Energy, Environment and Education Are Focus of WUSTL Trip to India

Washington University and its academic and corporate partners worldwide are putting research into action and leading a major initiative to address global energy and environmental solutions.

The WUSTL-led McDonnell Academy Global Energy and Environmental Partnership (MAGEEP) — a consortium of 28 international universities — convened in Mumbai for the Fourth International Symposium on Energy and Environment: ACCESS (Abundant Clean Cost-effective Energy Systems for Sustainability), Dec. 6–12, 2012. The symposium was co-hosted by Washington University, the Indian Institute of Technology Bombay (IIT Bombay), and Tata Institute of Social Sciences, Bombay (TISS).

“Every day billions of people are burning biomass to stay warm and prepare food,” says Chancellor Mark S. Wrighton. “For these people, energy access is the dividing line between the have and the have-nots. Our goal with this symposium was to bring university leaders, researchers, students and corporate partners together to discuss how to improve energy access in developing nations, while addressing the environmental and societal effects.”

The symposium brought together leaders in the field not only to think of creative solutions to the world’s energy needs, but also to challenge these leaders to think differently about how these problems are solved. In addition, the symposium challenged students to keep working collaboratively to solve these issues into the next generation.

“We know that by working together, we can address what are some of the most critical challenges facing our planet: adequate access to clean water, air and energy,” says Pratim Biswas, PhD, chair of the Department of Energy, Environmental & Chemical Engineering and the Lucy and Stanley Lopata Professor. “We believe we have an opportunity and responsibility to the people of the world to work toward meeting these challenges,” he says.

Presidents and directors of five MAGEEP universities — along with other faculty, students, and academic and corporate leaders numbering more than 200 — joined Wrighton, Devang Khakhar (director, IIT Bombay) and S. Parasuraman (director, TISS) on the opening panel. Several dignitaries from India’s government attended the opening session, along with Sujeesh Krishnan, special adviser of the United Nations initiative Sustainable Energy for All.

“It was a personal pleasure to see so many talented people from all parts of the world interacting socially and substantively exploring new approaches to solving the world’s energy and environmental problems,” Wrighton says.

Notable events of the symposium included:

• the launch of SERIUS (Solar Energy Research Institute for India and U.S.), a $125 million effort funded by the
East–West collaboration aims to develop best practices for native Chinese speakers learning English.

China is known to have the largest number of English-language learners in the world, with estimates as high as 300 million people learning to speak, write and read English. A linguist at Washington University has been collaborating with scholars from China to study the means by which native Chinese speakers learn English.

The exchange began in 2008 when Cindy Brantmeier, PhD, associate professor of applied linguistics and Spanish in Arts & Sciences, was asked to go to Northeast Normal University (NENU) to share her expertise on second-language acquisition, especially in reading.

Brantmeier, who was not able to go to China that year, instead offered to host one scholar each year from NENU, where leaders were seeking a more data-driven approach to language-learning research.

Since then, she has hosted three different visiting scholars who have been actively working together with experiments on language learning in China.

Brantmeier, recently honored as Washington University’s recipient of the 2012 Emerson Excellence in Teaching Award, says English is viewed in China as necessary for the advancement of science and technology.

“There is a great demand for English across all ages right now,” Brantmeier says.

Instructors in the United States and China teach second languages very differently, according to Brantmeier. Chinese instructors rely on repetition and memorization, whereas the American instructors, she says, favor a “low-risk environment with little reliance on habit formation or error-free production” in which students focus on meaning.

“We’re not saying this methodology will work in China,” Brantmeier says. “We’re trying to get at the best methodology and techniques for native Chinese learners to learn English.”

Yanming “Nancy” Gao, vice dean of the School of Overseas Education at NENU, returned to China in January after spending the past year at Washington University working with Brantmeier on these techniques.

This partnership highlights why global engagement is a priority at Washington University, says Richard J. Smith, PhD, dean of the Graduate School of Arts & Sciences and the Ralph E. Morrow Distinguished University Professor.

“Working with international researchers with new points of view benefits not only research; cross-cultural exchanges enhance the institutions and communities involved, as well,” says Smith, who helped spark the exchange by putting scholars at NENU in touch with Brantmeier.

“All the things that can come with a collaboration seem to have grown out of this,” Smith says. “It’s terrific.”

WUSTL Conference in India, cont’d from page 1

governments of India and the United States and matching funds from industry;
• launch of the MAGEEP Educational Network partnership, in which leaders from academia, government and industry will develop innovative collaborative energy and environmental educational programs;
• creation of a network, Global CONCERN, to address carbon dioxide mitigation and clean coal technologies involving India, the United States, China and Australia; and
• student programs and video competitions on campus clean energy programs.

