Letter from the Interim Director

This month, we had two important visits:

On Nov. 3, NWI organized its third External Advisory Board (EAB) meeting at TTU’s Innovation Hub. The annual meeting started with the State of the Institute address, followed by a review on the university’s research agenda by Dr. Guy Loneragan, Interim Vice President for Research. Drs. Andy Swift and Kishor Mehta briefed the EAB on current progress in the BS in Wind Energy program and the Ph.D. in Wind Science and Engineering program.

Three NWI faculty affiliates – Dr. Stephen Bayne of ECE, Dr. Beibei Ren of ME, and Dr. Chris Weiss of Geosciences – had the opportunity to present their latest projects to the board, and during the afternoon, Dr. W. Brent Lindquist, Dean of the College of Arts & Sciences, Dr. Nurcan Bac, Senior Associate Academic Dean of the Edward E. Whitacre College of Engineering, and Dr. Lawrence Schovanec, TTU President, all took time from their busy schedules and made individual remarks. Dr. Brandon Weeks, Associate Dean of Research and Graduate Programs of Edward E. Whitacre College of Engineering also attended the meeting.

After the breakout sessions, the board members reconvened and drafted a summary report on NWI’s strengths, weaknesses, and recommendations for improvement. This independent assessment has proven extremely valuable in allowing NWI leadership to address deficiencies and set the right course for future success.

A week later, we hosted a group of executives from Sandia National Laboratories including Marianne Walck (Vice President of the Energy and Climate Program Management Unit), Carol Adkins (Director, Energy Technologies and System Solutions Center), Amy Halloran (Senior Manager in the Renewable Energy Technologies Group), David Minster (Manager, Wind Energy Technologies Department), and Jon White (Principal Member of the Technical Staff, Wind Energy Technologies Department). The group had the opportunity to learn the current status of the collaboration on the DOE SWIFT facility at Reese as well as receiving an update on the cutting-edge research activities taking place at Texas Tech. They also met with Dr. Lawrence Schovanec, TTU President and with Dr. Guy Loneragan, Interim Vice President for Research, for a candid and substantive discussion about how to remove some of barriers and further strengthen the partnership.

I myself was fortunate to travel this month to two world-class wind facilities – the Wall of Wind (WOW) at Florida International University (FIU), and to the Full-Scale Open Jet Wind Tunnel at the Institute for Business & Home Safety (IBHS). WOW is one of six NSF-funded distributed, multi-user national NHERI Experimental Facilities and is powered by a 12-fan system capable of repeatable testing in up to Category 5 wind speeds. Additionally, the IBHS wind tunnel is six stories tall and 145 feet wide by 145 feet long, the equivalent of 4½ basketball courts. It’s built with a $40m investment by insurance companies and is primarily used to conduct industry-sponsored research.

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The trip was sweetened by my reunion with two of our own wind doctoral graduates who also work there - Dr. Tanya Brown-Giammanco and Dr. Ian Giammanco!

As the fall semester is finally behind us, I would like to pause a little, talking with our faculty, staff and students and reflecting on the success we have had and the challenges in front of us.

Go Raiders!

Daan Liang, Interim Director, NWI

McDonald-Mehta Lecture Series: Dr. Amber Emory

Continuing on with the prestigious McDonald-Mehta Lecture Series, NWI recently welcomed Dr. Amber Emory, a Research Radar Meteorologist at NASA Goddard Space Flight Center (GSFC) and alumna from NWI’s wind science and engineering doctoral program.

Dr. Emory’s presentation, on November 16, was titled “Establishing Severe Storms Research at NASA Goddard Space Flight Center”, and focused on the history of the Laboratory for Mesoscale Atmospheric Processes.

Primary research interests for Dr. Emory involve the study of severe weather with radars of various frequencies (S-, C-, X-, Ku-, Ka-, and W-band), and she works on research radar data validation, analyzes precipitation estimates, derives Dual-doppler wind retrievals in landfalling hurricanes, and uses dual-polarimetric radar variables to further understand mesoscale convective systems, cloud systems, microphysics, and their relation to the hydrologic cycle.

She graduated with her Ph.D. in 2012, and has been working at GSFC since 2009.

Thank you to all involved for a successful event.
DIF Researcher Recognized with 2016 NSSA Kiesling Award for Excellence

NWI’s Research Assistant Professor Larry Tanner was recently recognized with the 2016 Kiesling Award, given annually by the National Storm Shelter Association (NSSA).

Professor Tanner received his award for his ongoing contributions to wind hazard research and Debris Impact research at NWI’s Debris Impact Facility.

The Kiesling Award was founded by Dr. Ernst Kiesling, NSSA Executive Director, and recognizes “major contributions to the storm shelter industry.”

“Larry has put his heart and soul into debris impact testing and research, and I’m very pleased to see his work is being recognized,” add Dr. Daan Liang, Interim Director of NWI.

