

CURRICULUM VITAE

THOMAS GLENN HINTON
University of Georgia, Savannah River Ecology Laboratory
Aiken, SC 29802

(803) 725-7454; thinton@srel.edu

CURRENT POSITION

Senior Research Scientist, Savannah River Ecology Laboratory, University of Georgia, Aiken, SC.
Adjunct Professor, Radiological Health Sciences, Colorado State University, Fort Collins, CO.
Adjunct Professor, Environmental Engineering and Science, Clemson University, Clemson, SC.

EDUCATION

Academic Degrees:

- B. S., Wildlife Biology. Colorado State University. 1976.
- M. S., Radiation Biology. Colorado State University. 1983.
- Ph.D., Radiation Ecology. Colorado State University. 1989.

Post-graduate:

- *Ecological Modeling Using Microcomputers*. Colorado State University. 8-12 June 1987.
- *Summer School on Radioecology*. Organized by the Commission of European Communities, the International Union of Radioecologists, and the Belgian Nuclear Research Center. Mol, Belgium. 8-20 July 1990.
- *Experimental Design*. Statistical design course at the ETH, Zurich, Switzerland. Fall semester 1990.
- *Radiation-Worker II Training*, Westinghouse Savannah River Company, Aiken, SC. yearly since 1992.
- *Quantitative Ecotoxicology: A Hierarchical Approach*. Savannah River Symposia on Environmental Science, Aiken, SC. 20-23 June 1994.
- *Quantitative Methods in Ecotoxicology*. Savannah River Symposia on Environmental Science, Aiken, SC. 10-14 July 1995.
- *Pathway Analysis and Risk Assessment for Environmental Compliance and Dose Reconstruction*. Kiawah Island, SC. 6-10 November 1995.
- *Identification of Wetland Vegetation*, University of Georgia, Athens, GA. 18-21 August 1998.
- *Radiation Generating Device Training*, Westinghouse Savannah River Company, Aiken, SC. August 2000.
- *Handling People with Tact and Skill*, Augusta, GA. May 2000.
- *New Advances in Ecological Risk Assessment*, Duke University, Durham, NC. April 30-May 3, 2002.
- *RESRAD-BIOTA Code Training Course*. A model for estimating ecological risks from exposure to radionuclides. Argonne National Laboratory. 4-5 November 2003.
- *Proof Reading and Editing*. Dale Carnegie Course. Augusta, GA. February 2003.
- *How to Coach Employees to Maximum Achievement*. Dale Carnegie Course Augusta, GA. June 2003.
- *Medaka as a Model Organism for Human and Ecological Risks*. Univ. of Georgia, Athens. 24-27 March 2004.
- *Program Funding and Grants Administration*. NIH Workshop. Miami, FL. 5-8 May, 2004.
- *How to Balance Priorities and Manage Multiple Projects*. Fred Pryor Course. Augusta, GA. 2 June 2004.
- *Preparing National Institutes of Health RO1 Proposals*, Medical College of GA. Augusta, March 2005.

PROFESSIONAL EXPERIENCE

2006 - present	Senior Research Scientist, University of Georgia, Savannah River Ecology Laboratory
1999 - 2005	Associate Research Scientist, University of Georgia, Savannah River Ecology Laboratory.
1992 - 1998	Assistant Research Scientist, University of Georgia, Savannah River Ecology Laboratory.
1992 - 1995	Joint appointment with the University of Georgia (8 months/year) and the Paul Scherrer Institute, Switzerland (4 m/y).
1992	Staff Scientist, Paul Scherrer Institute, Switzerland.
1989 - 1991	Postdoctoral Fellow, Paul Scherrer Institute, Switzerland.
1985 - 1989	Ph.D. program.

1982 - 1983	MS. Program
1981 - 1985	Environmental Engineer, Reclamation Specialist, Pathfinder Mines Corporation, Shirley Basin, WY.
1979 - 1980	Agricultural Specialist, Decherd, TN.
1977 - 1978	Wildlife Biologist, Utah International Incorporated, Farmington, NM.
1972 - 1976	B.S. program.

RESEARCH AND TEACHING INTERESTS

Transport and fate of radioactive contaminants in aquatic and terrestrial ecosystems; effects of low-level, chronic irradiation on biota; human and ecological effects of chronic, low-dose contaminant mixtures using medaka fish as a model organism; transgenerational effects from contaminant exposures; coupling effects across levels of biological organization -- from molecules to ecosystems; human and ecological risk analyses; remediation of radioactively contaminated ecosystems; urban radiation ecology; contaminant modeling.