Another key transdisciplinary project is related to biomass use in rural areas. More than 3 billion people worldwide rely on biomass combustion for their cooking needs. Gautam Yadama, PhD, associate professor of social work at WUSTL’s Brown School; Mario Castro, MD, WUSTL professor of medicine and of pediatrics who specializes in treating pulmonary diseases; and Biswas launched a National Institutes of Health funded study to evaluate the use of clean-burning stoves in a field study in Rajasthan, India.

Using novel, state-of-the-art aerosol instruments deployed in the field for the first time, coupled with respiratory health measurements and systems dynamics approaches, they will determine approaches that promote the use of cleaner biomass-combusting stoves.

Yadama is getting the word out in other creative ways as well. He and photographer Mark Katzman traveled throughout India in the summer of 2012, later documenting the plight of the rural poor in Portraits of the Energy Impoverished: Fires, Fuel, and the Fate of 3 Billion. The collection of essays and photographs tell an eye-opening, insightful story about energy access in the rural villages of India, where the hunt for safe, affordable energy is often a matter of life and death. Yadama introduced his book at the symposium and moderated a panel discussion on a global overview of rural energy issues.

After the symposium, WUSTL held a meeting of its International Advisory Council for Asia (IACA) Dec. 12–15 in New Delhi. The IACA assists university leaders in expanding the university’s global presence. More than 20 alumni, parents and friends — including prominent educators and business leaders throughout Asia — joined university leadership at the meeting.

A representative from the U.S. Embassy in India made a presentation on India’s recent economic growth, and panel discussions with key faculty members, deans and the directors of the partner universities outlined the plans for WUSTL–India collaborative activities such as a new joint EMBA program with ITT Mumbai.
For Gregg Li, AB ’80, all roads lead to Asia. At the same time, the global business angel investor, consultant and professor maintains a well-worn path back to Washington University.

Li has built his career through a process of continual learning and teaching, taking a keen interest in the world around him and then applying his knowledge to help others.

Rised in Hong Kong, Hawaii and St. Louis, Li chose Washington University because of its architecture program, but switched to economics, Asian studies and international studies. “The university gave me an unparalleled opening of possibilities and mindset,” he says. “And my classmates from Saudi Arabia, New York, Malaysia and Chicago are still my friends today.”

After graduation, Li returned to Hawaii and earned a master’s degree in economics and Asian studies. In 1992, he took a position as an information systems analyst with the U.S. federal government in Washington, D.C. “Four years with the U.S. government provided excellent exposure to power, politics and modern-day bureaucracy,” he says.

Looking to work next in the private sector, Li completed an MBA in 1987 at the University of California, Los Angeles. From there, he worked in internal consulting for American Express TRS in East Asia. By 1992 he was at Coopers and Lybrand in Hong Kong, working as a principal consultant on organizational transformation and corporate governance.

In 1994, Li founded his own consulting firm, G. Li & Co. For the next 12 years, the firm provided research, design and development of corporate governance architecture for small businesses, nongovernmental organizations, banks and universities.

During that same time, Li also took on the role of general manager and chief executive of the PKKI Institute, a leadership and management think tank of the University of Hong Kong.

“While I was running the PKKI Institute, I felt obligated to seek a doctorate degree,” he says. From 1999 to 2004, he worked on an engineering doctorate at the University of Warwick in the United Kingdom.

“Earning that degree opened up the world of academic teaching to me,” he says.

From 2006 to 2011, Li served as Asia Pacific regional director of corporate governance and enterprise risk management for the Aon Corporation, the world’s largest insurance brokerage and risk consultancy. He advised the company and its clients on matters relating to corporate governance, strategy, innovation and leadership development.

Over the past decade, Li has also focused on teaching. He is an honorary and adjunct professor at five universities in the United States and Asia. Li serves on Washington University’s International Advisory Council for Asia and taught a cross-cultural management course for Washington University’s Olin Executive MBA Program at Fudan University in Shanghai.

Li’s consulting work continues as well. Currently, he’s nurturing five businesses as an angel investor, special adviser or teacher.

“The best part of my job is making a critical difference at the highest level, at the right time,” Li says. “I work with extremely talented, successful founders and leaders, performing surgery on their organizations by redesigning their boards or providing a new perspective. Seeing them become stronger and better is a blessing.”
News Briefs

Sold-Out Lunar New Year Festival Benefits Chinese and Local Children

More than 150 students performed in the annual Lunar New Year Festival (LNYF) at the Edison Theatre in February, making it one of the largest cultural shows on campus.

