

**Name:** Paul M. Bertsch

**Rank:** Professor and Director of the Savannah River Ecology Laboratory

**Program Overview:** Current research examines contaminant-mineral interactions, the chemical speciation and speciation transformations of contaminant in complex environmental media, and how the molecular form of contaminants, including manufactured nanoparticles. Research also seeks to establish underlying mechanisms involved in the natural attenuation of metals and radionuclides and those involved in novel in situ remediation strategies.



**Education:** *B.S.*, Plant Science, University of Connecticut , *M.S.*, Soil Chemistry, Virginia Tech  
*Ph.D.*, Soil Physical Chemistry-Mineralogy, University of Kentucky

**Employment:**

1999-present Director, Savannah River Ecology Laboratory, The University of Georgia, Aiken, SC and Professor Crop and Soil Sciences, The University of Georgia.

**Membership in Professional Societies:**

American Association for the Advancement of Science (AAAS)  
American Chemical Society  
American Geophysical Union  
American Society of Agronomy  
Clay Minerals Society  
Soil Science Society of America  
International Clay Minerals Society (AIPEA)  
International Union of Soil Science  
Geochemical Society

**Awards:**

D. W. Brooks Award for Excellence in Research – The University of Georgia. **2004.**  
Career Achievement Award – Soil Science Research Award –Soil Science Society of America. **2004.**  
UGA Excellence in Undergraduate Research Mentoring Award, **2001.**

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

(1) Undergraduate Course 0 (In last seven years)  
(2) Graduate Course 0 (In last seven years)  
(3) Service on Graduate Advisory Committees –  
Degree: **MS/ 3 Ph.D – 4 Involvement (member/chair)**

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

No. of Books **0**  
No. of Book Chapters **5**  
No. of refereed papers **46 > 137 total**  
No. of proceedings papers **4**  
No. of abstracts **21**  
No. of Patents/PVP's: **1**

Other Activities: Appointed to **National Academy of Sciences Committee for Soil Science.**  
Appointed to the **National Academy of Sciences Committee on Earth Resources.** Appointed to **National Academy of Sciences Committee on Frontiers in Soil Science Research.**

Appointed to the **Scientific Advisory Committee of the Advanced Photon Source**, Argonne National Laboratory, **National EPA Task Force** to develop criteria for Natural Attenuation of Inorganic Contaminants and Radionuclides., **National Academy of Sciences National Research Council Committee** on Building a Long-term Environmental Quality Research and Development program in the US Dept. of Energy, **Executive Committee of the National Synchrotron X-ray users community**-EnviroSync.

**Contribution to Extension: N/A**

**Sources of Grants/Amounts: (in last 7 years)**

**1999-2006**

USEPA - **\$560,180**

US Department of Energy - **\$928,725**

Westinghouse-Savannah River Co - **\$623,207**

USDA - **\$550,309**

Idaho Falls National Engineering Laboratory - **\$113,999**

Bechtel-Savannah River - **\$84,078**

NSF - **\$15,000**

US Geological Survey - **\$5,000**

US Dept of the Interior - **\$5,000**

Advanced Photon Source , Argonne National Laboratory - **\$50,000**

EC International - **\$77,238**

South Carolina Sea Grant Consortium - **\$75,849**

SREL CONTRACT - US Dept. of Energy Dollars– **Total \$68,416,824** (Since Paul has been Director)

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

Archway to Excellence Committee. University of Georgia,

Chair-Brooks Award Committee. University of Georgia,

Chair, Program Development Committee . Clay Minerals Society.

Chair, Division of Soil Chemistry, Soil Science Society of America,

Fellow evaluation committee -Soil Science Society of America

Chair-Five-year review committee for the Director of the Marine Extension Service.

Integrated Life Science Task Force Committee. University of Georgia,

Placement and Career Promotion Committee. American Chemical Society

Advisory Board of Advances in Agronomy.

Search Committee for Department Head of Crop and Soil Sciences-University of Georgia.

Member of the Re-direction committee for the Department of Crop and Soil Sciences -University of Georgia.

**Goals for the Next Seven Years:**

Over the next seven years my lab will be focused on coupling molecular environmental science and molecular biological techniques to understand the complex coupled biogeochemical processes involved in the bioavailability of metals and metalloids. Specifically, we will continue to focus on using advanced spectroscopic and imaging techniques along with advanced hyphenated separations-ICP-MS methods to provide information on the chemical speciation of metals and metalloids in soils and soil solutions and coupling this information with genomic, (metallo) proteomic, and (metallo) metabolomic methods to understand how various biological receptors regulate metal speciation and speciation dynamics.