PEER REVIEWED MANUSCRIPTS

- **Hinton, T. G.**, D. I. Kaplan, A. S. Knox, D. P. Coughlin, R. V. Nascimento, S. I. Watson, D. E. Fletcher, and B. J. Koo. 2006. Use of illite clay for *in situ* remediation of ¹³⁷Cs-contaminated water bodies: Field demonstration of reduced biological uptake. *Environ. Sci. Tech.* (in press)
- Pinder, J. E., **T. G. Hinton** and F. W. Whicker. 2006. Foliar uptake of cesium from the water column by aquatic macrophytes. *J. Environ. Radioactivity* 85:23-47.
- **Hinton, T. G.** and F. Bréchnignac. 2005. A case against biomarkers as they are currently used in radioecological risk analyses: A problem of linkage. In: *Scientific Trends in Radiological Protection of the Environment* (Eds: F. Brechignac and B. J. Howard). pg 123-136. ISBN: 2-7430-0880-8. IRSN, France.
- Kaplan, D. I., **T. G. Hinton** and A. S. Knox. 2005. Cesium-137 partitioning to wetland sediments and uptake by plants. *J. Radioanalytical and Nuclear Chem.* 264: 393-399.
- Dion, H. M., C. S. Romanek, **T. G. Hinton**, and P. M. Bertsch. 2005. ¹³⁷Cs in floodplain sediments of the Lower Three Runs Creek on the DOE Savannah River Site. *J. Radioanalytical and Nuclear Chem.* 264: 481-488.
- **Hinton, T. G.**, D. I. Kaplan, A. S. Knox and R. Sharitz. 2005. Phytoremediation potential of native trees in a uranium and thorium contaminated wetland. *J. Radioanalytical and Nuclear Chem.* 264:417-422.
- Pinder III, J. E., **T. G. Hinton** and F. W. Whicker 2005. The influence of a whole-lake addition of stable cesium on the remobilization of aged ¹³⁷Cs in a contaminated reservoir. *J. Environ. Radioactivity* 80:225-243.
- **Hinton, T. G.**, J. S. Bedford, J. C. Congdon and F. W. Whicker. 2004. Effects of radiation on the environment: A need to question old paradigms and enhance collaboration among radiation biologists and radiation ecologists. *Radiation Research* 162:332-338.
- Wilson, M. D., W. McCormick and **T. G. Hinton**. 2004. The maximally exposed individual—Comparison of maximum likelihood estimation of high quantiles to the extreme value estimate. *Risk Analysis* 24:1143-1150.
- **Hinton, T. G.**, D. P. Coughlin, Y. Yi and L. C. Marsh. 2004. Low dose rate irradiation facility: Initial study on chronic exposures to medaka. *J. Environ. Radioactivity* 74:43-55.
- Whicker, F. W., **T. G. Hinton**, M. M. MacDonnell, J. E. Pinder III, and L. J. Habegger. 2004. Avoiding destructive remediation at DOE sites. *Science* 303:1615-1616.
- Whicker, F. W., **T. G. Hinton**, M. M. MacDonnell, J. E. Pinder III, and L. J. Habegger. 2004. Response to L. Moore's and Response to R. Efrogmson's comments on "Avoiding destructive remediation at DOE sites". *Science* 306:975-977.
- Wilson, M. D. and **T. G. Hinton**. 2003. Comparative bias associated with various estimates of dose to the maximally exposed individual. *Health Physics* 85:585-593.
- Sauras-Yera, T., J. Tent, Y. Ivanov, **T. G. Hinton**, G. Rauret and R. Vallejo,. 2003. Reduction of crop contamination by resuspension within the 30-km zone of Chernobyl Nuclear Power Plant. *Environ. Sci. Technol.* 37:4592-4596.
- Wilson, M. D. and **T. G. Hinton**. 2003. Statistics of extreme values – comparative bias associated with various estimates of dose to the maximally exposed individual. IN: *Proceedings of the Third International Symposium on the Protection of the Environment from Ionising Radiation*. Darwin, Australia, 22 -26 July 2002 International Atomic Energy Agency. IAEA-CSP-17. Vienna, Austria.

