



October
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2016

The Department of Plant and Soil Science NEWSLETTER



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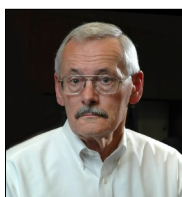
PSS Faculty News **P.4**

Faculty and Staff Win Numerous CASNR Awards in August



Dr. **Cynthia McKenney** was awarded the CASNR Teaching Award. Dr. McKenney regularly teaches three courses, facilitates student learning and engagement throughout her classes, and is the department leader for the distance education program. Expanding her teaching out of the classroom, Dr. McKenney presents at numerous seminars, scholarly meetings, and community organizations to spread her knowledge and expertise in horticulture.

Dr. **Glen Ritchie** was awarded the CASNR Student Advising Award. During his five-year career at Texas Tech, Dr. Ritchie has had nine students complete their M.S. and PhD work, all gaining employment upon graduation. Dr. Ritchie serves many undergraduate students through research projects and the Tech Agronomy Club. Through his supervision of the Quaker Farm, Dr. Ritchie interacts and serves many graduate students and industry professionals.



Dr. **Terry McLendon** received the CASNR Research Award. Dr. McLendon is the author or co-author on over 140 scientific publications. During his career, his research and projects have totaled over \$16 million, in the United States and abroad. Dr. McLendon is the originator and co-developer of the EDYS ecological simulation model that is used in ecological decision-making at over 35 locations. He continues to work with community groups and officers about groundwater management options and protecting coastal marsh habitat.

Mr. **Rick Kellison** was awarded the CASNR Research Staff Award. He is the current Project Director of the Texas Alliance of Water Conservation where he collects data on 30 commercial fields in the South Plains, presents research findings, presides over monthly management team meetings, and assists PI Dr. Chuck West in submitting reports. The TAWC has been nationally recognized through a variety of organizations and awards, many in thanks to Mr. Kellison's tireless efforts.



Mr. **Russ Plowman** was awarded the CASNR Instructor Award. He is responsible for the lecture and labs of the PSS 1411 course, which frequently enrolls over 300 students each semester. Mr. Plowman also teaches the Floral Design course, which he recently upgraded and enhanced to meet the university Fine Arts core credit. Outside of the classroom, Mr. Plowman provides his expertise and knowledge to students through innovative greenhouse experiences and hands-on gardening. He is currently working on a complete redesign of the TTU Greenhouse Gardens complex.

The Department of
Plant and Soil Science
Texas Tech University

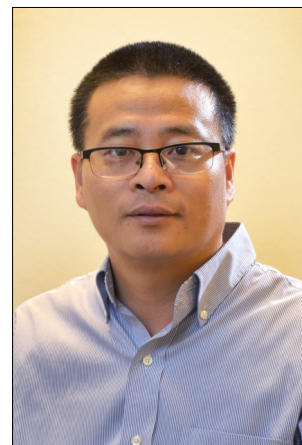
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New Faculty Update



Lindsey Slaughter has been named an assistant professor with Texas Tech's Department of Plant and Soil Science. She officially stepped into her new post on Sept. 1. Dr. Slaughter indicated that she is interested in continuing her research efforts in soil microbial ecology and plant-microbe-soil relationships in both natural and agricultural ecosystems. One of her primary goals here at Tech is to improve our ecological understanding of plant-microbe-soil symbioses and interactions that affect, and are affected by, management practices aimed at increasing the sustainability of agricultural production and improving the natural resource base now and under future global conditions. Prior to joining the Tech faculty, Dr. Slaughter worked as a teaching and research assistant at the University of Kentucky in Lexington, Kentucky, and the University of Tennessee-Martin in Martin, Tennessee. She received her bachelor's degree in natural resource management from the University of Tennessee-Martin, her master's degree in plant and soil sciences from the University of Kentucky, and her doctorate in soil science from the University of Kentucky.

Wenxuan Guo has been named an assistant professor with Texas Tech's Department of Plant and Soil Science. He officially stepped into his new post on Sept. 1. Dr. Guo is interested in continuing his research efforts in precision agriculture, environmental sciences, and remote sensing in agriculture, especially UAV application in precision plant phenotyping. One of his primary goals at Tech is to establish interdisciplinary research and teaching programs that leverage state-of-the-art technologies to improve agricultural production with limited resources, especially water. Prior to joining the Tech faculty, Dr. Guo worked as a global environmental modeling scientist with Monsanto in St. Louis. He also worked as a precision agriculture scientist with South Plains Precision Ag in Plainview, and an instructor at Texas Tech and Handan Agricultural College in Handan, China. Guo received his bachelor's degree in crop science from the Agricultural University of Hebei in Baoding, China, his master's degree in plant, soil, and environmental science from West Texas A&M University, and his doctorate degree in agronomy from Texas Tech.



