew out of conversations among the dance faculty.

"Though stylistically diverse, we're all interested in this idea of using dance and movement as a tool for communication," Slaughter said. "'Transmotion' reflects a collective sense of crossing cultural borders and boundaries while also suggesting the evolution of our personal processes."

The concert will feature five faculty works as well as two new pieces choreographed by a pair of distinguished visiting artists.

Paula Weber, chair and professor of dance at the University of Missouri-Kansas City, recently set "Souls Intertwined," a contemporary ballet work for eight students. An accomplished performer, Weber has been a soloist with the Lyric Opera Ballet of Chicago



Students perform "Nocturnal Landscapes," a modern piece choreographed by Mary-Jean Cowell, coordinator of the Dance Program in Arts & Sciences, that explores dream-like images. The dance is one of seven to be performed at the annual Washington University Dance Theatre.

and a principal dancer with the Milwaukee Ballet.

She also has worked with many of today's most renowned choreographers, including Bill T. Jones, Laura Dean, Charles Molton and Kevin Jeff. She is a member of the Wylliams/Henry Danse Theatre as well as principal dancer/ballet mistress with the Albany Berkshire Ballet.

Rulan Tangen, director of DANCING EARTH — Indigenous Contemporary Dance Creations in Santa Fe, N.M., worked with 12 students to set a new dance exploring the iconography of ancient Cahokia — the

largest and most influential Native settlement north of Mexico, situated just east of present-day St. Louis — as well as issues of assimilation, diversity and extinction. Many of these themes also will be integrated into Tangen's "Of Bodies Of Elements," her forthcoming full-length work about Native perspectives on humanity's changing in relationship to earth.

"In many ways, Rulan's work epitomizes what 'Transmotion' is all about," Slaughter said. "As a choreographer, she draws on her own cultural experiences and cultural background. Yet, at the

same time, she also incorporates elements from other dance idioms, such as modern, ballet and powwow.

"She's literally dancing across lines of discipline and culture," Slaughter said.

Also on the program are:  
• "Nocturnal Landscapes." Mary-Jean Cowell, associate professor and coordinator of the Dance Program in Arts & Sciences, choreographed mysterious, occasionally wistful modern work for eight dancers, which explores nocturnal associations and dream-like images. The piece is set to the music of Frederic Chopin, James

Hegarty and George Strait.

• "It Sang A Long Time Ago." The husband-and-wife team of David W. Marchant, senior lecturer in dance, and Holly Seitz Marchant, a faculty member at Saint Louis University and Maryville University, choreographed this new duet, which is performed by Adrienne Hayes and Jonathan White. David describes the piece as "a fictional movement drama peering through the window on the lives of two companions."

• "EMERGE." Slaughter choreographed this large-scale piece for 16 dancers, set to music by Savage Aural Hotbed. "This work deals with the unveiling and peeling back of layers of awareness," Slaughter said. "It is the journey of a novice through an alternate reality and a hierarchy of understanding."

• "Roses, Cokes and the Flying Pig." Ting-Ting Chang, Ph.D., the Andrew W. Mellon postdoctoral fellow in the PAD, offers this work for 12 dancers. As a choreographer, Chang — who also serves as artistic director for DreamDance Contemporary Arts — explores the aesthetics, visual images and spiritual strength of her Chinese ancestry and movement disciplines in ways at once traditional and postmodern.

• "Brimming." Mary Ann Rund, adjunct lecturer in dance, presents this classical modern piece for six dancers, choreographed in 2000 as a tribute to late dancer Stephanie Jill Silverman.

Tickets — \$10 for students, faculty, staff and seniors and \$15 for the public — are available through the Edison Theatre Box Office and all MetroTix outlets. For more information, call 935-6543.

## Israeli Art Music • Ribosome Dynamics • Chance Poetry

"University Events" lists a portion of the activities taking place Dec. 3-16 at Washington University. Visit the Web for expanded calendars for the Danforth Campus ([news-info.wustl.edu/calendars](http://news-info.wustl.edu/calendars)) and the School of Medicine ([medschool.wustl.edu/calendars.html](http://medschool.wustl.edu/calendars.html)).

### Exhibits

"Chance Aesthetics." Through Jan. 4. Kemper Art Museum. 935-4523.

"Metabolic City." Through Jan. 4. Kemper Art Museum. 935-4523.

"Mother and Daughter: The Art of Leona Kremen and Paula Smith." Through Jan. 22. Farrell Learning & Teaching Center, Hearsh Gallery. 747-3284.

### Films

#### Thursday, Dec. 3

7 p.m. Japanese Film Series. "Tony Takitani." McMillan Hall, Rm. 149. 935-5110.

### Lectures

#### Thursday, Dec. 3

11 a.m. Genetics Seminar. "High-Throughput Metabolite Profiling in *S. cerevisiae*." Sara J. Cooper, U. of Wash. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

Noon. Genetics Seminar. "An Atlas of Open Chromatin Spanning Diverse Human Cell Types in Health and Disease." Jason Lieb, assoc. prof. biology, U. of N.C. at Chapel Hill. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

4 p.m. Vision Science Seminar Series. "Bisretinoids of RPE Lipofuscin.

Understanding a Role in Macular Degeneration." Janet R. Sparrow, prof. of ophthalmic science, Columbia U. Maternity Bldg., Rm. 725. 362-3315.

4:15 p.m. Earth & Planetary Sciences Colloquium. Burt Thomas, postdoctoral fellow, U.S. Geological Survey. Earth & Planetary Sciences Bldg., Rm. 203. 935-5610.

#### Friday, Dec. 4

11 a.m. Energy, Environmental and Chemical Engineering Seminar Series. "Using Computations to Reconstruct, Analyze and Redesign Metabolism." Costas D. Maranas, prof. of chemical engineering, Pa. State U. Lopata Hall, Rm. 101. 935-5548.

Noon. Cell Biology & Physiology Lecture. "Macrophage Receptors and Innate Immunity." Siamon Gordon, prof. of cellular pathology, U. of Oxford, U.K. McDonnell Medical Sciences Bldg., Rm. 426. 362-6950.

2 p.m. Asian and Near Eastern Languages and Literatures Lecture & Panel Discussion. "Justice Versus the Interest of the State in Contemporary Shiite Political Thought." Co-sponsored by the Whitney R. Harris World Law Institute. (3:30 p.m. reception.) Women's Bldg., Formal Lounge. 935-7988.

3 p.m. Genetics Seminar. "High-Throughput Analysis of Large Copy-Number Variants and Hotspots of Human Genetic Disease." Gregory M. Cooper, U. of Wash. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

4 p.m. Dept. of Music Lecture Series. "Articulating Jewishness in Israeli Art Music." Assaf Shelleg, visiting Israeli scholar. Music Classroom Bldg., Rm. 102. 935-5566.