- Ulsh, B. A., **T. G. Hinton**, J. D. Congdon, L. C. Dugan, F. W. Whicker and J. S. Bedford. 2003. Environmental biodosimetry: A biological relevant tool for ecological risk assessment and biomonitoring. *J. Environ. Radioactivity* 66:121-139.
- Knox, A., D. Kaplan, D. Adriano, **T. G. Hinton**, and M. D. Wilson. 2003. Apatite and Phillipsite as sequestering agents for metals and radionuclides. *J. Environ. Quality* 32:515-525.
- **Hinton, T. G.**, J. E. Pinder, F. W. Whicker, L. Marsh, J. Joyner, D. Coughlin, Y. Yi, and J. Gariboldi. 2002. Comparative kinetics of cesium from whole-lake, limnocorrals, and laboratory-scale experiments. IN: *The Radioecology- Ecotoxicology of Continental and Estuarine Environments* (Ed: F. Brechignac), EDP Sciences Press, France.C1605- C1-610.
- Ulsh, B., S. Miller, F. Mallory, R. Mitchel, D. Morrison, J. Bedford, F. Whicker, **T. Hinton** and D. Boreham. 2002. Cytogenetic biomarkers of radiation exposure in nonhuman organisms. IN: *Proceedings from the International Conference on Radioactivity in the Environment*. (Eds. P. Borretzen, T. Jolle and P. Strand) 1-5 September 2002, Monaco. pp 74-78.
- Wilson, M. D. and **T. Hinton**. 2002. The maximally exposed individual—Use of simulation to estimate bias in various sample statistics. IN: *Proceedings from the International Conference on Radioactivity in the Environment*. (Eds. P. Borretzen, T. Jolle and P. Strand) 1-5 September 2002, Monaco. pp 153- 157.
- Malek, M. A., **T. G. Hinton** and S. B. Webb. 2002. A comparison of ^{90}Sr and ^{137}Cs uptake in plants via three pathways at two Chernobyl-contaminated sites. *J. Environ. Radioactivity* 58:129-141.
- **Hinton, T. G.**, A. Knox, D. Kaplan and S. Serkiz. 2001. An *in situ* method for remediating ^{137}Cs -contaminated wetlands using naturally occurring minerals. *J. Radioanalytical and Nuclear Chemistry* 249:197-202.
- Mulhmann-Diaz, M. C., B. A. Ulsh, F. W. Whicker, **T. G. Hinton**, J. D. Congdon and J. S. Bedford. 2001. Conservation of chromosome-1 in turtles over 66 million years. *Cytogenetics and Cell Genetics* 92:285-297.
- Ulsh, B. A., J. D. Congdon, **T. G. Hinton**, F. W. Whicker and J. S. Bedford. 2001. Culture methods for turtle lymphocytes. *Methods in Cell Science*. 22:285-297.
- Ulsh, B. A., F. W. Whicker, **T. G. Hinton**, J. D. Congdon and J. S. Bedford. 2001. Chromosome translocations in *T. scripta*: The dose-rate effect and *in vivo* lymphocyte radiation response. *Radiation Research* 155:63.
- Congdon, J. D., A. E. Dunham, W. A. Hopkins, C. L. Rowe and **T. G. Hinton**. 2001. Resource allocation-based life histories: A conceptual basis for studies of ecological toxicology. *Environ. Toxicology and Chemistry* 20:1698-1703.
- **Hinton, T. G.** 2000. Strong inference, science fairs and radioecology. *J. Environ. Radioactivity* 51:277-279.
- Abraham, J. P., F. W. Whicker, **T. G. Hinton** and D. J. Rowan. 2000. Inventory and spatial pattern of ^{137}Cs in a pond: A comparison of two survey methods. *J. Environ. Radioactivity* 51: 157-171.
- Ulsh, B. A., M. C. Mulhmann-Diaz, F. W. Whicker, **T. G. Hinton**, J. D. Congdon, and J. S. Bedford. 2000. Chromosome translocations in turtles: A biomarker in a sentinel animal for ecological dosimetry. *Radiation Research* 153: 752-759.
- **Hinton, T. G.**, C. M. Bell, F. W. Whicker and T. Phillippi. 1999. Temporal changes and factors influencing ^{137}Cs concentration in vegetation colonizing an exposed lake bed over a three year period. *J. Environ. Radioactivity* 44:1-19.
- Kirchner, G., S. Peterson, U. Bergstrom, S. Bushell, P. Davis, V. Filistovic, **T. Hinton**, P. Krajewski, T. Riesen, and P. Uit de Haag. 1999. Effect of user interpretation on uncertainty estimates: An example of the air-to-milk transfer of radiocesium. *J. Environ. Radioactivity* 42: 177-190.
- Whicker, F. W., **T. G. Hinton**, K. A. Orlandii and S. B. Clark. 1999. Uptake of natural and anthropogenic actinides in vegetable crops grown on a contaminated lake bed. *J. Environ. Radioactivity* 45:1-12.
- **Hinton, T. G.**, M. Malek, C. Sherony and S. B. Clark. 1998. Operationally-defined availability from sequential extractions compared to plant uptake of ^{137}Cs and ^{90}Sr . *J. Radioanalytical Nuclear Chem.* 235:185-190.
- **Hinton, T. G.**, J. A. Gessaman, R. D. Nagle and J. D. Congdon. 1998. An evaluation of whole-body potassium-40 content for estimating lean and fat mass in pigeons. *Condor* 100:579-582.
- Connor, D. M., **T. G. Hinton** and C. M. Bell. 1997. Variance partitioning as a guide for sampling and comparing the spatial distribution of Hg and ^{137}Cs in sediments. *Sci. Total Environ.* 206:167-176.