Yong Sig Kim has been named a research assistant professor with Texas Tech's Department of Plant and Soil Science. He officially stepped into his new post on Sept. 1. Kim is interested in continuing his research efforts in the understanding of plant responses to biotic and abiotic stresses such as pathogens, extreme temperatures, drought, and salt conditions by using *Arabidopsis* as a model plant. One of his primary goals here at Tech is to establish the translational research by applying the knowledge learned from basic research into development of crop plants for enhancement of productivity as well as stress management. Prior to joining the Tech faculty, Dr. Kim worked as a research associate at the Plant Research Laboratory at Michigan State University-East Lansing and a research associate in the University of Arizona-Tucson's Department of Plant Sciences. Dr. Kim received his bachelor's and master's degrees from the Department of Agricultural Biology at Seoul National University in Seoul, South Korea, and his doctorate degree from the Department of Plant Sciences at the University of Arizona-Tucson.

Narratives and photos curtesy of Norman Martin in the CASNR Dean's Office.

PSS & Staff News

Between Earth and Sky released its third and final film trailer on www.betweenearthandskymovie.com. The ground-breaking film is the first of its kind to explore global climate change through the lens of soil science. The research-based film tells the story of global climate change by shining a light on arctic soils and ecosystems, and the livelihood of Alaskan-Americans.



The **Texas Alliance for Water Conservation** has been selected by the Irrigation Association Awards and Honors Committee to receive the 2016 National Water and Energy Conservation award. This award recognizes the organization's achievements in the conservation of water and energy through irrigation procedures, practices, equipment, methods, and techniques. The award will be presented during the 2016 Irrigation Show and Education Conference in Las Vegas later this fall.

Rick Kellison will receive the Texas Tech Chancellor Staff Award for Excellence in November.

The Following faculty and staff were nominated for several awards recently: **Thayne Montague** was the CASNR nominee for the NARRU Distinguished Educator Award, **Diann Merriman** was the CASNR nominee for the President's Excellence in Academic Advising Award, **Venu Mendu** was the CASNR nominee for the TTU Alumni Association New Faculty Award, **Cynthia McKenney** was the CASNR nominee for the Chancellor's Council Distinguished Teaching Award, **Joey Young** was the CASNR nominee for the Hemphill Wells New Professor Excellence in Teaching Award, and **Jyotsna Sharma** was the CASNR nominee for the Bernie E. Rushing, Jr. Faculty Distinguished Research Award.

Enrollment numbers for the fall 2016 semester have been released and we have some great numbers to share! We had a 26% increase in undergraduate student numbers, with 131 campus students and 39 distance students; and a 17% increase in graduate student numbers (79 on campus and 25 distance), with 58 master's students and 46 PhD students.

The department will be hosting a PSS Alumni Homecoming Lunch on October 15th at 11 a.m. in the Bayer Plant Science Building Courtyard. Stop on by to visit with our alumni and grab a bite to eat on the way to the game. *Please note, if the game is scheduled for 11 a.m., this event will be cancelled.*

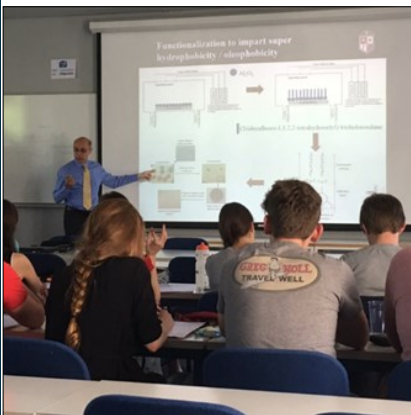
Alumni Spotlight

A Texas Tech University Plant and Soil Science alumnus has been selected to receive an award at the American Society of Agronomy and Crop Science Society of America annual meeting in November. Dr. **Jane Dever** has been named an ASA Fellow, the highest award bestowed by the Society. Dr. Dever specializes in cotton breeding, conducting her research at the Texas A&M AgriLife Research and Extension Center in Lubbock. She has a B. S. in Textile Technology and Management, M. S. in Crop Science, and Ph. D. in Agronomy, all from Texas Tech University.



Dr. **David Weindorf's** research team had a paper win Best Original Paper Award for 2015 in the Elsevier Journal, *Geoderma*. The team included Abdo Aldabaa (visiting researcher), David Weindorf (TTU Faculty), Somsubhra Chakraborty (Assistant professor at the Institute of Technology– Kharagpur, India), Aakriti Sharma (former TTU MS student), and Bin Li (Associate professor at Louisiana State University).

Dr. **Abidi** returned from his trip to Europe where he spent 5 months as a U.S. Fulbright Scholar at Ghent University (Belgium) for research and teaching (January 18 – June 18, 2016). This was an excellent opportunity to meet fellow



scientists from Ghent University and to initiate collaboration between Texas Tech University and Ghent University. During his stay, he travelled to Piraeus University of Applied Sciences (Athens, Greece) to teach a 1-week course on Biopolymers and Bioproducts for students enrolled in the European Masters Program in Textile Engineering. He taught also a course on surface modification techniques of biopolymers for undergraduate students enrolled in Materials Science at Ghent University. He also travelled to Mulhouse (France) to attend the Fiber Society meeting and to Ljubljana, Slovenia to attend the 16th World Textile Conference (AUTEX).