#### Monday, Dec. 7

4 p.m. Immunology Research Seminar Series. "Regulating and Targeting V(D)J Recombination and Somatic Hypermutation." David Schatz, investigator, Howard Hughes Medical Inst. Farrell Learning & Teaching Center, Connor Aud. 362-2763.

#### Tuesday, Dec. 8

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series.

### How to submit 'University Events'

Submit "University Events" items to Angela Hall of the Record staff via:

e-mail — [recordcalendar@wustl.edu](mailto:recordcalendar@wustl.edu)

campus mail — Campus Box 1070

fax — 935-4259

Upon request, forms for submitting events will be e-mailed, mailed or faxed to departments to be filled out and returned.

Deadline for submissions is noon the Thursday prior to publication date.

"Identification of Targets and Function of HMCV in miRNAs." Jay Nelson, prof. of molecular microbiology and immunology, Ore. Health Sciences U. Cori Aud., 4565 McKinley Ave. 362-7367.

5 p.m. Freedom From Smoking Class. "Relapse Prevention and Graduation." Center for Advanced Medicine, Barnard Health and Cancer Info. Center. To register: 362-7844.

#### Wednesday, Dec. 9

Noon. Siteman Cancer Center Prevention & Control Seminar Series. "Population-Level Data Collection & Knowledge Exchange Systems: A Current System and an Emerging Opportunity." Scott Leatherdale, scientist, Cancer Care Ontario. Goldfarb Hall, Rm. 132. 454-8981.

4 p.m. Biochemistry & Molecular Biophysics Seminar. "Translation Factor Control of Ribosome Dynamics During Protein Synthesis." Ruben L. Gonzalez Jr., asst. prof. of chemistry, Columbia U. McDonnell Medical Sciences Bldg., Rm. 264. 362-4152.

#### 5 p.m. Kemper Art Museum Gallery Talk.

"Spotlight Series: Jean Dubuffet, Tete barbe." Karen K. Butler, asst. curator. Kemper Art Museum. 935-4523.

#### Thursday, Dec. 10

Noon. Genetics Seminar. "Altering Neuronal/Glial Metabolism to Prevent Axonal Degeneration." Jeffrey Milbrandt, prof. of pathology and immunology. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

4 p.m. Office of Technology Management Technology Commercialization Seminar Series. "Navigating Conflict of Interest and Achieving Satisfactory Results." Bill Stenson, prof. of medicine, and Eric Leuthardt, asst. prof. of neurological surgery. Farrell Learning & Teaching Center, Connor Aud. 747-0908.

4 p.m. Vision Science Seminar Series. "The Role of Macrophage ATP Binding Cassette Transporter A1 (ABCA1) in Inflammation." John S. Parks, prof. of lipid sciences, Wake Forest U. School of Medicine. Maternity Bldg., Rm. 725. 362-3315.

#### Friday, Dec. 11

Noon. Cell Biology & Physiology Lecture. "Role of Autophagy Genes in Innate Immunity, Inflammation and Disease Susceptibility." Herbert W. "Skip" Virgin, prof. of pathology and immunology. McDonnell Medical Sciences Bldg., Rm. 426. 362-6950.

#### Monday, Dec. 14

Noon. Institute for Clinical and Translational Sciences Seminar Series. "The Translational Continuum Seminar Series: Tyrosine Kinases in Cancer Treatment and Drug Development." Michael Tomasson, assoc. prof. of medicine; Neil Gibson, oncology therapeutic head, Pfizer Research and Development; Charles Blanke, head of medical oncology, U. of British Columbia. (Lunch provided.) Clifton Aud., 4950 Children's Place. R.S.V.P. required: 362-9829.

4 p.m. Immunology Research Seminar Series. Mike Diamond, prof. of medicine. Farrell Learning & Teaching Center, Connor Aud. 362-2763.

4 p.m. Siteman Cancer Center Breast Cancer Research Group Seminar Series. "PIIBNP, a Protein Fragment From Cartilage, is Anti-Tumor and Anti-Angiogenic." Linda J. Sandell, research prof. of orthopaedic surgery. Farrell Learning & Teaching Center, Holden Aud. 454-8981.

### Music

#### Thursday, Dec. 3

8 p.m. Jazz at Holmes. Steve Davis, drums; William Lenihan, guitar; and friends. Ridgely Hall, Holmes Lounge. 862-0274.

#### Friday, Dec. 4

8 p.m. Concert. Concert Choir. Graham Chapel. 935-5566.

#### Sunday, Dec. 6

3 p.m. Concert. Messiah Sing-Along. Graham Chapel. 935-5566.

#### Monday, Dec. 7

8 p.m. Choir. Flute Choir. Graham Chapel. 935-5566.

#### Tuesday, Dec. 8

8 p.m. Concert. Small Chamber Ensembles. Graham Chapel. 935-5566.

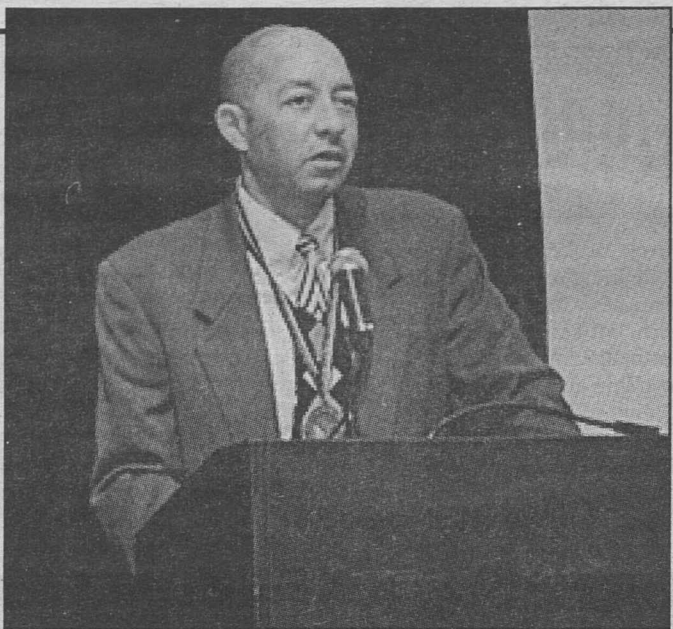
#### Wednesday, Dec. 9

8 p.m. Concert. Danforth University Center Chamber Music Series. Megan Stout, harp. An evening of harp chamber music.

### Green Your Office

Avoid wasting plastic trash bags: Ask your maintenance representative not to empty your personal wastebasket until it is full.