- Mohler, H. J., F. W. Whicker and **T. G. Hinton**. 1997. Temporal trends of ^{137}Cs in an abandoned reactor cooling reservoir. *J. Environ. Radioactivity* 37:251-268.
- **Hinton, T. G.**, P. Fledderman, J. Lovich, J. Congdon and J. W. Gibbons. 1997. Radiographic determination of fecundity: Is the technique safe for developing embryos? *Chelonian Conservation and Biology*. 2:409-414.
- Whicker, F. W., **T. G. Hinton** and D. J. Niquette. 1997. Effects of a partial draw down on the dynamics of ^{137}Cs in an abandoned reactor cooling reservoir. IN: *Freshwater and Estuarine Radioecology*. (Ed: Hilton, Desmet, Comans, Blust and deBetencourt) *Studies in Environmental Science*, Elsevier. pp. 205-214.
- **Hinton, T. G.** and F. W. Whicker. 1997. A screening model approach to determine probable impacts to fish from historic releases of radionuclides. IN: *Freshwater and Estuarine Radioecology* (Ed: Hilton, Desmet, Comans, Blust and deBetencourt) *Studies in Environmental Science*, Elsevier. pp. 441-448.
- Clark, S. B., W. H. Johnson, M. A. Malek, S. M. Serkiz and **T. G. Hinton**. 1996. A comparison of sequential extraction techniques to estimate geochemical controls on the mobility of fission product, actinide and heavy metal contaminants in soil. *Radiochemica Acta*. 74:173-179.
- **Hinton, T. G.**, M. McDonald, Y. Ivanov, N. Arkhipov and A. Arkhipov. 1996. Foliar absorption of resuspended ^{137}Cs relative to other pathways of plant contamination. *J. Environ. Radioactivity* 30:15-30.
- Askbrant S., J. Melin, J. Sandalls, G. Rauret, **T. Hinton**, R. Vallejo, A. Cremers, C. Vandecasteele, N. Lewyckij, Y. Ivanov, S. Levschuk, B. Prister, N. Arkhipov, A. Arkhipov, S. Kruglov and R. Alexakhin. 1996. Mobility of radionuclides in undisturbed and cultivated soils in Ukraine, Belarus and Russia six years after the Chernobyl fallout. *J. Environ. Radioactivity* 31:287-312.
- **Hinton, T. G.**, P. Kopp, S. Ibrahim, I. Bubryak, A. Syomov, L. Tobler and C. Bell. 1995. A comparison of techniques used to estimate the amount of resuspended soil on plant surfaces. *Health Physics* 68:1-9.
- **Hinton, T. G.**, J. M. Stoll and L. Tobler. 1995. Soil contamination of plant surfaces from grazing and rainfall interactions. *J. Environ. Radioactivity* 29:11-26.
- **Hinton, T. G.** 1994. Sensitivity analysis of ECOSYS-87: An emphasis on the ingestion pathway as a function of radionuclide and type of deposition. *Health Physics* 66:513-531.
- **Hinton, T. G.**, P. Kopp, S. Ibrahim, I. Bubryak, A. Syomov and L. Tobler. 1993. Contaminated soil on Chernobyl vegetation. IN: *Proceedings of the 26th Midyear Topical Meeting of the Health Physics Society*. Coeur d'Alene, ID. pp. 407-421.
- Whicker, F. W., D. J. Niquette and **T. G. Hinton**. 1993. To remediate or not: A case history. IN: *Proceedings of the 26th Midyear Topical Meeting of the Health Physics Society*. Coeur d'Alene, ID. pp. 473-485.
- **Hinton, T. G.** 1992. Contamination of plants by resuspension: a review, with critique of measurement methods. *Sci. Total Environ.* 121:171-193.
- **Hinton, T. G.**, F. W. Whicker, J. E. Pinder III and S. A. Ibrahim. 1992. Comparative kinetics of ^{47}Ca , ^{85}Sr , and ^{226}Ra in the freshwater turtle, *Trachemys scripta*. *J. Environ. Radioactivity* 16:25-47.
- **Hinton, T. G.**, F. W. Whicker and J. E. Pinder III. 1988. The comparative kinetics of Ca, Sr, and Ra within the yellow-bellied turtle *Trachemys scripta*, as influenced by dietary calcium, season, age and sex of the animal. IN: *Impact Des Accidents D'Origine Nucleaire Sur L'Environnement*. The 4th International Symposium of Radioecology. March, 1988. Cadarache, France. Vol. 2, E120-128.
- **Hinton, T. G.** and F. W. Whicker. 1985. A field experiment on Rn flux from reclaimed uranium mill tailings. *Health Physics* 48(4):421-427.
- **Hinton, T. G.** and F. W. Whicker. 1982. A field experiment on tailings reclamation: Radon flux versus earthen cover depth. IN: *The 5th Symposium on Uranium Mill Tailings Management*. Colorado State University, Fort Collins, CO. pp. 421-432.

