Yachi Wanyan, PhD, PE.

EDUCATION

Ph.D. in Civil Engineering, University of Texas at El Paso 12/2008
Dissertation: *Expert system design guide for lower classification roads over high PI clays*
MS in Civil Engineering, University of Texas at El Paso 07/2003
Thesis: *Expediting rigid pavement construction by using alternate pavement sections*
B.E. major in Civil and Environmental Engineering,
minor in Applied Computer Science, Tongji University, Shanghai, China 07/1998

PROFESSIONAL LICENSE

Licensed Professional Engineer (P.E.), Texas, No. 106375.

TEACHING AND RESEARCH EXPERIENCE:

Associate Professor, Texas Southern University 09/2019 to Present

- Teach Civil Engineering core courses: Civil Engineering Materials (CIVT/CIVE 141), Soil Mechanics/Geotechnical Engineering (CIVT/CIVE 224), Transportation Engineering (CIVE/CIVT 334), Geometric Design of Highways (CIVT/CIVE 335), Reinforced Concrete Design (CIVT 337/CIVE 339) and Civil Engineering Project (CIVE 400).

Assistant Professor, Texas Southern University 09/2013 to 08/2019

- Taught Civil Engineering core courses: Civil Engineering Materials (CIVT/CIVE 141), Soil Mechanics/Geotechnical Engineering (CIVT/CIVE 224), Environmental Engineering (CIVT/CIVE 301), Water and Wastewater Engineering (CIVT/CIVE 434), Fluid Mechanics (CIVT/CIVE 332), Hydraulic Engineering (CIVT/CIVE 333), Transportation Engineering (CIVE/CIVT 334), Geometric Design of Highways (CIVT/CIVE 335), Reinforced Concrete Design (CIVT 337/CIVE 339) and Strength of Materials (CIVT 338/CIVE 336).

Visiting Assistant Professor, Texas Southern University 09/2011 to 08/2013

- Taught Civil Engineering and Electrical/Computer Engineering core courses.

Postdoctoral Research Fellow, Texas Southern University 07/2011 to 09/2011

- Performed studies in Transportation Engineering field.

Research Associate, University of Texas at El Paso 01/2004 to 12/2008

- Worked on several TxDOT pavement and geotechnical engineering projects focus on improving pavement design and performance.

Research Technician, Texas A&M AgriLife Research Center 08/2002 to 07/2003

- Worked on several water resources project to test and simulate surface water and groundwater interactions.

Research Assistant, University of Texas at El Paso 08/2000 to 07/2002

- Worked on rigid pavement structural performance modeling, LCCA and construction management.

Lecturer, Guangdong University of Technology, Guangdong, China 07/1998 to 07/2000

- Taught Civil and Environmental Engineering core courses: Hydraulics, Environmental Engineering, Water and Wastewater Engineering, Water Supply and Sewerage, Pump Station Design.