**Celebrated poet** Carl Phillips, a finalist for the 2009 National Book Award in poetry for his 10th collection of poetry, "Speak Low," gives a reading at the National Book Awards Finalists Reading Nov. 17 in Tishman Auditorium at The New School in New York City. Each of the 20 finalists from among four categories read from their nominated works. Phillips, who received a bronze medallion and \$1,000 as a finalist, was recognized during the 60th anniversary National Book Awards dinner and ceremony Nov. 18 at Cipriani Wall Street in New York. This was the third National Book Awards nomination for Phillips, a professor of English and of African and African American studies, both in Arts & Sciences.

## Social change grants available through Community Service Office

By NEIL SCHOENHERR

Up to \$32,000 is available to WUSTL students for the development and implementation of innovative community projects during the summer in the form of social change grants through the Community Service Office.

A new gift from Procter & Gamble will provide an additional \$10,000 in funding this year.

Students may submit proposals for multiple grants if they meet eligibility requirements. The intent to apply deadline is Jan. 25, 2010, and the proposal deadline is Feb. 12, 2010.

Social change grants provide a unique opportunity for students to receive funding to pursue an independent summer project in the spirit of social entrepreneurship. Funding can be used at the recipient's discretion to cover costs of the project, cost-of-living expenses, and/or in lieu of earnings during the summer or academic year. Individuals or teams can apply.

Social change grants of \$5,000 and \$6,000 are available to six individuals or teams:

- The Procter & Gamble Social Change Grant is made possible by The Procter & Gamble Fund of the Greater Cincinnati Foundation, which awarded funds to the Gephhardt Institute for Public Service during the 2010 cycle. The fund supports programs designed to prepare students for professional success through leadership opportunities and

learning environments that encourage innovation and creativity.

Two \$5,000 grants are available for domestic or international projects. All students, including graduate and professional students, are eligible to apply.

- The Stern Social Change Grant was established in 2000 to provide interested students with the means to pursue creative and meaningful activities geared toward finding solutions to society's needs.

Two \$6,000 grants are available. All undergraduates are eligible. Graduating seniors also may apply.

- The Kaldi's Social Change Grant was established in 2005 to provide students with the opportunity to develop sustainable community projects in the St. Louis region. One \$5,000 grant is available. Undergraduates are eligible.

- The Gephhardt Social Change Grant is funded by supporters of the Gephhardt Institute for Public Service and supports international civic engagement or service projects demonstrating capacity for sustainable impact on an identified community issue. One \$5,000 grant is available. All students, including graduate and professional students, are eligible to apply.

For more information on the grants, visit [communityservice.wustl.edu/grants](http://communityservice.wustl.edu/grants) or call Stephanie Kurtzman, director of the Community Service Office and associate director of the Richard A. Gephhardt Institute for Public Service, at 935-5066.

## Holiday tradition alive on campus with annual 'Messiah' sing-along Dec. 6

The Department of Music in Arts & Sciences will present its annual sing-along of George Frideric Handel's oratorio "Messiah" at 3 p.m. Sunday, Dec. 6, in Graham Chapel.

John Stewart, director of vocal activities, directs the program.

The performance, which lasts about an hour, will include the Christmas portion of "Messiah" as well as the "Hallelujah Chorus." Those who wish to participate in the sing-along may sit in special sections arranged according to voice type (soprano, alto, tenor, baritone), although those who choose not to sing also are welcome to attend. Copies of the music

will be available for those who do not bring their own scores.

Soloists for the performance will include sopranos Stephanie Ball and Sarah Shipkowski, both second-year graduate students in the Department of Music.

Mezzo soprano will be Debra Hillebrand, with tenor Keith Boyer. Baritone will be Tom Sitzler, also a second-year graduate student. William Partridge Jr., campus organist, will provide the instrumental accompaniment.

The concert is free and open to the public.

For more information, call 935-5566 or e-mail [kschultz@wustl.edu](mailto:kschultz@wustl.edu).

## Sports

### Women's soccer advances to final four

With a 2-1 victory over Calvin College Nov. 22, the No. 17-ranked women's soccer team advanced to its second final four in school history.

The team travels to San Antonio Friday, Dec. 4, to play No. 21 Lynchburg College (17-3-4) at 1:30 p.m. The winner of that will take on the winner of the match between No. 9 College of New Jersey (16-2-1) and No. 1 Messiah College (19-0-1) for the NCAA Division III title.

The championship game is slated for 1 p.m. Saturday, Dec. 5, in San Antonio.

In the victory over Calvin, sophomore Lee Ann Felder scored the game-winning goal in the 57th minute, as she one-timed a cross from senior Caryn Rosoff for her sixth goal of the year.

Freshman goalkeeper Clara Jaques picked up her 16th win of the season in goal by making seven saves. The victory for Jaques moves her into eighth place on the all-time WUSTL list in her first season on the Danforth Campus.

The Bears' overall record of 17-3-2 ties the school record for victories in a season. WUSTL also won 17 games in 1997, '98, 2004, '06 and '07.

### Cross country teams finish in top 10

Both the men's and women's cross country teams qualified to compete in the NCAA Division III championships in Cleveland Nov. 21, and each squad turned in a top 10 finish.

Sophomore Michael Burnstein paced the WUSTL men to a

surprising seventh-place finish at the national meet. With a time of 25:56.4, Burnstein finished 20th and earned All-America honors for the first time in his career.

In a matter of seven days, the men's team vaulted from being unranked nationally to posting the best national finish for any men's cross country team in school history. The men's squad was appearing in the NCAA championships for just the fifth time in school history and the first since 2006.

Junior Taryn Surtees helped the women to a 10th-place overall finish, an improvement over last year's 12th-place finish. Surtees garnered All-America honors for the second time, as she placed 20th overall with a time of 22:36.0.

"This is probably the greatest day in school history for the Washington University cross country program," head coach Jeff Stiles said after the competition. "I would gladly give up a national championship to have both teams come to the national meet and compete and do well."

"Our women's team has had national success recently, but without the men qualifying, too, so this means a lot to have them both here and do well," Stiles said.

Their appearance at the meet also was the first time since 2006 WUSTL had both its cross country teams compete in the national championship meet in the same year.

### Women win McWilliams Classic

The women's basketball team captured the Ninth Annual McWilliams Classic tournament title with an 82-62 win over Rhodes College Nov. 29 at the WU Field House.

Junior point guard Alex Hoover, who scored 17 points in the tournament championship game, earned the Jacqueline Bickel Schapp Most Valuable Player award.

Joining Hoover on the all-tournament team was graduate student Jaimie McFarlin and senior Zoe Unruh.