BOOK CHAPTERS

- **Hinton, T. G.** and J. E. Pinder, III. 2001. A review of plutonium releases from the Savannah River Site, subsequent behavior within terrestrial and aquatic environments, and resulting dose to humans. IN: *Plutonium in the Environment*, (Ed. A. Kudo) Environmental Radioactivity Series, Vol. I. Elsevier Science Ltd. UK pp 413 – 436.
- **Hinton, T. G.** 1998a. Risks from exposure to radiation. Chapter 14 IN: *Fundamentals of Ecotoxicology* (Ed: M. Newman). Lewis Publishers, Ann Arbor, MI. pp 251-278.

- **Hinton, T. G.** 1998b. Estimating human and ecological risks from exposure to radiation. Chapter 7 IN: *Risk Assessment: Logic and Measurement* (Ed: M. Newman and C. Strojjan). Ann Arbor Press, Chelsea, MI. pp 143-166.
- **Hinton, T. G.** and D. E. Scott. 1990. Radioecological techniques for herpetology with an emphasis on freshwater turtles. Chapter 21 IN: *The Life History and Ecology of the Slider Turtle*. (Ed. J. W. Gibbons). Smithsonian Institution Press, pp. 267-287.

NON-REVIEWED PROCEEDINGS

- **Hinton, T. G.**, J. Congdon, B. Ulsh, W. Kuhne, J. Bedford, W. Whicker. 2004. Molecular endpoints as indicators of ecological risks from chronic, low-level irradiation: A problem of not connecting-the-dots. IN: *Radioecology and Environmental Dosimetry*. (Eds. J. Inaba, H. Tsukada and A. Takeda. Institute for Environmental Sciences, Aomori, Japan. (ISBN 4-9980604-6-5 C3040) pp 37-43.
- **Hinton, T. G.** and F. W. Whicker. 2003. Environmental radiation effects: A need to question old paradigms and to enhance collaboration among radiation biologists and radiation ecologists. IN: *Molecular Mechanisms for Radiation –Induce Cellular Response and Cancer Development*. (Ed. K.. Tanaka, T. Takabatake, K. Fujikawa, T. Matsumoto and F. Sato) Institute for Environmental Sciences, Aomori, Japan. pp 1-7.
- Whicker, F. W. and **T. G. Hinton**. 1997. Effects of ionizing radiation on terrestrial ecosystems. *Proceedings of International Symposium on Ionizing Radiation*, Stockholm, Sweden. May 20-25, 1996. Swedish Radiation Protection Institute.
- **Hinton, T. G.** 1993. Variation among model predictions within an IAEA validation exercise. In: *Proceedings on Environmental Transport and Dosimetry*. Charleston, SC, American Nuclear Society, pp. 138-143.
- Whicker, F. W., **T. G. Hinton**, D. J. Niquette, and J. Seel. 1993. Health risks to hypothetical residents of a radioactively contaminated lake bed. IN: *Proceedings of the ER'93 Conference*, Augusta, GA. pp. 619-624.
- **Hinton, T. G.** 1990. A review of the mass loading approach to estimate resuspension onto plant surfaces. (Invited paper) IN: *The International Union of Radioecologists' 7th meeting on Soil to Plant Transfer Factors*. Sept. 27-29, Uppsala, Sweden. pp. 27-37.

