

**Name** David E. Radcliffe

**Rank:** Professor

% Salary Budgeted: Instr. 40 Res. 60 Ext. Outreach

**Program Overview:** Watershed-scale modeling of phosphorus and sediment transport and modeling of on-site wastewater systems.



**Education:** BS, US Naval Academy, 1971  
MS, University of Kentucky, 1980  
PhD, University of Kentucky, 1984

**Employment:** University of Georgia since 1983

**Membership in Professional Societies:**

Soil Science Society of America and American Geophysical Union

**Awards:** Fellow Soil Science Society of America (2000)

**Contributions to Teaching:**

(1)	Undergraduate			
	Course #	Title	Times taught (Sp & Fall)	Avg. # of Students
	CRSS 1020	Intro. Water Resources	Fall	18
	CRSS 4600/6600	Soil Physics	Fall	23
(2)	Graduate			
	Course #	Title	Times taught (Sp & Fall)	Avg. # of Students
	CRSS 8600	Numerical Methods	Sp	3
	CRSS 8610	Spatial Modeling	Alt Sp	8
(3)	Service on Graduate Advisory Committees			
	Degree (MS/Ph.D)	Involvement (member/chair)		
	8/6	11/3		

**Contributions to Research and Other Creative Activities:**

No. of books	0	
No. of book chapters	3	
No. of refereed papers/by journal	J. Environmental Quality	5
	Vadose Zone J.	3
	Soil Sci. Soc. Am. J.	2
	Agronomy J.	2
	Geoderma	1
	Transactions ASAE	1
	Soil Tillage Res.	1
	J. Soil Water Cons.	1
No. of proceedings papers	18	
No. of abstracts	39	
No. of Patents/PVPs		
Other activities		

**Contributions to Extension:**

Member Animal Waste Awareness Research Extension (AWARE) Team

**Sources of Grants/amounts:**

Clean Water Act Section 319 Funds, Georgia Environmental Protection Division. \$565,115

USDA NRICGP. \$327,157

USDA CSREES Special Grant. \$280,623

International Fellows Program. University of Georgia. \$3,000

USDA CSREES Special Grant. \$274,061

USDA CSREES 406 program \$550,000

Clean Water Act Section 319 Funds, Georgia Environmental Protection Division. \$121,560

Scientific exchange program. Australian Cotton Cooperative Research Centre. A\$3000

**Contributions to Professional Service:** (committee service to department, college, university, and/or professional societies)

Soil Physics Division representative, SSSA Board

Past Technical Editor, Soil Physics Division

Member, University Council 2002-2005

CSREES Review Committee, Environmental Microbial Safety Lab, Beltsville, MD

CSREES 406 program panel member, 2004-2005

Past Chair, Soil Physics Division, SSSA

Past President, Soil Sci. Soc. Georgia

**Goals for the Next Five Years:**

Research: Continue development of watershed-scale computer model of sediment and phosphorus transport to Lake Allatoona using the Soil Water Assessment Tool (SWAT) that covers an area of 2,800 km<sup>2</sup>. Seek funding from EPA to fund monitoring program for paired watershed studies in the Lake Allatoona watershed comparing low impact development urban landuse with traditional urban landuse using first and second order stream automated sampling. Continue development of uncertainty analysis of SWAT. Continue analysis of on-site wastewater management (septic) systems for water flow using HYDRUS-2D numerical model. Develop a simple method for estimating the long-term acceptance rate for on-site systems based on model simulations. Instrument on-site system trenches at Griffin with automated TDR, tensiometers, and water level wells for comparison with HYDUS-2D simulations.

Teaching: Expand enrollment of Introduction to Water Resources course. Develop a dual undergraduate track for Soil Physics course that will attract engineering students by requiring integral calculus (3-hr and 4-hr versions of course, 2 lectures each week are common to both tracks, 3<sup>rd</sup> lecture covers integral calculus applications for the course material covered that week). Add more calculus to advanced graduate class (CRSS 8600) that covers HYDRUS-2D in a tutorial setting. Increase enrollment in other advanced graduate class (CRSS 8610) on watershed modeling to about 15 students.