McFarlin had eight points with eight rebounds against Rhodes, while Unruh tallied 12 points, eight rebounds and three assists in the championship game.

The Bears advanced to the McWilliams final with a 75-37 win over Rose-Hulman Institute of Technology Nov. 28.

WUSTL set a tournament record with 22 steals in the win over Rose-Hulman.

The Bears (4-1) return to action at 2 p.m. Saturday, Dec. 5, at Elmhurst College in Chicago.

### Men's basketball captures Titan Tip-Off

The men's basketball team posted victories over Ohio Wesleyan University (85-68) and Illinois Wesleyan University (67-61) to capture the 2009 Titan Tip-Off Tournament championship in Bloomington, Ill.

Senior guard Aaron Thompson tied his career-high with 31 points in the championship game over Illinois Wesleyan.

Thompson, who was joined on the all-tournament team by graduate student Sean Wallis, was 12-of-20 from the field and hit 5-of-6 from the foul line in the win.

Thompson averaged 29.5 points per game in the tournament, while Wallis averaged 12 points and 9.5 assists per game.



Freshman Clara Jaques was in goal for 16 of the Bears' 17 victories this season.

Danforth University Center, Tisch Commons. 935-5566.

### Thursday, Dec. 10

8 p.m. Opera Scenes. (Also 8 p.m. Dec. 11.) Umrath Hall Lounge. 935-5566.

## Sports

### Friday, Dec. 4

8 p.m. Men's Basketball vs. McKendree U. Annual Lopata Classic. (Continues 6 p.m. Dec. 5.) Athletic Complex. 935-4705.

### Wednesday, Dec. 9

7:30 p.m. Men's Basketball vs. Wheaton College. Athletic Complex. 935-4705.

### Saturday, Dec. 12

7:30 p.m. Men's Basketball vs. Augustana College. Athletic Complex. 935-4705.

## On Stage

### Friday, Dec. 4

8 p.m. Performing Arts Dept. Presentation. "Transmotion." (Also 8 p.m. Dec. 5; 2 p.m. Dec. 6.) Cost: \$15, \$10 for students, seniors, faculty and staff. Edison Theatre. 935-6543.

## And More

### Friday, Dec. 4

6 p.m. Chance Poetry Reading. (Refreshments served.) Kemper Art Museum. 935-4523.



# Olin Cup finalists in race for funding new businesses

By MELODY WALKER

A record number of aspiring entrepreneurs entered 45 ideas for new ventures in the annual Olin Cup business plan competition this fall. As the race toward \$75,000 in seed money enters its last stage, seven finalists are crunching numbers and honing their plans for the crucial final presentation to judges in January.

Ken Harrington, managing director of the Skandalis Center, emceed the "Elevator Pitch" event Nov. 19, where 17 semifinalists had two minutes each to present their business plans.

The teams presented privately in front of 16 judges and then presented publicly in front of an audience.

"The judges, audience and I were very impressed with the quality of this year's pitches and ideas," Harrington said. "We look forward to the next phase in the competition and seeing their full business plans."

There was no time for sweaty palms or stage fright as the contestants took to the stage to make their pitches in front of judges like Charlie McGill, executive director of the Entec Innovation Center in Valparaiso, Ind. "In two minutes, I look for the passion in the individual and their ability to think on their feet and answer questions in an honest and articulate way," McGill said.

Olin Cup finalist Adam Regelmann, M.D., Ph.D., is a resident at Barnes-Jewish Hospital in the Department of Internal Medicine. He said the two-minute pitch was challenging, especially when trying to explain his online business "Quartz" — a Web site that provides tools to manage inventory in academic science labs.

Participating in the Olin Cup has been a good learning experience, Regelmann said.

"It's clear that the competitive experience is valuable, with opportunities to meet other entrepreneurs and investors," Regelmann said. "Regardless of whether you win, it's a good way to network and meet people with similar interests. If you win, you

get startup money, which is great for the company."

Regelmann has been granted a special arrangement with the School of Medicine to complete his residency while working on his startup.

For WUSTL alum Nick Apperson, founder of Worldki, a Web site for video game designers, taking part in the Olin Cup isn't just about the money.

"It's more about the visibility," Apperson said, "and going through the process and ironing out things that are not fundamental flaws but need to be worked out. There's a certain amount of credibility that comes with it."

"And I think it brings out the best in you to be competitive with others," Apperson said. "The money isn't a driving factor."

Before the final round of judging in late January, contestants must prepare detailed business plans in writing and a Power Point presentation about their startup ventures. The most viable busi-

nesses with the highest probability of success will be judged winners. This year's finalists include two WUSTL student-owned or student-supported ventures (indicated by an asterisk):

**Eyelten Therapeutics\***: developing therapies to treat age-related macular degeneration;

**IV Diagnostics LLC**: diagnostic technology for detection and monitoring of circulating tumor cells;

**LangLearner**: Web-based platform for foreign language learning;

**Lynxess**: software to track prescription drug containers to combat counterfeiting;

**Quad Connect\***: Web site to promote campus life through student engagement and community communication online;

**Quartz**: an online suite of networked tools for academic scientists to manage lab inventory; and

**Worldki**: open-source video game development tools.

Contestants will make their final private presentations to the judges Jan. 21, and the winners will be announced Feb. 4 at an awards ceremony.



## Law school announces six-semester tax LL.M.

The School of Law recently became the first top law school to allow students to earn both a juris doctorate and a master of laws in taxation in six semesters without any summer coursework.

By not requiring a summer component, students interested in this joint degree program can continue to take advantage of summer employment opportunities while earning the J.D. and the LL.M. in three years.

"This new program is a great opportunity for our students who accept permanent employment outside of St. Louis, and, therefore, cannot take advantage of our current seven-semester LL.M. option," said Mary Perry, J.D., director of the LL.M. in Taxation Program and assistant dean for adjunct faculty. "It also offers students who participate in the program the competitive advantage of having a tax LL.M. in hand

when they graduate."

To earn the additional degree, students must take eight credits beyond those required for the J.D., and the students' coursework must include "Federal Income Tax" and 24 additional qualifying credits in tax-related courses — the same requirements as for the traditional one-year LL.M. in Taxation Program.

For more than 40 years, the tax LL.M. at the law school has offered a rigorous course of study in the field of tax law.

"Employers like to see a more focused course load in tax when filling tax positions," said Michael Spivey, assistant dean for career services, strategy and marketing.

"Students interested in the tax field should find this program highly beneficial to their job search."

"Additionally, the ability to complete internships over the summer will uniquely position these students to start their legal careers with valuable and relevant experience," Spivey said.