TECHNICAL REPORTS

- **Hinton, T. G.** (in press) Savannah River Site – Source Terms and Pathways. Radioactivity from Military Installation Sites and Effects on Population Health (RADSITE). The Scientific Committee on Problems of the Environment (SCOPE), part of the International Council of Scientific Unions, which is a branch of the United Nations, is an interdisciplinary body of scientific expertise that serves as a source of advice with respect to environmental problems. The aim of this international SCOPE study is to review the radioactive releases and waste generated during the development of nuclear weapons. The project will produce an integrated worldwide assessment of source terms, radionuclide releases, and associated human and ecological risks.
- Committee Report *Cesium in the Environment*. (in press). National Council on Radiation Protection and Measurements. (C. Garten, D. Hamby, K. Higley, **T. Hinton**, D. Kaplan, D. Rowan, G. Schreckhise, W. Whicker). NCRP, Washington, DC.
- **Hinton, T. G.**, Bon-Jun Koo, S. I. Watson, D. Kaplan, D. E. Fletcher, D. P. Coughlin, and M. M. Standora. 2004. Short-term environmental impacts of illite clays when used as an *in situ* method for remediation of ¹³⁷Cs-contaminated wetlands. WSRC-TR-2004-0500, Westinghouse Savannah River Company.
- **Hinton, T. G.**, A. S. Knox, and D. I. Kaplan. 2002. Field deployment of an *in situ* remediation method for ¹³⁷Cs contaminated wetlands. WSRC-TR-2002-00516. Rev. 0. Westinghouse Savannah River Company, Aiken, SC.
- Knox, A. S., **T. G. Hinton** and D. I. Kaplan. 2001. Bioavailability of Radioactive Cesium in Old R Discharge Canal, R-Canal, Pond A, and the Adjacent Floodplain. WSRC-TR - 2001-00455, Rev. 0. Westinghouse Savannah River Company, Aiken SC.
- Kaplan, D. I., A. S. Knox, **T. G. Hinton**, R. R. Sharitz, B. P. Allen and S. M. Serkiz. 2001. Evaluation of the Phytoimmobilization Technology for the TNX Outfall Delta. WSRC-TR-2001-00032, Rev. 0. Westinghouse Savannah River Company, Aiken, SC.
- Kaplan, D. I., A. S. Knox, **T. G. Hinton**, R. R. Sharitz, B. P. Allen and S. M. Serkiz. 2001. Proof-of-Concept of the Phytoimmobilization Technology for the TNX Outfall Delta: Status Report. WSRC-TR-2001-00375, Rev. 0. Westinghouse Savannah River Company, Aiken, SC.

- Kaplan, D. I., A. S. Knox, **T. G. Hinton**, and S. M. Serkiz. 2000. Proof-of-Concept of the Phytoimmobilization Technology for the TNX Outfall Delta: Status Report. WSCR-TR-2000-00058, Rev. 0. Westinghouse Savannah River Company, Aiken, SC.
- **Hinton, T. G.**, D. I. Kaplan, A. C. Knox and S. M. Serkiz. 1999. In situ remediation of ¹³⁷Cs contaminated wetlands using naturally occurring minerals. Westinghouse Savannah River Company Technical Report, WSCR-TR-99-00229. Aiken, SC.
- Romanek, C. S., **Hinton T.**, Philippi T., Collins B., McArthur JV., Sharitz R. and Seaman J. 1999. ¹³⁷Cs in floodplain sediments of the Lower Three Runs Creek Integrated Operable Unit of the Savannah River Site, Westinghouse Savannah River Company, SRS.
- Validation of Models Using Chernobyl Fallout Data from the Central Bohemia Region of the Czech Republic. 1995. International Atomic Energy Agency/Commission of European Communities Coordinated Research Programme on the Validation of Environmental Model Predictions (VAMP). IAEA-TECDOC-795. INIS Clearinghouse, IAEA. Vienna, Austria.
- Uncertainty and Validation: Effect of User Interpretation on Uncertainty Estimates. 1996. BIOMOV5-II Technical Report #7. Swedish Radiation Protection Institute, Stockholm.
- Transfer of Radionuclides in Animal Production Systems. 1996. Final report to European Union's Nuclear Fission Safety Programme. CEC DGXII-F-6. (Sept. 1992 to June 1995).
- Transfer of Radionuclides through the Terrestrial Environment to Agricultural Products, Including the Evaluation of Agro-chemical Practices. 1996. Final Report for European Union's program on "International Cooperation on the Evaluation of the Consequences of the Accident at the Chernobyl Nuclear Power Plant" (Nov. 1992 to Nov. 1995).