SELECTED PUBLICATIONS AND PRESENTATIONS

- **Y. Wanyan** and Y. Liu (2019) Preparing Students for the 21st Century, 30th Information Technology & Teacher Education Conference, Las Vegas, Nevada; March 18-22, 2019
- **Y. Wanyan** and Y. Liu (2018) Effective Use of Indirect Assessment for Student-centered Learning, The Association for Educational Communications and Technology (AECT) International Conference, Kansas City, MO, USA October 23-27, 2018.
- **Y. Wanyan** and Y. Liu (2018, accepted) Assessment Beyond Classroom, The Association for Educational Communications and Technology (AECT) International Convention "Learning for All" to be held at Kansas City, MO, USA October 23-27, 2018.
- **Y. Wanyan** and Y. Liu (2018) Effective Use of Assessment for Instructional Alignment, 8th International Conferences on STEM/STEAM and Education, Honolulu, Hawaii, USA June 6 to June 8, 2018
- **Y. Wanyan** and Y. Liu (2018) Data Informed Instructional Quality Improvement, Society for Information Technology and Teacher Education 29th International Conference, Washington D.C., USA March 26-30, 2018
- **Y. Wanyan** and Y. Liu (2018) Effective Instructional Enhancement Based on Multi-dimensional Assessment Data, International Organization of Social Sciences and Behavioral Research in New Orleans, Louisiana, USA March 19-20, 2018
- **Y. Wanyan**, I. Abdallah, S. Nazarian, and A. J. Puppala (2018) Feasibility of Using Subgrade Moisture Content as A Key Parameter to Evaluate HMA Roads Performance Under Different Drying/Wetting Cycles. *MOJ Civil Engineering*, 2018, 4(2), pp 66-73. DOI: 10.15406/mojce.2018.04.00099
- **Y. Wanyan**, I. Abdallah, S. Nazarian, & A. J. Puppala (2018) Feasibility study of using subgrade moisture content as key parameter to evaluate HMA roads performance under different drying/wetting cycles. MOJ Civil Engineering, 4(2): 66-73
- **Y. Wanyan**, X. Chen, and D. Olowokere. (2017) Integration of Artificial Intelligence Methodologies and Algorithms into The Civil Engineering Curriculum Using Knowledge-Based Expert Systems: A Case Study. *Engineering Education Letters*: Vol. 2017 1, 3.
- **Y. Wanyan** (2017) Improving Hot Mix Asphalt (HMA) Pavement Performance by Controlling Environmental Induced Variation in Subgrade Soil, *in Proceedings of ICPTA Annual conference*, University of Houston, Houston, TX, May 19-21, 2017.
- **Wanyan Y**, Imad A, Nazarian S and Puppala A.J. (2015) "Case History of Using Moisture Content Based Approach to Predict Low-Volume Roads Longitudinal Shrinkage Cracking Failure" *Transportation Geotechnics* Transportation Research Board 94th Annual Meeting, Washington D.C, Jan 10-15
- **Y. Wanyan**, I. Abdallah, S. Nazarian, & A. J. Puppala (2014) Moisture content-based longitudinal cracking prediction and evaluation model for low-volume roads over expansive soils. *Journal of Materials in Civil Engineering*, 27(10), 04014263.
- **Y. Wanyan**, I. Abdallah, S. Nazarian, & A. J. Puppala (2010) An Expert System for Design of Low-volume Roads over Expansive Soils, *Transportation Research Records: Journal of the Transportation Research Board*, 2154, 81-90.
- **Wanyan, Y.,** Manosuthkij, T., Abdallah, I., Nazarian, S. and Puppala, A.J. (2008) "Expert System Design Guide for Lower Classification Roads over High PI Clays" Research Report: *FHWA/TX-08/0-5430-2*
- **Wanyan, Y.,** Portillo, E., Abdallah, I. and Nazarian S. (2008) "Expert System for Pavement

Remediation Strategies (ExSPRS) User's Manual" Research Report: *FHWA/TX-08/0-5430-P2*

- Manosuthkij, T., Puppala, A.J., Nazarian, S. and **Wanyan, Y.** (2007) "Comparisons between Measured and Predicted Swell Strains using PVR and Suction Based Models" *in Proceedings, Sessions of Geo-Denver*, pp. 1-11
- Sheng, Z., Aristizabal, L.S. and **Wanyan, Y.** (2004) "Well Spacing and Its Impacts on Surface Water Flow in El Paso Lower Valley" *in Proceedings, World Environmental and Water Resources Conference*, ASCE, Salt Lake, Utah, June 27-July 1, 2004, 6p. CD-ROM.
- **Wanyan, Y.** and Sheng, Z. (2003) "Effects of Irrigation Pumping on Surface Water Flow in El Paso Lower Valley Area during Drought" *in Proceedings*, *American Water Resources Association Annual Conference*, San Diego, CA, November 3-5
- Comeau, D. Sheng, Z., **Wanyan, Y.** and Aristizabal, L.S. (2003) "Using GFLOW to Model Interaction between Surface Water and Ground Water: The Lower Valley of El Paso Case Study" *in Proceedings, New Mexico Symposium on Hydrologic Modeling*, Socorro, NM, August 12: E-20
- Sheng, Z., **Wanyan, Y.,** Aristizabal, L. and Reddy, K. (2002) "Seepage Losses for the Rio Grande Project" TWRI Special Report 2002-047, June: http://twri.tamu.edu/reports/2002/2002-047/sr2002-047.pdf
- Melchor L.O., Weissmann, J., **Wanyan, Y.** and Nazarian, S. (2003) "A Study of Expediting Construction of Rigid Pavements in Urban Areas by Using Alternative Pavement Sections" Research Report: *TX-01/0-4188-3*
- **Wanyan, Y.** (1999) "Hydraulics Review Guidebook for Guangdong Province Self-Taught Examination" Guangdong Department of Education , Guangzhou, China