## University switchboard changes hours

As of Dec. 1, the Washington University switchboard — which can be reached by calling the University's main line at 935-5000 — is being staffed from 8 a.m.-5:30 p.m., Monday through Friday. During non-working hours, callers receive an automated response.

Before the change, the switchboard opened at 7:30 a.m. and closed at 6 p.m.

"The change aligns our switchboard hours to reflect the times of normal calling patterns experienced by our operators," said Bill Orrick, director of Telecommunications Services.

The automated responses heard when the switchboard is closed will not change. Frequently requested numbers are provided with single-digit transfers.

For more information, call Orrick at 935-4599.

## Economists

— from Page 1

failures and collapse of the credit markets that led to the global economic crisis of 2008.

"Consumer-fueled growth worked for a while and provided a lot of stimulus for the economy," Fazzari said, "but the middle-class American is tapped out now; they've borrowed as much as they can. They're cutting back because they have no choice. I don't know how we can get a strong recovery at this point."

Economist Glenn MacDonald, Ph.D., the John M. Olin Distinguished Professor of Economics & Strategy and director of the Center for Research in Economics and

Strategy at Olin Business School, is more optimistic about the recovery.

His forecast calls for a slow and steady rebound from what he calls a "typical modern" recession. "The economy bottomed at the end of the first quarter of this year, and, as would be typical of modern recessions, it was not especially deep and will bounce out relatively slowly," MacDonald said. "That's been the case in post-1980s recessions."

MacDonald said comparatively high unemployment eventually will decline, but it will take time. "Employment tends to come back with a nine-month to one-year lag. So, there is no particular reason to think this recession is going to be any different from others that have occurred in the

modern era."

Unlike Fazzari, who believes more government stimulus funds could help the economy, MacDonald is concerned that the stimulus package may prolong the recession.

"Because the government has no source of resources other than taxes or borrowing, the 'stimulus' merely creates the prospect of a lot of uncertainty about both the national debt and higher taxes," MacDonald said. "This uncertainty may hinder the recovery."

MacDonald offers advice to people who are concerned about the economy. "Stick with the data, look at the facts, and keep your eye on where this machine (the U.S. economy) is going," MacDonald said, "and that really offers a lot of optimism."

## Becker a finalist for Rhodes Scholarship

By NEIL SCHOENHERR

Emily Becker, a senior majoring in international and area studies with a minor in English, both in Arts & Sciences, was a finalist for a Rhodes Scholarship announced Nov. 21.

"Being picked as a finalist for this distinguished scholarship is a wonderful achievement," said Joy Kiefer, Ph.D., assistant dean in the College of Arts & Sciences. "Emily has much to be proud of, and I know she will accomplish many great things after she leaves the University."

Becker was one of several finalists who interviewed for the scholarship in Des Moines, Iowa. The scholarship provides funding for approximately 80 students from around the world to study at the University of Oxford in England for two or three years.

Becker, who has made the Dean's List each semester since fall 2006, maintains a 4.0 grade-point average. She has received a Benjamin A. Gilman International Scholarship, a Robert C. Byrd Honors Scholarship and an Amanda Beth Rosenberg Scholarship in History. She is a member of Sigma Iota Rho, the International & Area Studies Honorary Society.

An active volunteer on cam-

pus, Becker is a member of the Uncle Joe's Peer Counseling and Resource Center, where she counsels fellow students in person and over the phone. She also is a member of the Campus YMCA, where she tutors seventh-grade students in English, social studies and Spanish.

In May 2009, Becker completed an independent research project in Misiones, Argentina, called "El Ruido de Arboles Caidos: A Study of the Impact of Deforestation on the Cultural Identity of the Mbya Guarani." The 44-page qualitative research paper, written in Spanish, examines the impact of deforestation on the formerly hunter-gatherer Mbya Guarani indigenous group.

Using interviews and observations taken from a weeklong visit to the community of Tamandua and an additional visit to the community of Alecrin, Becker analyzed the ways in which environmental changes have transformed how members of this community understand themselves and their relationship to Argentine society.

Becker is proficient in Spanish and modern standard Arabic and has a working knowledge of Levantine colloquial Arabic.

She hopes to pursue a career in diplomacy.

## Sign up to receive W-2 electronically

Beginning with Tax Year 2009, WUSTL employees can sign up to receive electronic delivery of W-2 forms, announced Tina Grarup, director of Payroll Services.

There are two significant advantages to electronic delivery of W-2 documents, Grarup said.

First, electronic W-2s will arrive approximately three weeks earlier than mailed W-2s, giving WUSTL employees a head start on their taxes. Second, there is no risk of employees' forms being lost in the mail.

"We are very excited to offer electronic W-2s; it is a win-win for both our employees and the University," Grarup said. "We are making it possible for employees to access their information much

earlier than in past years, and by consenting, they are contributing to a cost-savings to the University."

To sign up, employees must log into HRMS using their WUSTL KEY. Click on "Employee Self Service" and then "Payroll and Compensation." From there, click on "W-2/W-2c Consent."

Employees who sign up will be notified by e-mail in early January when electronic W-2 forms are available.

Those who sign up for electronic W-2s will receive the document electronically from Tax Year 2009 on, unless the employee changes his or her status in HRMS.

For more information, call Payroll Services at 935-9835.

## Campus Watch

The following incidents were reported to University Police Nov. 17-30. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This information is provided as a public service to promote safety awareness and is available on the University Police Web site at police.wustl.edu.

### Nov. 18

8:31 a.m. — A laptop was reported stolen from an office in Seigle Hall.

### Nov. 20

9:00 a.m. — A person reported her iPod had been stolen from Brookings Hall.

3:08 p.m. — A person reported that a vehicle was struck in the parking lot outside Millbrook Square Apartments. The striking vehicle left the scene.

### Nov. 23

9:37 a.m. — A person reported her wallet and digital camera were stolen from her backpack in the Earth & Planetary Sciences Building.

1:17 p.m. — A student reported points were used from his ID card after he had lost it off campus.

### Nov. 24

1:55 p.m. — A vehicle with a fraudulent daily permit was ticketed and towed from Snow Way Garage.

### Nov. 25

12:51 p.m. — A bicycle was reported stolen from outside Brown Hall.

2:38 p.m. — Money was stolen from a truck parked outside Lopata Hall.

### Nov. 28

4:03 p.m. — A person reported her cell phone had been stolen from Olin Library.

Additionally, University police responded to two accidental injuries, two automobile accidents, two investigations and one judicial violation.



## Notables

### Introducing new faculty members

The following are among the new faculty members at the University. Others will be introduced periodically in this space.