INVITED PRESENTATIONS (since 2000, underline indicates presenter, * indicates international venue)

2006

- **Effects of Chernobyl Radiation on Natural Biota.* T. G. Hinton, R. Alexakhin, M. Balonov, N. Gentner, J. Hendry and B. Prister. Annual Meeting of the National Council on Radiation Protection and Measurements (NCRP); "Chernobyl at Twenty". Arlington, VA. 3-4 April, 2006.

2005

- **Use of Medaka in Ecotoxicological Research.* T. G. Hinton International Symposium on Standardization of Medaka Bioresources. Nagoya University. Japan. 14-15 November.
- **Radiation effects to the environment: A need to link molecular injury to population-level impact. (Keynote for session)* T. G. Hinton, J. Bedford, J. Congdon and F. W. Whicker. Radiation Research Society. Denver, Colorado. 17-21 October.
- **Twenty Years of Exposure: Ecological Effects of Chernobyl.* T. G. Hinton, R. Alexakhin, M. Balonov, N. Gentner, J. Hendry and B. Prister. 2nd International Conference on Radioactivity in the Environment. Nice, France. 2-6 October.
- **Metals and Ionizing Radiation: Potential Mechanisms for Interactions within Contaminant Mixtures..* T. G. Hinton. Environmental Risk from Multiple Stressors, Norwegian University of Life Sciences, Oslo, Norway. 5 July.
- *Environmental radiological effects from operating the SRS for over 50 years: Similarities to observations at Chernobyl (Subtitle: Twice-cooked fish)* T. G. Hinton. Sierra Club. Columbia, South Carolina. May.

2004

- **A case against biomarkers as they are currently used in radioecological risk analyses: A problem of linkage. (Keynote for session)* T. G. Hinton. ECORAD 2004; Aix-en Provence, France. September.
- * *Environmental effects of the Chernobyl accident.* T. G. Hinton. International Atomic Energy Agency. Vienna, Austria. January.
- *Environmental effects from 50 years of operating a nuclear production facility.* T. G. Hinton. Clemson University, Clemson, South Carolina. March.
- *Road Trip to Chernobyl* T. G. Hinton. Explorer Club. Columbia, South Carolina. October.

2003

- **Molecular endpoints as indicators of ecological risks from chronic, low-level irradiation: A problem of not connecting-the-dots. (Keynote for Symposium)* T. G. Hinton, J. Congdon, B. Ulsh, W. Kuhn, J. Bedford, W. Whicker. International Symposium on Radioecology and Environmental Dosimetry at the Institute for Environmental Sciences (IES). Aomori, Japan. October.

- *Effects of chronic, low level irradiation to nonhuman biota -- A need to couple effects across levels of biological organization.* T. G. Hinton, B. Ulsh, J. Bedford and F. W. Whicker. American Chemical Society Meeting. New Orleans, Louisiana. March.
- **Environmental radiation effects. A need to question old paradigms and to enhance collaboration among radiation biologists and radiation ecologist.* T. G. Hinton, F. W. Whicker, J. Congdon, J. Bedford. National Institute of Radiological Sciences (NIRS), Chiba, Japan. October.

2002

- *A Quantitative Biomarker of Cumulative Chromosome Damage*, T. G. Hinton, J. Bedford and W. Whicker. Symposium on Environmental Stewardship: Promising Solutions to Uncertainty. Center for Bioenvironmental Research, Tulane University. New Orleans, Louisiana. February.
- **Effects of ionizing radiation on plants and animals: What we now know and still need to learn.* F. Whicker and T. G. Hinton. Third International Symposium on the Protection of the Environment from Ionising Radiation. Darwin, Australia. July.

2001

- *Ecological Risks from Radioactive Contamination.* T. G. Hinton. U.S. Fish and Wildlife Service. Yosemite, California. April.
- *History of SRS and Current Environmental Radiation Levels.* T. G. Hinton. Savannah River Site Forest Service. Aiken, South Carolina. May.
- *Nondestructive Remediation of ¹³⁷Cs-Contaminated Wetlands.* T. G. Hinton. SREL Natural Monitored Attenuation Symposium. Aiken, South Carolina. October.

2000

- **Determining significant endpoints for ecological risk analyses.* T. G. Hinton. International Atomic Energy Agency. Vienna, Austria. August.
- **Environmental impacts of operating a nuclear production facility for 50 years.* T. G. Hinton. United Nation's Scientific Committee on Problems in the Environment (SCOPE). Brussels, Belgium. December.