This year’s show, “Across the Water,” named for the Year of the Water Snake, explores the meaning of reaching across one’s own “water”: the boundaries and limitations that restrict people from venturing outside of their comfort zone. The event — including student presentations such as the Korean fan dance, Chinese yo-yo and modern hip-hop — attracted a full house to its two evening performances.

The week prior to the show, the organization held LNYF Week, which included a fireworks exhibition co-sponsored by the Asian Multicultural Council, cultural cuisine, a traditional tea and a feast. All show proceeds benefit the Half the Sky organization, and will go toward covering surgeries for orphans, including reconstructing unilateral cleft lips and palates. Additionally, LNYF works with Families with Children from China to mentor adopted Chinese children in the St. Louis area. (See Glimpses photograph, pg. 5.)

WUSTL, Singapore Management University Team Up for Finance Master’s Degree

To meet the needs of today’s global economy, professionals in the field of finance require specialized skills and expertise that go beyond the boundaries of traditional graduate education.

The new Global Master of Finance dual degree program offered by Washington University’s Olin Business School and Lee Kong Chian School of Business at Singapore Management University (SMU) is designed to prepare students for success in a wide variety of finance-related careers worldwide.

Graduates of the program earn a master of science in finance degree from Olin and a master of science in applied finance degree from SMU. The 14-month curriculum is divided into four terms, with half of the courses held on the St. Louis campus and the other half taught in Singapore on the SMU campus.

“Olin Business School has joined forces with Singapore Management University to educate a new generation of risk managers, research analysts and investment decision makers,” says Mahendra Gupta, PhD, Olin’s dean and Geraldine J. and Robert L. Virgil Professor of Accounting and Management.

WUSTL Joins Chinese Universities to Promote Asset Building

Leadership and policy-focus changes in China have created an opportune time for Washington University to explore asset building with Chinese scholars.

Xi Jinping’s confirmation as China’s new head of state this past March signals the potential for a more progressive government. His ascension coincides with an increase in asset-based policies in response to rising inequality and aging populations.

Anticipating these developments, the Brown School’s Center for Social Development (CSD) joined Peking University, Hong Kong Polytechnic University, National University of Singapore and others to convene the conference “Lifelong Asset Building: Strategies and Innovations in Asia” in November 2012. Some 100 participants from China and around the world traveled to Peking University’s Beijing campus to brainstorm topics including home ownership and asset-building innovations.

Several countries in Asia have created innovative policies and programs that build assets for family and community development, according to Michael Sherraden, PhD, director of the CSD and the Benjamin E. Youngdahl Professor of Social Development at the Brown School.

“All of this experience can inform innovations in the United States and elsewhere,” Sherraden says. “It is possible that inclusive and progressive asset-based policies may play a larger role in many countries in the years ahead.”

Elaborating, James Wertsch, PhD, vice chancellor for international affairs and the Marshall S. Snow Professor in Arts & Sciences, notes: “With aging populations in many countries, building assets over the life course will be fundamental for both economic development and security in old age.”

Engineering’s Shen receives CAREER Award from NSF

Jung-Tsun Shen, PhD, assistant professor of electrical and systems engineering in the School of Engineering & Applied Science, has won a prestigious Faculty Early Career Development Award (CAREER) from the National Science Foundation.

The awards support junior faculty who model the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations. Nineteen Washington University faculty have received CAREER awards.

Shen, the Das Family Distinguished Career Development Assistant Professor, received a five-year, $400,000 grant to study the mechanisms for enhancing optical nonlinearity in subwavelength metallic nanostructures. The nanostructures Shen studies are a type of artificially engineered material called metamaterial.

Metamaterials are a new class of man-made structures that exhibit exceptional optical properties that are not easily observed in nature. Results of the research will benefit optical science and have implications for ultracompact optoelectronics, ultra-fast communications and high-resolution optical imaging.
Glimpses

Tiffany Yao (left) and Becky Chen, from the St. Louis Modern Chinese School, watch as Washington University students, faculty, family and friends celebrate the Lunar New Year. More than 150 WUSTL students performed at the annual festival, raising money for Half the Sky and Families with Children from China (see story, pg. 4).
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The Alumni and Parents Admission Program (APAP) involves alumni and parents of undergraduates in recruiting, selecting and enrolling students at Washington University. APAP members interview applicants, staff college fairs and host receptions for admitted students. For information, contact:

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Alumni, parents and friends of the university often help identify students who would benefit from a Washington University education. Refer names and addresses of talented prospective students to:

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