**Crickette Sanz**, Ph.D., joins the Department of Anthropology in Arts & Sciences as assistant professor. Sanz earned a doctorate from WUSTL, where she studied the behavioral ecology of chimpanzees in northern Republic of Congo. Since 2004, Sanz has been a research fellow at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. Her research interests include primate behavior and ecology, animal tool use, biological basis of human behavior, and great ape conservation. She is co-director of the Goulougo Triangle Ape Project; a research associate of the Wildlife Conservation Society's International Program in Republic of Congo; and an active member of the International Union for Conservation of Nature's Primate Specialist Group on Great Apes.

### Of note

**Nathan A. Baker**, Ph.D., associate professor of biochemistry and molecular biophysics, has received a five-month, \$70,000 grant from the National Institute of General Medical Sciences for research titled "APBS: Nanoscale Biomolecular Electrostatics Software." This grant is supported by the American Recovery and Reinvestment Act. ...

**Jonathan Breshears**, a student at the School of Medicine and a Doris Duke Clinical Research Fellow, attended the National Institutes of Health's Clinical Investigator Student Trainee Forum in Bethesda, Md., Nov. 4-6. Bimal Chaudhari, Lucas McDuffie, Shuddhadeb Ray and Michael Scaffani, all Doris Duke Clinical Research Fellows doing research at the School of Medicine, also attended. ...

**Robert Criss**, Ph.D., professor of earth and planetary sciences in Arts & Sciences, has received a two-year, \$35,000 subaward from the Missouri Botanical Garden for research titled "Missouri Botanical Garden Deer Creek Watershed

Initiative." ...

The Internal Medicine Interest Group at the School of Medicine honored three faculty who volunteered at the Community Health in Partnership Services, a free clinic on North Grand Avenue. The Nov. 7 event gave special recognition to **Jonathan Green**, M.D., associate professor of medicine and assistant professor of pathology and immunology. In addition, the group recognized **Sarah Keller**, M.D., assistant professor of obstetrics and gynecology, and **Nathaniel Murdock**, M.D., associate professor of clinical obstetrics and gynecology. The Internal Medicine Interest Group collaborates with the clinic's physicians to hold community health screenings at health fairs and churches throughout St. Louis, and its members shadow physicians at the clinic. ...

**Kathleen Hall**, Ph.D., professor of biochemistry and molecular biophysics, has received a 20-month, \$241,056 grant from the National Institute of General Medical Sciences for research titled "Assembly and Stability of Supramolecular PTB: Exon Complexes." This grant is supported by the American Recovery

and Reinvestment Act. ...

**Dong Qin**, Ph.D., research associate professor of energy, environmental and chemical engineering, has received a one-year, \$390,000 subaward from Cornell University for research titled "National Nanotechnology Infrastructure Network (NNIN)-CAP Equipment ONLY." This grant is supported by the American Recovery and Reinvestment Act. ...

**D.C. Rao**, Ph.D., professor of biostatistics, has received a two-year, \$303,463 grant from the National Institutes of Health's National Heart, Lung, and Blood Institute for research titled "Exploring a New Direction to Gene Discovery for Hypertension in the Large FBPP." This grant is supported by the American Recovery and Reinvestment Act. ...

**Erica Townsend**, residential college director for Lee/Beaumont Residential College, recently was presented with the New Professional Rising Star award from the Student Affairs Administrators in Higher Education, Region IV-West. ...

**Sandra G. Williams**, an M.D./Ph.D. student in biochemistry

and molecular biophysics, has received a two-year, \$54,634 National Research Service Award Predoctoral Fellowship Award to Promote Diversity in Health Related Research from the National Institute of General Medical Sciences for research titled "The Contribution of Protein Conformational Instability to RNA Binding." ...

**Younan Xia**, Ph.D., the James M. McKelvey Professor of Biomedical Engineering, has received a three-year, \$228,000 subaward from the University of Washington for research titled "Digital Luminescent Particle Image Barometry, Thermometry and Velocimetry."

### Speaking of

**Michael Sherraden**, Ph.D., the Benjamin E. Youngdahl Professor of Social Development, **Yunju Nam**, Ph.D., assistant professor of social work, and **Jin Huang**, graduate student in social work, spoke at the annual Association for Public Policy Analysis and Management research conference in November in Washington, D.C.

## Obituaries

### Warren M. Shapleigh, 89, Board of Trustees member since 1966

Warren M. Shapleigh, a member of the Board of Trustees since 1966 and former president of Ralston Purina, died Nov. 1, 2009, at McKnight Place Extended Care in Ladue, Mo. He was 89.

Shapleigh was elected to the board in 1966 and served for 14 years before becoming emeritus in 1980. While on the board, Shapleigh was a member of nine committees, including development, real estate, honorary degree and undergraduate experience.

"Warren Shapleigh was a remarkable citizen of St. Louis and an important member of the Washington University family," Chancellor Mark S. Wrighton said. "Our University is stronger today because of his leadership and thoughtful contributions. He will be deeply missed."

Except for a six-week interval from

1945-46, there has been a member of the Shapleigh family on Washington University's Board of Trustees since 1895. Shapleigh's grandfather — Alfred L. Shapleigh — and father — A. Wessel



Shapleigh

Shapleigh — served on the board from 1895-1945 and 1946-1972, respectively.

Warren Shapleigh's involvement at the University extended beyond the board. In 1987, he joined the School of Architecture's National Council and served as its chair from 1988-1998. Shapleigh received the Dean's Medal from the School of Architecture in 1996.

Shapleigh also helped spearhead the fund-raising initiative for what would become the Sam Fox School of Design & Visual Arts, serving in early 2000 as a leadership chair for the School of Architecture in the Campaign for Washington University.

Shapleigh was born in St. Louis and attended St. Louis Country Day School. He earned a bachelor of arts in economics from Yale University in 1938 and served in the Navy from 1942-46. After World War II, he joined his family's business, Shapleigh Hardware, where he became vice president of buying and merchandising.

He joined Ralston Purina in 1961 as manager of diversified planning and quickly ascended within the company, becoming vice president of the consumer products division, executive vice president of Ralston

Purina and president of the Consumer Products Group.

He was named director of Ralston Purina in 1966 and served as president from 1972-78.

Shapleigh was a member of the board of directors of the Missouri Botanical Garden for nearly 60 years and also served on the boards of St. Luke's Hospital and the Brookings Institution in Washington, D.C. He was president of the Spencer T. and Ann W. Olin Foundation from 1989-2006.

Shapleigh is survived by his wife, Jane Shapleigh; daughters Jane Shapleigh Mackey of Ladue and Christine Shapleigh Schmid, M.D., of Boston; son-in-law, Paul A. Schmid III of Boston; five grandchildren and two great-grandchildren.

