



TEXAS TECH UNIVERSITY National Wind Institute™

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Letter from the Interim Director



Daan Liang, Ph.D., P.E.

In April, several of our research projects shifted into high gear, keeping faculty, students, and technicians extremely busy. John Schroeder, Brian Hirth, Jerry Guynes, and Jeff Livingston are racing to complete three radar systems before the summer while Chris Weiss, Eric Bruning, and Johannes Dahl take advantage of severe spring weather to collect field data as the part of their NOAA-funded “Verification of the Origin of Rotation in Tornadoes EXperiment-Southeast” (VORTEX-SE) project. In the meantime, Larry Tanner successfully completed debris impact testing of roof panels with very promising results. This American Institute of Steel Construction (AISC) sponsored project, which is led by Dr. Kiesling and myself along with participant James Yang, is aimed at evaluating the performance of metal decks in resisting debris impact and the feasibility of incorporating them into future storm shelter design.

Concerted effort is being made to update NWI’s main website (www.nwi.ttu.edu) by refreshing graphics and revising contents. A working group headed by Anna Young meets on a weekly basis and painstakingly takes on the website section by section. Nevertheless, this task couldn’t be completed solely by our staff. Some of you may have been contacted for your latest resume to be posted as well as up-to-date information on our core facilities.

Please take a few minutes of your time to visit the website and let us know what additional changes you’d like to see. We hope to be reaching out to you soon to collect this data.

There will be a meeting taking place on Wednesday, June 1, at Grand Hyatt of DFW for NSF Industry & University Cooperative Research Center (I/UCRC) for Wind Hazard and Infrastructure Performance (WHIP). At this meeting, researchers from Texas Tech University and Louisiana State University will have a face-to-face discussion with the Center’s prospective members about future research projects and the path forward for its formation. Through this academia-industry collaboration, the Center will play a leading role in improving our nation's ability to manage risk and improve resiliency of critical infrastructure against extreme wind hazards.

Furthermore, NWI held a forum on April 27 in which I presented a summary progress report on our strategic plan. Priorities for the upcoming 2016-2017 academic years were also outlined. The forum was well attended by faculty, students, and staff and we had a great discussion on ways to move the Institute forward. The slides can be viewed from our website.

Lastly, the position for NWI’s permanent director has been posted on the TTU HR website and a search committee is being formed by the Office of Vice President for Research. During the past 20 months, I have enjoyed working with each of you and have every intention of putting together a strong application and compete for this position. If selected, I will continue our collaborative effort in advancing the mission of NWI and its strategic goals.

Go Raiders!

NWI Representatives Graduate from TTU President's Leadership Institute

Texas Tech University hosts a selective President's Leadership Institute (PLI) each academic year to further develop skills of professionals (both faculty and staff) on campus.

The one-year course has just come to its conclusion and NWI is proud to announce that Liz Inskip-Paulk and Matt Saldana were part of that graduating class.

The PLI is an applicant-based hands-on series of seminars and workshops focused on providing further professional development for Texas Tech University employees on campus.

Sponsored by the President's Office, the course is nine months long, and included almost 20 representatives from across the campus and the curriculum.

NWI is proud to support our employees and wishes to congratulate both Matt and Liz on their accomplishments.



(Above L-R) - Matt Saldana, Instructor in the BSWE education program, and Liz Inskip-Paulk, Unit Coordinator, who have just graduated from the prestigious TTU President's Leadership Institute (PLI) for the academic year 2015-2016.

NWI welcomes...



(Above) - John Geesling, NWI Research Associate.

NWI is happy to announce that a number of new people have joined NWI as part of our great team.

John Geesling, NWI Research Associate

John started at TTU in 2001 where he played a role in starting the then-new IT HelpCentral service and Help Desk. He was then invited to work at Technology Operations and Systems Management (TSOM) where he contributed to the start of their new server hosting service.

John also was on the server administration team and, just prior to arriving at NWI, was the Assistant Managing Director of the Server Support Group.

Before working at TTU, John spent 15 years as an electronic technician, mostly in the field of aircraft avionics while he was serving with the U.S. Air Force.

WELCOME ABOARD!

NWI Assistant Awarded Student Employee of the Year

Eric Garza, a Senior in the BSWE program here at NWI, was recently recognized for his great customer service and hard work by TTU's Student Financial Aid and Scholarship Department when he was awarded the 2016 **Student of the Year Award**.

This financial award recognizes Eric's stellar work ethic and pleasant personality during his time here at NWI. Student assistant positions can be large or small, and Eric has taken on numerous responsibilities during his tenure here.

Eric was awarded with \$1,000 in scholarship money, and NWI is proud to count him as one of our own team members. Eric's nomination will now move on the next level of the competition.

Eric is planning to graduate in May 2017 to enter the project development side of the residential wind industry.

Congratulations, Eric, and thank you for your hard work. NWI is lucky to have you on our team.



NWI's Jodie Stone Retires After 24 Years at TTU



NWI marked the end of an era last month when Jodie Stone, Senior Accountant, retired after twenty years of service with Texas Tech University. Jodie played a vital role of keeping the accounts straight for the National Wind Institute.

Jodie is off to start new adventures. NWI would also like to congratulate Jodie on her recent marriage and wisher her well for the future.

Thank you for your service. You will be missed.

For all new accounting-related questions, please direct inquiries to Angela Beikmann who was brought onto the NWI team earlier last month.

Did You Know...?

According to the U.S. Wind Industry Annual Market Report, the American wind power industry supported a record **88,000** jobs at the start of 2016—an increase of 20%.

Source: Wind Energy Weekly (AWEA). 04/15/2016.

NWI Ph.D. Students Continue Research with SPiDAR



(Photo credit: Tassia Pereira)

NWI is proud of our students, both undergraduate and graduate, who are striving to reach new levels of excellence in research and other ways.

