Curriculum Vitae – Yan Jin

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EDUCATION

Ph.D. Environmental Toxicology, University of California, Riverside, 1994
Dissertation Title: Transport and Transformation of Volatile Organic Chemicals in Unsaturated Soils; *Advisor*: Dr. William A. Jury (Distinguished Professor of Soil Physics & Soil Physicist, Emeritus, UC-Riverside)

M.S. Soil Chemistry, New Mexico State University, 1989
Thesis Title: Toluene Behavior in Sludge-Amended Soils**;** *Advisor*: Dr. George A. O'Connor (Professor of Soil Chemistry, University of Florida)

B.S. Soil Science, Agricultural University of Hebei, China, 1983.

PROFESSIONAL EXPERIENCE

7/06 – present: Professor of Soil and Environmental Physics, Department of Plant and Soil Sciences, and Professor of Civil and Environmental Engineering (joint appointment), University of Delaware

6/13 – 8/13: Guest Professor, Institute of Environmental Engineering, Swiss Federal Institute of Technology, Zurich (ETHZ), Switzerland (Host: Professor Wolfgang Kinzelbach)

2/10 – 7/10: Guest Professor, Department of Environmental Sciences, Swiss Federal Institute of Technology, Zurich (ETHZ), Switzerland (Host: Professor Dani Or)

5/04 – present: Honorary Professor, College of Natural Resources and the Environment, China Agricultural University, Beijing, China

9/07 – 8/12: Honorary Professor, Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources, Yangling, China

6/01 – 5/06: Associate Professor, Department of Plant and Soil Sciences and Associate Professor of Civil and Environmental Engineering (joint appointment), University of Delaware

9/95 – 5/01: Assistant Professor, Department of Plant and Soil Sciences, University of Delaware

9/94 – 8/95: Postdoctoral Research Associate, Department of Environmental Sciences, University of California, Riverside

8/83 – 7/86: Lecturer, Department of Agronomy, Agricultural University of Hebei, China

PROFESSIONAL AFFILIATIONS

American Geophysical Union
Association of Chinese Soil and Plant Scientists in North America
European Geophysical Union
International Society for Porous Media
Soil Science Society of America
W3188 Western Regional Research Committee

HONORS AND AWARDS

- University of Delaware College of Agriculture and Natural Resources (CANR) Excellence in Research Award, 2018
- *Vadose Zone Journal* Outstanding Associate Editor, 2017
- Recipient, Don and Betty Kirkham Soil Physics Award, 2015

- Outstanding Contributions to Western Region Multistate Research, 2011
- Fellow, Soil Science Society of America, 2008.
- Provost's Honoree at 2008 Annual Board of Trustees' Meeting
- Outstanding Overseas Scholar, Chinese Academy of Sciences 2008
- Fellow, Institute for Transforming Undergraduate Education, University of Delaware, 1997.
- Outstanding Student Presentation, Annual Student Symposium, Environmental Toxicology Graduate Program, UC-Riverside, 1993.

EDITORIAL APPOINTMENTS

- Associate Editor, Vadose Zone Journal, 2003-2010, 2017-present
- Associate Editor, Soil Systems, 2018-present
- Co-Guest Editor, Vadose Zone Journal, for the Special Issue on "The Root Zone: oil Physics and Beyond", 05/2016.5-12/2017
- Associate Editor, Journal of Environmental Quality, 2008-2010

PATENTS

Jin, Y. and P. C. Chiu. Removal of microorganisms and disinfection byproduct precursors using elemental iron or aluminum. Granted: U.S. patent (US11/375,206), Canadian PAC30182-039, [This invention was selected as one of the seven innovations showcased in NASA's Tech Briefs, "2007 The Year in Technology" (http://www.udel.edu/PR/UDaily/2008/dec/nasa120707.html; www.techbriefs.com).

PUBLICATIONS

Google Scholar: 4332 total citations, h-index = 38 as of June 2018 (https://scholar.google.com/citations?user=Y5KDymwAAAAJ&hl=en)n 10