A memorial service was Nov. 5 at Saint Peter's Episcopal Church in Ladue.

### Hazelton, medievalist and Chaucerian scholar, 91

Richard M. Hazelton, Ph.D., professor emeritus of English in Arts & Sciences, died Nov. 13, 2009, of pneumonia at Missouri Baptist Hospital in St. Louis. He was 91.

A commissioned officer in the U.S. Army Air Corps and U.S. Air Force from 1943-49, he served in World War II as a bombardier and was a prisoner of war in Germany.

After returning home, Hazelton, a native of Camden, N.J., went to college under the G.I. Bill. He earned a bachelor of arts in English at the University of California, Los Angeles, in 1951 and a master of arts in English from the University of California, Berkeley, in 1952. He earned a doctorate in English from Rutgers University in 1956.

He joined the WUSTL Department of English in 1958 as an assistant professor after teaching at Ohio State University. He was promoted to associate professor in 1961 and to professor in 1964 and was named emeritus in 1984.

A medievalist and Chaucerian scholar, he received a Guggenheim Fellowship in 1964 to conduct research in Oxford, England, and in Florence, Italy. Hazelton also taught for a year at Waseda University in Tokyo, where he developed a passion for Asian art and culture.

Hazelton was beloved by his students for his commitment to learning and for his continued intellectual growth. He frequently offered new courses, developing an interest in, among other things, Native American oratory and writing and Latin American writers such as Gabriel Garcia

Marquez.

Hazelton also was active in civil rights, antiwar and other political movements in the 1960s and 1970s.

In 1974, St. Louis Post-Dispatch columnist Jake McCarthy wrote about Hazelton helping set up the Metro Bail Fund to raise bond for the indigent.

McCarthy described Hazelton as a "lover of music and poetry and a mild man, inconspicuous in a crowd. But he hurts inside over injustice, and he works unobtrusively in the community — also endlessly — to secure his belief that men existing together ought to be humane to one another."

Hazelton, treasurer of the Metro Bail Fund, explained the need for such a fund: "Here are people being held in jail before they've been found guilty of something, just because they are poor. The rich can get bailed out the same day, but who's going to do something to get the poor out of jail on bond? Why doesn't society do something about this problem?"

After retiring from WUSTL, Hazelton traveled extensively in Mexico and Spain. He is survived by three daughters, Nina Hazelton of Jefferson City, Mo., Jill Hazelton of Waltham, Mass., and Suzy Gorman of St. Louis; a son, John Gorman of Falls Church, Va.; and four grandchildren. A son, Rick Hazelton, and a daughter, Meiling Hazelton, preceded him in death.

Memorial contributions may be made to the North Shore Animal League, 25 Davis Ave., Fort Washington, NY 11050, or NSALAmerica.org.

### Nussbaum, mathematics professor emeritus, 84

Edward Nussbaum, Ph.D., professor emeritus of mathematics in Arts & Sciences, died Oct. 31, 2009, of congestive heart failure at Barnes-Jewish Hospital. He was 84.

Nussbaum taught at the University for 37 years, retiring in 1995.

Edward N. Wilson remembers sitting in on Nussbaum's class in 1967 when Wilson was a new graduate student. "I thought his lectures were a model of clarity and precision," said Wilson, Ph.D., professor emeritus of mathematics.

Nussbaum's mathematic expertise was unbounded operators on Hilbert spaces and related topics. Hilbert spaces are a generalization of familiar two- and three-dimensional spaces to n-dimensional spaces and then on to infinite dimensional vector spaces.

The vectors can be sophisticated entities, such as functions and differential or integral operators. Hilbert spaces arise naturally in mathematics, physics and engineering and are indispensable tools in quantum mechanics, signal processing and a host of other topics.

Nussbaum was introduced to this area of study by the famous mathematician John von Neumann, who coined the term Hilbert space. Nussbaum worked with von Neumann on an electronic computer project at the Institute of Advanced Study in Princeton while Nussbaum was finishing a doctorate at Columbia University in New York.

He earned a master's degree in mathematics in 1950 and a doctorate in 1957,

both from Columbia.

He was a Holocaust survivor who escaped Nazi Germany and, after many harrowing experiences, made his way to New York in 1947.

Nussbaum's father, Karl, his mother, Franziska, and his brother, Erwin, all died in the Auschwitz concentration camp in Poland.

Nussbaum and his sister, Liselotte, escaped to Belgium on a Kindertransport train in 1939, when he was 14, but Belgium then was overrun by the Nazis and he was forced to flee again, first to Vichy France and then, on foot, to Switzerland.

"Ed never spoke about his ordeal or the fate of his family," said David Wright, Ph.D., chair and professor of mathematics. "He didn't seem haunted; he was always smiling, very friendly."

"He was a kind, gentle and compassionate man," said Guido Weiss, Ph.D., the Elinor Anheuser Professor of Mathematics in Arts & Sciences.

Nussbaum is survived by Anne, his wife of 52 years, a daughter, Franziska Suzanne Nussbaum of St. Louis, and a son, Karl Erich Nussbaum of New York City.

The family asks that memorial contributions be made to a charity of the donor's choice.



## Washington People

BY GERRY EVERDING

Itai Sened, a scholar of the origins of property rights and the workings of multiparty legislative systems, has spent his career pursuing a new understanding of the role cultural, social and political institutions play in shaping human behavior.

As director of the Center for New Institutional Social Sciences (CNISS) at Washington University, Sened is charged with carrying on the legacy of Douglass C. North, Ph.D., the Spencer T. Olin Professor in Arts & Sciences and co-recipient of the 1993 Nobel Memorial Prize in Economic Sciences.

"It's no longer that new, but it is a different approach for understanding the social sciences, one that emphasizes the role of institutions in shaping your social and personal life," says Sened, Ph.D., professor of political science in Arts & Sciences and faculty member at WUSTL since 1996.

North won the Nobel in part for his work on the role that institutions play in shaping the economic well being of nations — what makes some countries rich and others poor. It was research along these lines by North and his colleagues at WUSTL that first



Itai Sened, Ph.D. (right), director of the Center for New Institutional Social Sciences (CNISS), participates in a workshop with CNISS fellows Marsela Dauti (left), a doctoral student in the George Warren Brown School of Social Work, and Renee Kramer, an undergraduate political science major in Arts & Sciences and a Hirsch Family Fellow at CNISS. "Itai has a nurturing, very paternal relationship with his students," says Gary Miller, Ph.D., professor of political science. "Not just during their years here but also for their entire careers."

## 'Carrying on the mission'

Sened helps students master new institutional social sciences

attracted Sened to WUSTL following his doctoral degree in political science from the University of Rochester in 1990.