Graduate students Tassia Pereira, Ricardo Castillo and undergraduate Travis Monk (L-R above) took a candid photo the other day when they were working at the NWI field site at Reese Technology Center.

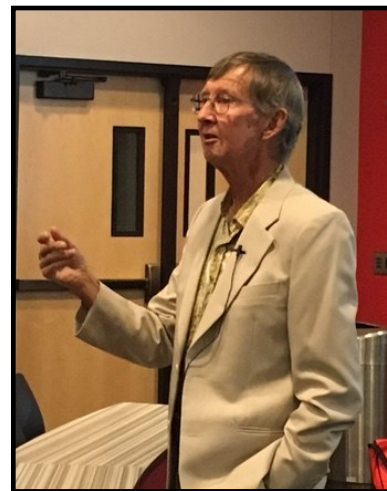
The students were installing a SPiDAR (a LIDAR device) to research the wake behind one of the turbines in the SWiFT facility as part of an ongoing study.

NWI Hosts Australian Researcher for Lecture

NWI was proud to host Dr. George Walker, a retired researcher and long-time friend of the National Wind Institute who was visiting from Australia on a recent trip.

Dr. Walker, who formerly worked with James Cook University and with Aon Reinsurance Company, spoke on Friday, April 22, on *Resilience and the Built Environment*.

The lecture was well attended so thank you to all who were involved.



BSWE Spring 2016 Graduates Recognized



As the end of the semester and the academic year come to a close, it's traditional for faculty to host a luncheon for the undergraduates who will be graduating at this Spring's commencement ceremonies.

This year's cohort was hosted at Skyviews Restaurant, and the time was used to gain feedback to further strengthen the undergraduate program for future scholars. NWI is proud of all our graduates, both past and present! Congratulations.

NWI GRANTS AND CONTRACTS — APRIL 2016

Investigator	Unit	Credit	Award Amount Credited	Proposal No.	Title	Agency
Westergaard ,Carsten H	Mechanical Engr	100%	\$315,480	109567	Lidar based Wind farm Controller and optimizer	Israel-U.S. Binatl Ind R&D/ Pentalum Tech Ltd

WESA STUDENTS VOLUNTEER WITH RANCH DAY



(Right) - Shelby Maloy and Eric Garcia, student members of the Wind Energy Student Association (WESA) interact with younger potential researchers and scholars at the recent National Ranching Heritage Association's Ranch Day held in April.

Focused on providing hands-on experiences for young scientists-to-be, WESA members provided an interactive station where visitors could learn how wind power is used to irrigate crops and livestock.

The weather was great and NWI is proud of our undergraduates who volunteered in this way to continue the tradition of building and keeping Red Raiders in the community around us.

NWI MOVERS & SHAKERS

- NWI Wind Education faculty **Dr. Arquimedez (Archie) Ruiz-Columbie** (right) has been selected to have a poster at the upcoming WindPower 2016 conference in May in New Orleans. Dr. Ruiz-Columbie's poster is titled: "Testing a New Method for Wind Shear Characterization using the 200m Meteorological Tower at Lubbock, Texas."
- NWI WISE Ph.D. alum **Dr. Xinxin Zhang** (who graduated in 2015) is working as an engineer at Berkshire Hathaway Speciality Insurance in the CAT Engineering and Analytics Department where he is primarily responsible for providing engineering analytics for wind and storm-surge related risk assessment, evaluating vendor CAT models, developing internal CAT models and tools, and performing property-specific catastrophe risk analyses.

Dr. Zhang has had two publications printed in the *Journal of the American Wind Energy and Industrial Aerodynamics* (JWEIA):

Zhang, Z., and X. Chen (2015). "Assessing Probabilistic Wind Load Effects via a Multivariate Extreme Wind Speed Model: A Unified Framework to consider Directionality and Uncertainty." *Journal of Wind Engineering and Industrial Aerodynamics* 147: 30-42.

Zhang, Z., and X. Chen (2016). "Influence of Dependence of Directional Extreme Wind Speeds on Wind Load Effects with Various Mean Recurrence Intervals." *Journal of Wind Engineering and Industrial Aerodynamics* 148: 45-56.

- The Wind Energy Student Association (WESA) recently announced its new slate of officers for the upcoming academic year 2016-2017:

Incoming WESA Officers (2016-2017)

⇒ President: **Wyatt Zalatoris (Senior)**

⇒ Vice-President: **Sean Curran (Senior)**

⇒ Treasurer: **Anna Lee Haag (Senior)**

⇒ Secretary: **Eric Garcia (Senior)**

⇒ SORC Representative: **Debari Gbaanador (Senior)**

UPCOMING CONFERENCES/WORKSHOPS:

- AWEA's national conference, WINDPOWER2016, is scheduled for May 23-26 in New Orleans, LA. (See above for details on NWI's own Dr. Archie Ruiz-Columbie who will have had a poster accepted at this conference.)
- Remember the NWI Wednesday Lecture Series every Wednesday at 2:30 p.m. in Experimental Sciences Building Room 120. Come and learn from your colleagues and peers. Check the upcoming schedule at www.wind.ttu.edu.
- The annual summer camp, *Run on the Wind*, is now open for sign-ups. Please check the TTU-IDEAL website for details: https://www.depts.ttu.edu/diversity/ideal/run_on_wind.php

**Remember to drop by the NWI booth # 4855
in the main Exhibition Hall at this year's
WINDPOWER conference!**



(Above) - Dr. Arquimedez Ruiz-Columbie, NWI Wind Education faculty.



(Above) - Dr. Xinxin Chen, NWI Ph.D. alumni, 2015.

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). Go Red Raiders!