PRESENTATIONS

50 Invited, 161 volunteered in 10 countries. Some examples:

1. Jin, Y. **Keynote**. Coupled soil physical and biological processes in the rhizosphere. Wageningen Soil Conference – Soil Science in a Changing World. August 27-31, 2017. Wageningen University & Research, The Netherlands.
2. Jin, Y. Coupled soil physical and biological processes in the rhizosphere. Chinese National Annual Symposium of Soil Physics/International Soil Physics Workshop – Nexus of Food, Energy, and Water Systems, August 3-5, 2017. Shenyang, China.
3. Jin, Y. **Keynote**. Quantification and characterization of colloids and organic carbon released under oscillating redox conditions, in Session HS8.1.5 – Fate and transport of biocolloids and nanoparticles in soil and groundwater systems. *European Geosciences Union General Assembly*, Vienna, Austria, April 23-28, 2017.
4. Jin, Y. Plant-growth promoting bacteria (PGPR) enhance plant drought stress tolerance: Physicochemical and hydrological changes in rhizospheric soil. 35th International Geological Congress, Cape Town, South Africa, August 27 – September 4, 2016.
5. Jin, Y. Colloids: Their Mobilization and Potential Role in Carbon Cycling and Phosphorus Transport, China Agricultural University, Beijing, China, July 1, 2016
6. Jin, Y., W.J. Zheng, and H. Bais. The root zone: Soil physics and plant-growth promoting bacteria. Kirkham Conference, Ben-Gurion University of the Negev, Israel, April 10-14, 2016.
7. Jin, Y. Cotransport of hydroxyapatite and goethite nanoparticles in saturated porous media: size selective effect and phosphate oxygen isotope fractionation. 7th International Conference on Porous Media & Annual Meeting. May 18-21, 2015, Padua, Italy.

SELECTED RESEARCH PROJECTS AND GRANTS

Jaisi, D.P. and Y. Jin. Towards global phosphorus security: Development of a novel nanofertilizer using phosphorus recovered from agricultural wastes. USDA-NIFA, 2018-2021. Amount awarded: $462,990.

Jin, Y. and W. Zheng. Plant growth promoting rhizobacteria (PGPR) enhance plant drought stress tolerance: hydrological changes in rhizospheric soil. CANR Seed Grant, 2017-2019, Amount awarded: $48,500. (Zheng is a postdoc in Jin's group).

Jaisi, D.P. and Y. Jin. Bioavailability and fate of particulate and colloidal phosphorus released from agricultural sources: A case study in the Chesapeake Bay watershed. USDA-NIFA, 2015-2018. Amount awarded: $499,996.

Vasilas, B. and Y. Jin. Colloid mobilization and biogeochemical cycling of organic carbon, nitrogen, and phosphorous in wetlands. USDA-NIFA, 2013-2018. Amount awarded: $408,600.

Jin, Y. Characterizing mass and energy transport at different scales. Multistate project. USDA-Hatch. 2014-2019, $32,655/year.

Jin, Y., V. Lazouskaya, and G. Wang. Hydro-biophysical processes shaping microbial contamination in fresh produce. USDA-NIFA, 2013-2017. Amount awarded: $499,802. (Wang and Lazouskaya were postdocs in Jin's group).

Sparks, D.L., et al. (Jin is a co-PI). CZO: Spatial and temporal integration of carbon and mineral fluxes: a whole watershed approach to quantifying anthropogenic modification of critical zone carbon sequestration. U.S. NSF, 2009-2014. Amount awarded: $4,340,087.

Wang, L-P and Y. Jin. Theoretical and experimental investigation of nanoparticle retention and transport in porous media. U.S. NSF, 2009-2013. Amount awarded: $330,000.

Fuller, M.E., C.E. Schaffer, and Y. Jin. Fate and transport of colloidal energetic residues. DOD-DOE-EPA SERDP, 2009-2012. Amount awarded: $980,000.

Bryant, S. and Y. Jin. Quantifying the mechanisms of pathogen retention in unsaturated soils. U. S. Department of Agriculture, National Research Initiatives (NRI), 2007-2011. Amount awarded: $388,067.

Jin, Y. and J. Q. Xiao. Agglomeration, retention, and transport behavior of manufactured nanomaterials in variably-saturated porous media. U.S. EPA-STAR, 2007-2010. Amount awarded: $399,035.

Jin, Y. and L-P. Wang. Effects of 3-D pore-scale flow geometry and surface heterogeneity on colloid transport in porous media. U. S. Department of Agriculture, National Research Initiatives (NRI), 2008-2011. Amount awarded: $243,377.

Jin, Y., J. T. Sims, and K. Kniel. Effect of land application of wastes on the fate and transport of pathogens in soil. U. S. Department of Agriculture, NRI, 2006-2010. Amount awarded: $399,454.

TEACHING AND ADVISING

Courses Taught: 1) PLSC 438 **Fate and Transport of Contaminants in Soil**; 2) PLSC 603 **Soil Physics**
Supervised: 12 postdoctoral fellows, 11 Ph.D students, 11 M.S. students
Served: 45 graduate student committees

SERVICE APPOINTMENTS AND INVITATIONS

- Chair, Soil Physics & Hydrology Division, Soil Science Society of America, 2018
- Member, Soil Science Society of America's America-New Zealand Soil Science Professional Exchange Fund Committee (S576), 2018-2020
- Council Fellow, Delaware Environmental Institute, 2009 – present
- President, Association of Chinese Soil and Plant Scientists in North America, 2007 – 2008
- Chair, Western Regional Soil Physics Committee (W-1188), 2003 – 2004
- Co-Chair, Scientific Committee: International Workshop "Soil Physics and the Nexus of Food, Energy, and Water", August 2-5, 2017, Shenyang, China