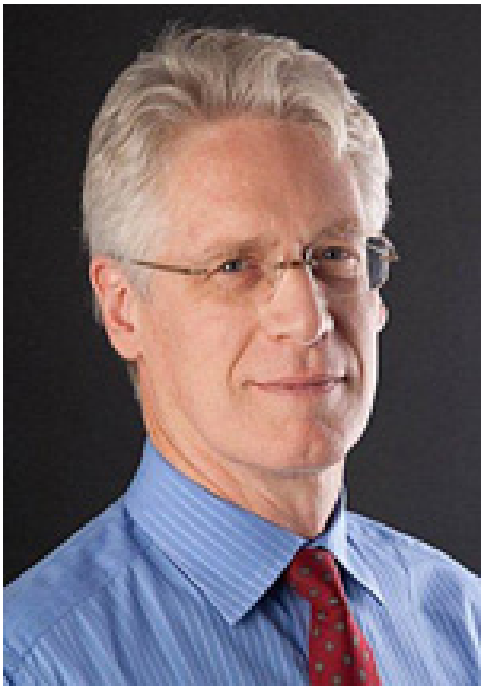

Dr. Kirk Hatfield

Director, Engineering School of Sustainable Infrastructure and Environment, University of Florida

Dr. Kirk Hatfield is the Director of the Engineering School of Sustainable Infrastructure and Environment at the University of Florida, the Director of the Florida Water Resources Research Center, and a Professor in the Department of Civil and Coastal Engineering. Dr. Hatfield received his BS and MS degrees from the University of Iowa and his PhD degree from the University of Massachusetts in Amherst. Following graduation, he joined the University of Florida, Department of Civil Engineering in 1987.

Dr. Hatfield's ongoing research activities are in the areas of aqueous environmental monitoring, contaminant fate and transport modeling in the subsurface, environmental remediation, and water resources systems analysis. He has active research collaborations with universities and institutes in Russia, Brazil, Canada, Mexico, England, and Germany. These collaborations have produced several patents and several technical paper awards in 1994, 1998, 2006, and 2011 from ASEE and ASCE and from the editorial board of the most highly cited journal in his discipline, Environmental Science and Technology. In 2006, the Department of Defense awarded Dr. Hatfield and his colleagues the distinguished "Project of the Year Award" for their research to demonstrate and validate a new technology that provides direct measures of water and contaminant fluxes in subsurface aquifers.

Selected Papers

Selected Publications

Tiered Approach to Resilience Assessment. *Risk Analysis*. 38:1772-1780. 2018

Development of a Passive Sensor for Measuring Vertical Cumulative Water and Solute Mass Fluxes in Lake Sediments and Streambeds. *Advances in Water Resources*. 105:1-12. 2017

Theoretical Aspects for Estimating Anisotropic Saturated Hydraulic Conductivity From In-Well or Direct-Push Probe Injection Tests in Uniform Media. *Advances in Water Resources*. 104:242-254.2017

Quantifying Nutrient Fluxes With a New Hyporheic Passive Flux Meter (Hpfm). *Biogeosciences*. 14:631-649. 2017

A New Device for Characterizing Fracture Networks and Measuring Groundwater and Contaminant Fluxes in Fractured Rock Aquifers. *Water Resources Research*. 52:5400-5420. 2016

Nature-Like Solution for Removal of Direct Brown 1 Azo Dye from Aqueous Phase Using Humics-Modified Silica Gel 2016

Silanized Humic Substances Acting As Hydrophobic Modifiers of Soil Separates Inducing Formation of Water-Stable Aggregates in Soils. *Catena*. 137:229. 2016

Targeted Design of Water-Based Humic Substances-Silsesquioxane Soft Materials for Nature-Inspired Remedial Applications. *Rsc Advances*. 6:48222-48230. 2016

Capture and Release Zones of Permeable Reactive Barriers Under the Influence of Advective-Dispersive Transport in the Aquifer. *Advances in Water Resources*. 69:79-94. 2014-07-01

Effect of Injection Screen Slot Geometry On Hydraulic Conductivity Tests 2014-04-01

Nonreversible Immobilization of Water-Borne Plutonium Onto Self-Assembled Ad Layers of Silanized Humic Materials 2014-02-01

A stochastic model for estimating groundwater and contaminant discharges from fractured rock passive flux meter measurements. *Water Resources Research*. 2012

Contaminant Discharge and Uncertainty Estimates from Passive Flux Meter Measurements. *Water Resources Research*. 48. 2012

Controlling Aqueous Sorption of Humic Substances on Silica Gel by Directed Alkoxysilyl-Derivatization of Their Functionalities. *Colloids and Surfaces A-Physicochemical and Engineering Aspects*. 396:224-232. 2012

Partitioning of Waterborne Plutonium(V) between Mobile and Immobile Compartments of NOM Probed with a Use of Mineral-Adhesive Silanized Humic Substances 2012

Self-Assembly of Alkoxysilanized Humic Substances Into Multidomain Adlayers At the Water-Solid Interface: Linking Surface Morphology To the Molecular Structure of the Adsorbate 2012-01-01

Clostridium Chromiireducens Sp Nov., Isolated From Cr(Vi)-Contaminated Soil. *International Journal of Systematic and Evolutionary Microbiology*. 61:2626-2631. 2011-11-01

Dimensionless Parameters To Summarize the Influence of Microbial Growth and Inhibition On the Bioremediation of Groundwater Contaminants. *Biodegradation*. 22:877-896. 2011-09-01

A Trigonometric Interpolation Approach To Mixed-Type Boundary Problems Associated With Permeameter Shape Factors. *Water Resources Research*. 47. 2011-03-01

Approximate up-scaling of geo-spatial variables applied to deep foundation design. *Georisk*. 5:163-172. 2011

Constructal design of permeable reactive barriers: A groundwater hydraulics criteria. *Journal of Engineering Mathematics*. 2011

Dimensionless monod parameters to summarize the influence of microbial growth kinetics and inhibition on the attenuation of groundwater contaminants. *Biodegradation*. 877-896. 2011

Evaluation and application of anion exchange resins to measure groundwater uranium flux at a former uranium mill site 2011

Stochastic Evaluation of Subsurface Contaminant Discharges Under Physical, Chemical, and Biological Heterogeneities. *Advances in Water Resources*. 33:801-812. 2010-07-01

Analytical Solutions for Flow Fields Near Drain-And-Gate Reactive Barriers. *Groundwater*. 48:427-437. 2010-05-01