Dr. **Scott Longing** has been chosen for one of four sites nation-wide for a native pollinator planting this fall at the Quaker Farm.

The following presentation and publications were made during the last three months:

- Herrero, J., O. Artieda, and **D.C. Weindorf**. 2016. Soil gypsum determination. In: Methods of soil analysis. Soil Science Society of America, Madison, WI. p. 1-6. doi:10.2136/methods-soil.2016.0037.
- Weindorf, D.C.**, and S. Chakraborty. 2016. Portable X-ray fluorescence spectrometry analysis of soils. In: Hirmas, D. (Ed.). Methods of soil analysis. Soil Science Society of America, Madison, WI. p. 1-8. doi:10.2136/methods-soil.2015.0033.
- Singh, S.**, S. V. Angadi, K. Grover, R. S. Hilaire and S. Begna (2016). Effect of growth stage based irrigation on soil water extraction and water use efficiency of spring safflower cultivars. *Agricultural Water Management*. 177: 432-439. doi.org/10.1016/j.agwat.2016.08.023.
- S. Huang, N. Liang, **Y. Hu**, X. Zhou, **N. Abidi**. Article review: Polydopamine-Assisted Surface Modification for Bone Bio-substitutes. *BioMed Research International*, 2016, 2389895, <http://dx.doi.org/10.1155/2016/2389895>.
- L. Cabrales, K. Calderon, I. Hinojosa, F. Valencia, **N. Abidi**. Synthesis and characterization of polyesters derived from sebacic acid, hexanediol, and hydroquinone. *International Journal of Polymer Analysis and Characterization*, in press.
- R.S. Dassanayake, E. Rajakaruna, H. Moussa, **N. Abidi**. One-pot synthesis of MnO₂-Chitin hybrids for effective removal of methylene blue. *International Journal of Biological Macromolecules*, 93(2016) 350-358.
- C. Ruan, Y. Zhu, X. Zhou, **N. Abidi**, **Y. Hu**, J.M. Catchmark. Effect of cellulose crystallinity on bacterial cellulose assembly, *Cellulose*, DOI 10.1007/s10570-016-1065-0.
- Y. Hu**, **N. Abidi**, Multistage Separation of Cellulose Nanofibers Showing Distinct Characteristics and Chiral Nematic Phases. *Langmuir*, in press.
- N. Abidi**, **S. Acharya**, **P. Wansapura**, **N. Dissanayake**, **Y. Hu**, R. Dassanayake. Cellulose dissolution: promising approach for the preparation of composite materials. 3rd International Conference and Exhibition on Biopolymers and Bioplastics, September 12-14, 2016, San Antonio, TX.

Important Dates

October:

8: TTU @ Kansas State Football game

10-15: Homecoming week

15: TTU vs. West Virginia Football game

15: PSS Alumni lunch

22: TTU vs. Oklahoma football game

29: TTU @ TCU football game

31: :Last day to drop a course with penalty

November:

3-21: Advanced registration

22: Open registration

24-25: University holiday/offices closed

December:

7: Last day of classes

8: Individual study day

9-14: Final Exams

16-17: Commencement

23-31: University holiday/offices closed

If you have questions or comments regarding any information on this newsletter, or to be removed from the PSS distribution database, please contact Christi Chadwell, Communications and Recruiting Coordinator, Christi.chadwell@ttu.edu

PSS Student News

Graduates of the Texas Tech Viticulture Certificate program were honored in a ceremony at the Hill Country University Center in Fredericksburg on June 25th. A total of 24 graduates received certificates of completion. This cohort started in September 2014. The program is designed for industry entrepreneurs and prospective vineyard managers seeking comprehensive knowledge of viticulture principles and commercial grape production practices.



Following students were awarded scholarships through the Wine Society of Texas: Sherah Mills received the Russell D. Kane Grant, Michael Hellman received the Paul and Merrill Bonarrigo Grant, Samuel Smith (staff member at Fredericksburg campus) received a \$1,000 grant.

The following students graduated with their bachelor's in plant and soil science in August: David Brockman, Robert Mason, and Molly Morris. Two students graduated with their master of science degrees: Kirsten Poff and Chang Cao, and Misha Manuchehri graduated with her PhD.

Dr. Misha Manuchehri accepted the position of Extension Small Grains Weed Scientist with Oklahoma State University upon her graduation in August.

Robert Soliz (distance B.S. student) received three medals in the T.V. Munson Cup for each of the wines he created.

The Texas Tech Soils Judging Team and Texas Tech are hosting the Region IV Collegiate Soils Contest in Ruidoso, New Mexico in October. Schools participating include University of Arkansas, Oklahoma State University, Texas A&M University, Texas A&M University at Kingsville, and Tarleton State University. The USDA-Natural Resources Conservation Service has been integral in helping to secure landowner access, describe, and sample the contest and practice sites.

