Julian H. Singer
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Education

Ph.D. Soil Physics
University of Georgia
Dissertation: Fluid movement and solute transport through a forested watershed on the Atlantic Coastal Plain.

M.S. Botany
University of Georgia
Thesis: The effects of overstory removal and fire on wetland vegetation and recruitment from the seed bank in a hydrologically restored Carolina bay wetland.

B.S. Natural Resources
Sewanee: The University of the South

Research and Professional Experience

2003-Present	**Research Professional**, Soil Physics, Savannah River Ecology Laboratory (SREL), UGA.
2001-2003	**Graduate student**, Soil Physics, SREL, UGA.
1998-2001	**Hydrologist**, USDA Forest Service, New Ellenton, SC.

Professional and Research Interests:

Fluid flow and solute transport modeling
Vadose transport processes
Automated sampling systems using logic control systems
Surface complexation modeling
Surface water and groundwater quality monitoring
Soil, vegetation, atmosphere (SVAT) modeling
Upscaling reactive transport equations in porous media
Wetland restoration and mitigation

Teaching and Advising Experience

Developed and taught undergraduate Soils and Hydrology courses focusing on hands-on experience for NSF and DOE funded field station in collaboration with USDA Forest Service and an association of Historically Black Colleges and Universities (HBCU) (2004-present).

Introductory Biology, Community Ecology, Introductory Botany

Professional Activities

Soil Science Society of America
Agronomy Society of America
American Geophysical Union
Ecological Society of America
Society of Wetland Scientists

Patents:

Singer, J.H., J.C. Seaman, and S.A. Aburime. A Portable Automated Vadose Monitoring and Pore Water Sampling System. Invention Disclosure Statement submitted to the UGA Technology Commercialization Office.

Seaman, J.C., S.A. Aburime, **J.H. Singer**, and M. van Bavel (Dynamax, Inc.) Automated Vadose Monitoring and Pore Water Sampling System. Invention Disclosure Statement submitted to the UGA Technology Commercialization Office June 16, 2003.

Recent Publications:

Singer, J.H., J.C. Seaman, and S.A. Aburime. Development and Testing of an Automated System for Monitoring Movement and Collecting Soil Pore-Water Samples in an Irrigated Test Plot. To be submitted to the Vadose Zone Journal.

Singer, J.H., J.C. Seaman, and S.A. Aburime. Water and solute transport in the vadose zone of a forested site: Dispersion modeling. To be submitted to Soil Science Society of America Journal.

Rebel, K.T., S.J. Riha, **J.H. Singer**, N. Fahey, J.T. Stedinger. Using Tritium as a Tracer to Determine Differences in Tree Water Uptake within the Soil Profile. Submitted to the Canadian Journal of Forestry.

Seaman, J.C., M. Wilson, P.M. Bertsch, **J.H. Singer**, F. Majs, and S.A. Aburime. 2007. Analysis of tracer migration in a diverging radial flow field. Proceedings of the 2007 Georgia Water Resources Conference, March 27–29, Athens, GA, The University of Georgia.

Singer, J.H., J.C. Seaman, and S.A. Aburime. 2007. An improved technique for soil solution sampling in the vadose zone utilizing real-time data. Proceedings of the 2007 Georgia Water Resources Conference, March 27–29, Athens, GA, The University of Georgia.

Seaman, J.C., M. Wilson, P.M. Bertsch, **J.H. Singer**, F. Majs, and S.A. Aburime. 2007. Tracer migration in a radially-divergent flow field: Longitudinal dispersivity and anionic tracer retardation. Vadose Zone J. 6:

De Steven, D., R.R. Sharitz, **J. H. Singer**, and C. D. Barton. 2006. Testing a Passive Revegetation Approach for Restoring Coastal Plain Depression Wetlands. Restoration Ecology 14 (3): 452–460.

D. E. Radcliffe, L. T. West, and **J. H. Singer**. 2005. Gravel Effect on Wastewater Infiltration from Septic System Trenches. Soil Science Society of America Journal. 69: 1217-1224.

Hitchcock, D.R., C.D. Barton, K.T. Rebel, **J.H. Singer**, J.C. Seaman, J.D. Strawbridge, S.J. Riha, and J.I. Blake. 2005. A containment and disposition strategy for tritium-contaminated groundwater at the Savannah River Site, South Carolina, United States. Environ. Geosci. 12:17-28.

Hitchcock, D.R., K.T. Rebel, C.D. Barton, **J.H. Singer**, J.C. Seaman, J.D. Strawbridge, S.J. Riha, and J.I. Blake. 2004. Tritium phytoremediation at the Savannah River Site, SC USA: Water management, remediation, and hydrological research. Proceeding of the 6th Int. Conf. On Hydroscience and Engineering (ICHE-2004), May 30-June 3, Brisbane, Australia.

Aburime, S.A., J.C. Seaman**, J.H. Singer**, and T.S. Steenhuis. 2003. Reliability of contaminant transport modeling on vadose zone sampling methods in structured soils. *In* Proceedings of the 2002 National Conference on Environmental Science and Technology, Uzochukwu et al., (Eds.) Greensboro, NC, Battelle Press Publ. pg. 137-151.

Seaman, J.C., S.A. Aburime, J. Hutchison, and **J.H. Singer**. 2003. Evaluating vadose transport processes using centrifugation methods. *In* Proceedings of the 2002 National Conference on Environmental Science and Technology, Uzochukwu et al., (Eds.) Greensboro, NC, Battelle Press Publ. pg. 233-242.

Kolka, R.K., **J.H. Singer,** C.R. Coppock, W.P. Casey, C.C. Trettin. 2000. Influence of restoration and succession on bottomland hardwood hydrology. Ecological Engineering. Vol. 15 p. S131-S140.