



TEXAS TECH UNIVERSITY

# Wind Science and Engineering Research Center

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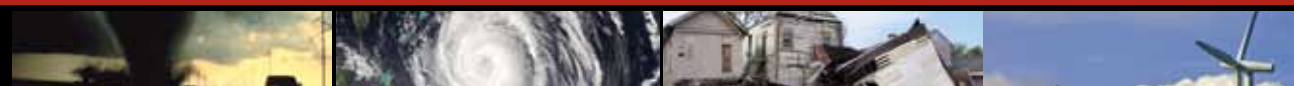
*WISE receives wide media coverage*

# WindWISE Everything *wind.*



(L-R) - Kent Hance, Texas Tech University System chancellor; Kelly Overley, vice-chancellor of institutional advancement; Ed Whitacre, campaign co-chair, and Jerry Rawls, campaign co-chair. (Photo credit: Artie Limmer)

SUMMER 2010 *WindWISE* The newsletter of Wind Science and Engineering Research Center. Edited by Liz Inskip-Paulk and designed by Copy Craft Printers



## WALL STREET JOURNAL

### WISE receives wide media coverage

WISE has been in the news lately. The WISE Debris Impact Testing facility was listed in the August edition of Popular Science (circ: 1.3 mill) as one of "30 Awesome College Labs". Additionally, Dr. Ernst Kiesling, professor and executive director of the National Storm Shelter Association, was featured in an article on storm shelters in the Wall Street Journal (circ: 1.6 mill). Congratulations!



(Right) Dr. Ernst Kiesling, professor and executive director of the National Storm Shelter Association, was featured in an article in the Wall Street Journal.



### McDonald-Mehta Lecture Series begins its 2010-2011 program

The McDonald-Mehta Lecture Series 2010-11 started off with a lecture by Dr. Yukio Tamura, professor at Tokyo Polytechnic University (TPU), and director of TPU Global Centers of Excellence Program. His talk was titled "Monitoring Techniques in Wind Engineering."

Save the Dates:  
McDonald-Mehta Lecture Series  
2010-2011

- February 2, 2011:  
Dr. Greg Kopp (University of Western Ontario)
- March 2, 2011:  
Dr. Jamie Kruse (NOAA)
- April 6, 2011:  
Dr. Mark Powell (NOAA)
- April 27, 2011:  
Dr. Timothy Reinhold (Inst. Business and Home Safety)

## Vision and Tradition: The Campaign for Texas Tech

Earlier in September, Texas Tech University kicked off a \$1 billion fundraising campaign geared to ensuring the future of the system's three universities. The campaign is co-chaired by Ed Whitacre, chairman of the board for General Motors Co., and Jerry Rawls, chairman of Financial Corp.

The campaign's "silent" phase kicked off in 2005, and more than \$600 million has been raised so far to benefit each university: TTU, TTU Health Sciences Center, and Angelo State University in San Angelo. The funds are earmarked for student scholarships, faculty endowments and facilities to ensure continued growth for each university.

Since 2007 when Kent Hance became the Chancellor, the system has reported more than \$100 million in funds raised every year, and wise stewardship of the funds has enabled endowment growth. In 1996, when Texas Tech

became a system, its endowment stood at \$60 million. In 2009, the last year for which numbers are available, the endowment totaled \$679 million – a healthy growth rate.

"TTU is making a strong push in fundraising activities," added Dr. John Schroeder, associate professor in Atmospheric Sciences and director of the Wind Science and Engineering Research Center (WISE). "And WISE is following suite. We are diligently pursuing private funding sources to help support the country's only Ph.D. program in Wind Science and Engineering, which is found right here at TTU."

For more information concerning the fundraising campaign, please go to the website: [www.visionandtradition.com](http://www.visionandtradition.com).

For more information concerning contributing to WISE, please contact Carol Ann Stanley at (806) 742-3476.



## Congressman Visits WISE Research Facilities

Congressman John Carter (R, TX-31) recently visited Lubbock for a tour of the WISE research facilities at Reese Technology Center. The Congressman, a TTU alumnus, had returned to Lubbock for the Tech-Oklahoma State football game, and was interested in learning more about wind energy and wind engineering, particularly the research that WISE was investigating.

The tour, led by Dr. John Schroeder, included tours of the 200 m data acquisition tower, the new Alstom wind energy project, the West Texas Mesonet project and numerous other WISE facilities. Also accompanying him on the tour was Dr. Taylor Eighmy, Vice-President for Research at TTU.



Congressman John Carter reviews the wind research being completed at the Reese Technology Center in Lubbock.