"I was incredibly lucky at Rochester because I ended up being the last student of William H. Riker, who was, by anyone's account, one of the top five political scientists of the 20th century," Sened says. "I got my Ph.D. out of Rochester, and then Riker literally handed me over to Doug North. I did my postdoc here because of North's interest in institutions."

### Intro to U.S. academia

While mentors such as Riker and North may be responsible for Sened's interest in institutions, his obsession with social issues can be traced to his own family's personal experiences with violence and injustice.

His father, Alexander Sened, fled Poland in 1935 as anti-Jewish sentiment mounted, settling in what would later become Israel. He returned to Europe after the war to organize the immigration of Jewish refugees and, in the process, met his future wife, Yonat. She and her parents miraculously had escaped Poland's infamous Nazi-controlled Warsaw Ghetto.

When Israel's war of independence broke out, the couple went to Israel illegally, settling in the remote, hilly desert community of Kibbutz Revivim, an area largely

populated by nomadic Arab Bedouins. Poor and self-educated, his father joined the Labor youth movement. He later became head of the youth movement and then the editor of Israel's leading publishing house, Hakibbutz Ham-euchad. His mother went on to lecture in Hebrew literature at Ben-Gurion University.

Together, Alexander and Yonat Sened authored more than 10 novels, many dealing with the experiences of Holocaust survivors and other Jewish refugees struggling to make a new life in Israel.

"My parents were relatively well-known writers, and they wrote together as a couple, which is somewhat unusual, so they both got invited to spend a year at the University of Iowa writers program," Sened says.

"I was 15 going on 16 at the time, so I got a pretty wonderful exposure to American academia," he says. "Coming from the desert and this background of terrible social injustice, Iowa City, Iowa, was an amazing environment for me; it seemed like a light at the end of a tunnel."

### Wanting justice done

Sened envisioned a career in academia, but getting there would be a challenge.

"I never had any doubts, but the problem was that I was born in a kibbutz, so I didn't have any money," he says. "I was literally penniless when I finished my military service at age 21."

Sened eventually settled in

Paris, where he took a job as a delivery boy for a company selling luxury goods to tourists. Over the next five years, he worked his way up to head of the company, all the while stashing money for an eventual return to school to earn an undergraduate degree in philosophy and political science at Tel Aviv University.

While in Paris, he became closely acquainted with Bernard Henri-Levy, a French intellectual, philosopher and journalist who became the driving force behind a rising group of young intellectuals now

known as the New Philosophers.

"Because of my upbringing and because of my interest in social justice, I was actually more inclined to pursue a career in philosophy," Sened says. "I eventually found philosophy to be too academic and arcane. I wanted justice to be seen and done. It was not enough to simply discuss it."

This drive to get involved in something tangible led Sened to leave WUSTL while doing post-doctoral research and return to Israel in 1991 to work in the re-election campaign of Prime Minister Yitzhak Rabin.

After Rabin's election, he continued to work as a strategic consultant to the administration during the era of the Oslo agreement, including planning for the so-called security wall separating Israeli- and Palestinian-held territories in the West Bank.

In parallel, Sened was pursuing his academic career at Tel Aviv University.

"After the assassination of Rabin on Nov. 4, 1995, my friends at Washington University invited me to come back here," Sened says. "I was working full-time here in January 1996, so the whole transition took little more than five or six weeks."

He has called St. Louis home ever since. His wife, Sarit Smila, Ph.D., recently earned a doctorate in philosophy at Washington University and teaches both at WUSTL and at nearby Webster University. He is the father of five children.

### 'We mark them for life'

Sened continues to credit much of his academic success to the incredible opportunities he has had to work closely with world-class mentors.

As CNISS director, he makes it his mission to seek similar opportunities for his students, often arranging for them to work side-by-side with the very best faculty in their respective fields.

Under Sened's direction, CNISS has launched several "natural sciences-type" learning laboratories, which bring together faculty and students from across campus for cross-disciplinary research challenges. Teams typically consist of five or six senior faculty, four or five doctoral students and several undergraduates.

One project exploring the economic impact of the middle class involves several faculty and students from the George Warren Brown School of Social Work along with others from political

science and economics in Arts & Sciences. Another examining non-price barriers to the development of alternative energy technologies draws faculty from political science, economics and earth and planetary sciences in Arts & Sciences and from the Department of Energy, Environmental & Chemical Engineering in the School of Engineering & Applied Science.

"What warms my heart, what makes my day," Sened says, "is sitting in a meeting on the renewable energy project and seeing our students, including two undergraduates from China, discussing these issues with first-class scholars in the field. To me, that's the height of what we're supposed to do and what is so wonderful in what we do."

This year, two CNISS undergraduates, Charis Fischer and Adrian Torres, were two of only four students in political science to graduate with the highest honors, and both were recognized with special awards for their research.

"Our students tell us repeatedly that this is a life-changing experience for them," Sened says. "Probably the most important thing we do is give them firsthand experience with what it takes to do cutting-edge research in the social sciences."

While Sened is known for being a tireless, prolific researcher, his work with students is his passion, says Gary Miller, Ph.D., professor of political science.

"Itai has a nurturing, very paternal relationship with his students," Miller says. "Not just during their years here but also for their entire careers. He brings his students back to campus for visits, and it's clearly a joy for him to see them."

Sened just returned from Bloomington, Ind., where he spent Thanksgiving with a former student completing a doctorate under Elinor Ostrom, Ph.D., the most recent recipient of the Nobel Memorial Prize in Economic Sciences.

"What they end up doing, which is fantastic, is carrying on the mission that got handed over to us from William H. Riker and Douglass C. North," Sened says.

"They're all interested in the way that institutions affect social outcomes, economic prosperity and social and political stability and welfare, and, in one way or another, they'll all be involved in this for the rest of their lives," he says. "So, in this respect, we mark them for life."

### Itai Sened

**Born:** Kibbutz Revivim, Negev, Israel

**Degrees in:** B.A., political science and philosophy, 1985, Tel Aviv University, Tel Aviv, Israel; M.A., Ph.D., political science, 1986-1990, University of Rochester

**Dissertation:** "A Political Theory of Rights"

**Hobbies:** Swimming, windsurfing and family vacations to Italy, Latin America and islands of the Caribbean



The Sened family on a vacation to Toscana, Italy: Itai Sened (left) corrals his five-year-old son Yoav while enjoying a hug from daughter Hagar, 18. Oldest son Haran (center), 24, looks on as son Yanai, 20, holds the youngest daughter, Maya, 2. His wife, Sarit Smila (right), a recent WUSTL doctoral graduate in philosophy, is an adjunct instructor at WUSTL.