West Texas Mesonet Network Celebrates Opening of 100th Station

Texas Tech University’s West Texas Mesonet network recently celebrated the opening of the 100th station in the widespread collection of meteorological instrumentation platforms that covers parts of West and northern Texas, and spreads into both New Mexico and Colorado.

“This has been the culmination of 16 years of work by employees of the National Wind Institute, along with our volunteer mesonet army of National Weather Service employees, landowners and weather enthusiasts,” reported Wes Burgett, the West Texas Mesonet network manager. Currently, the wide-ranging instrumentation network has 100 mesonet stations and seven SODAR units in 66 Texas counties and three different states.
TTU-NWI and WTC Holds for “2+2” Signing Agreement

As renewable energy continues to be the focus in the news, NWI is working hard to prepare the workforce, present and future.

To support that goal, Texas Tech University recently signed a formal agreement with West Texas College to recognize the “2+2” agreement between the two educational facilities to enable students to have a seamless transition from the two-year college in Snyder to the university here in Lubbock.

The WTC Wind Energy program was started in 2010, and NWI hosts the only wind energy undergraduate degree in the country, so it is a logical next step to work together to produce wind energy workers who are well trained in both the academic and the practical sides of the industry.

Dr. Daan Liang, Interim Director for NWI, added, “The wind energy program under Dr. Swift’s leadership has seen tremendous growth since its inception. The new agreement will provide additional opportunities to attract high-quality students to the program.”

The Signing Agreement included signatures from Dr. Patrick Hughes, Associate Provost, Undergraduate Education and Student Affairs, TTU, and from Dr. Barbara Beebe, President of West Texas College.

Terra Vista Middle School Visits NWI

November saw the visit of students from Terra Vista Middle School from Frenship who learned about the innovative wind-related research and projects that NWI is busy with in Building 250 at Reese Technology Center.

Many thanks to all who were involved with making this tour a success.
RECENT PUBLICATIONS and PROCEEDINGS (as reported by Web of Science)


Photo Credit: The Daily Telegraph.
NWI GRANTS AND CONTRACTS — NOVEMBER 2016

Awarded:

NWI VORTEX-SE: Improving Understanding and Predictability of Tornadic Storms in the Southeastern U.S. Using Intensive Observations and High-Resolution Modeling

National Oceanic and Atmospheric Administration 09/01/2016 - 08/31/2017
Bruning, E. C. (Geosciences) 33% $19,382
Dahl, J. (Geosciences) 33% $19,382
Weiss, C. C. (Geosciences) 34% $19,970

GLEAMM:NWI:I-Corps: Efficient Software Tool for Improving Power Flow Analysis Functions

National Science Foundation 09/21/2016 - 05/31/2017
He, M. (Electrical and Computer Engineering) 100% $50,000

BSWE STUDENTS SHOW GENEROSITY FOR ANNUAL TOYS FOR TOTS DRIVE

Each year in December, undergraduate students in the Bachelor’s degree in Wind Energy (BSWE) program donate toys to the local Toys for Tots drive.

Such generosity is noticed and appreciated by both NWI and the drive organizers.

Thank you to all who participated this year.
Two NWI staffers were recently recognized for excellence in their work performance when they received Distin-
guished Staff Awards from Texas Tech University.

**Liz Inskip-Paulk** (L) was given the President’s Award of Excellence, and **Kacey Marshall** (R) was given the Mata-
dor Award of Excellence. Both awards are for excelling in
the work place and for demonstrating a commitment to
TTU and beyond.

Liz has been with the NWI since 2007, and with TTU for
almost 20 years. Kacey has been with NWI and TTU since
2013.

“Congratulations to Liz and Kacey for receiving such pres-
tigious awards,” added Dr. Daan Liang, Interim NWI
Director. “Our staff plays a critical role in NWI’s success
and we appreciate their service.”

The President’s Award of Excellence recognizes an
individual who has one or more years of service with
TTU, and who has demonstrated strong leadership skills
throughout the year.

The Matador Award of Excellence recognizes a newcomer who has one to three years of service with Texas Tech, and
who has made significant contributions and share innovative ideas to the department to the TTU community.

NWI is proud of all its staffers, and would like to commend Liz and Kacey on a job well done.

**NWI Associate Managing Director Dr. Anna Thomas Young**
(far right in image on right) recently moderated a panel
presentation at the recent GridNEXT conference in
Georgetown, TX on November 9-11.

The presentation was titled “Large Wind Farm Production
Optimization R&D, and included presenters including (image
L-R) Zachary Taylor (Guadalupe Valley Electric Cooperative,
Inc.), Mark Harrak (Group NIRE), Murvat Musa (Reese Tech-
nology Center), and Josh Bryant (Sandia National Labs).

The 2016 GridNEXT Conference was sponsored by the Texas
Renewable Energy Industry Association (TREIA).

If you are interested in having your latest scholarly endeavors featured in the next NWI newsletter, please
forward your information (publications, proceedings, conference/workshop attendance, or other news etc.)
to Liz Inskip-Paulk (email: Elizabeth.paulk@ttu.edu).