## WISE Awarded Federal grants for further wind energy development

Texas Tech University is included in \$5.2 million awarded by the Department of Energy to advance two areas of wind power research. The first project, titled “Short Term Wind Forecasting,” will focus on accelerating the use of wind power in electricity transmission networks by allowing utilities and grid operators to more accurately forecast where and when electricity will be generated from wind power. John Schroeder and Brian Ancell, co-investigators, were awarded approximately \$481,000. Partners in this project include AWS Truepower, LLC, North Carolina State University, the University of Oklahoma, the National Renewable Energy Laboratory (NREL), MESO, Inc., and ICF International.

The second project is focused on the development of midsize wind turbines and the adaptation of a wind turbine featuring two blades located downwind of the tower. This turbine design builds upon a commercially-produced architecture and scales it up to a 500 kilowatt rated output. The tilt-down tower (braced by guy wires and hinged near its base) allows installation without using cranes and will work to compete with fossil fuel power. The principal investigator is Stephen Ekwaro-Osire, associate professor in Mechanical Engineering at TTU.

“WISE faculty continue to competitively win awards.” said Dr. John Schroeder, Director of WISE. “These successes once again underscore the multidisciplinary faculty teams which can be assembled at WISE to uniquely contribute to solving wind energy related research problems.”



## Founding Fathers Attend M-M Lecture Series Kick-Off

(L-R): Drs. Jim McDonald and Kishor Mehta attend the first of the presentations in their namesake lecture series. The series is funded with endowment of Dr. Mehta and Dr. McDonald (both founding faculty of WISE) – and invites nationally known and world-renowned scientists and experts in wind-related industries to campus to share their knowledge. (See front page for calendar dates.)

## Liang receives NSF grant to study communities and hurricanes

Daan Liang, Ph.D., assistant professor in construction engineering and faculty associate of WISE, was awarded \$280,000 from the National Science Foundation to study the economic resilience of communities after hurricanes have hit.

The study is titled “*Development of a Quantitative Model for Measuring Regional Economic Resilience to Hurricanes*,” and along with Liang, Co-PIs include Dr. Bradley Ewing in the TTU Rawls College of Business, and Dr. Kishor Mehta, Horn Professor in Civil Engineering and one of the founders of WISE.

Liang describes his research: “We will focus on investigating the long-term impact of hurricane damages on communities. Specifically, we will examine key factors affecting the speed and magnitude of disaster recovery with respect to local economy and the built environment. The result of this work could be used to facilitate policy changes for making coastal communities more resilient in facing future disasters.”

Congratulations to all involved!



Dr. Daan Liang, assistant professor in construction engineering and faculty associate of WISE, received an NSF grant recently.

## Perry Announces \$8.4 million award to create Renewable Energy Institute

Over the summer, it was announced that TTU’s WISE (along with the National Institute for Renewable Energy [NIRE]) will receive \$8.4 million from the Texas Emerging Technology Fund (TETF). Governor Rick Perry visited Lubbock and TTU to make the announcement that Texas Tech and its wind research organizations will receive \$6.4 million of the total award. The remaining \$2 million will be used to support plans to design, construct and operate research wind farms, and then sell the power generated in the commercial marketplace to fund the National Wind Resource Center, a non-profit organization founded by TTU.

“Texas is home to some of our brightest minds in the energy business, both in the private sector and at our world-class universities, like Texas Tech,” Gov. Perry said at the news conference. “This TETF investment will ensure that Texas can continue to add wind capacity and prepare to connect wind farms to the grid and our major cities, helping address the growing energy needs of a population that is expanding by about 1,000 people per day.”

The partnering NIRE will also provide services to industry partners and offer an industry consortium, which will be managed by The Wind Alliance, a collection of industrial, academic and public sector entities that collaboratively focus on developing a trained workforce, infrastructure and technology focused on the future of the wind industry ([www.thewindalliance.org](http://www.thewindalliance.org)).

“It is a great day to be at Texas Tech University,” said Dr. John Schroeder, Director of WISE. “We’ve been conducting wind related research for 40 years, and the future is brighter than ever.”



According to its website, the Texas Emerging Technology Fund is a \$200 million initiative created by the Texas Legislature in 2005 to provide the state with an unparalleled advantage in the research, development and commercialization of emerging technologies. According to the website, the TETF has allocated more than \$154 million in funds to 111 early stage companies, and \$161 million in grant matching and research superiority funds to Texas universities.



(Above) - Governor Perry announces the ETF funding at Texas Tech University last summer.