RECENT POSTER PRESENTATIONS

- Coughlin, D., Yi Yi and **T. G. Hinton**. Research opportunities on contaminant mixtures at a unique low dose rate irradiation facility. *Aquatic Animal Models of Human Disease Conference*. Athens, GA. 30 Oct. - 2 Nov. 2005.
- Tsyusko, O., T. Glenn, Yi Yi, and **T. Hinton**. Radiation-induced untargeted germline mutations in Japanese medaka. *Aquatic Animal Models of Human Disease Conference*. Athens, GA. 30 Oct. - 2 Nov. 2005.
- Tsyusko, O., D. Coughlin, Yi Yi, T. Glenn, and **T. G. Hinton**. Timing of repair from radiation-induced DNA strand breakage in bluegill fish. *Aquatic Animal Models of Human Disease Conference*. Athens, GA. 30 Oct. - 2 Nov. 2005.
- Tsyusko, O., Yi Yi, D. Coughlin, T. Glenn, and **T. G. Hinton**. Radiation induced DNA strand breakage in Japanese medaka.. Annual meeting for *Society of Toxicology and Environmental Chemistry*. Baltimore, MD. Nov 12- 17 2005.

GRANTS

<u>YEAR</u>	<u>TITLE</u>	<u>AGENCY</u>	<u>AMOUNT / TIME</u>	<u>ROLE</u>
2005	<i>Transgenerational Effects of Chronic Low-Dose Irradiation in a Medaka Fish Model System</i>	DOE Low Dose Program	\$1,033,705; 3y	coPI
2005	<i>Proposal Development Funds for NIEHS Superfund Basic Research Program.</i>	Office VP for Research Medical College of GA;	\$4,000; 3m	PI
2005	<i>Proposal Development Funds for NIEHS Superfund Basic Research Program.</i>	Office VP for Research University of GA;	\$4,000; 3m	PI
2003	<i>In Situ Remediation of Cs-Contaminated Wetlands</i>	DOE	\$83,000; 1y	PI
2002	<i>Immobilization of Cs with Illite Minerals</i>	Bechtel SRS	\$40,000; 1y	PI
2001	<i>Deployment of an In Situ Remediation Technique for ¹³⁷Cs Contaminated R-Canal and Pond A</i>	DOE SubCon Focus Area	\$46,000; 1y	PI
2001	<i>Bioavailability of Cesium in R-Canal, Pond A and the Adjacent Floodplain</i>	SCUREF/ERDA	\$25,812; 6m	PI
2001	<i>Human and Ecological Risk Management at DOE Sites (funds for this grant were pulled prior to</i>	DOE Center for Risk Analysis via Argonne	\$95,000; 2y	PI

	completion because DOE closed the Center for Risk Analysis)	National Laboratory		
2000	<i>Evaluate Engineering Scale up and Deployment of an In Situ Remediation Technique for ¹³⁷Cs Contaminated R-canal and Pond A</i>	DOE SubCon Focus Area	\$46,000; 1y	PI
2000	<i>Phytoimmobilization Study at the TNX Outfall Delta</i>	WSRC /ERDA	\$71,684; 1y	PI
1999	<i>In Situ Remediation of ¹³⁷Cs Contaminated Wetlands</i>	Bechtel-ER DOE	\$25,322; 1y	PI
1999	<i>Potential Enhancement of Radiocesium Mobility in the Lower Three Runs Creek Operable Unit</i>	Bechtel-ER, DOE	\$10,000; 1y	coPI
1998	<i>In Situ Remediation of ¹³⁷Cs Contaminated Wetlands Using Naturally Occurring Mica Clays</i>	Westinghouse Savannah River Company	\$31,800; 3m	PI
1997	<i>A Field Test of the Efficiency of a Biotic System for Remediating Radionuclide and Metal Contamination in Surface Waters</i>	DOE International Radioecology Center	\$810,167; 3y	PI
1997	<i>Predicting the Fate of ¹³⁷Cs in Ponds: Sensitivity and Uncertainty Analyses and Verification of a Model</i>	DOE International Radioecology Center	\$264,288; 2y	coPI
1996	<i>Determining Significant Endpoints for Ecological Risk Analyses</i>	DOE (EMSP)	\$897,666; 3y	PI
1996	<i>Chromosome Painting: A Novel Approach for Assessing Damage Across Levels of Biological Organization</i>	UGA Research Foundation	\$3,500; 1y	PI
1992- 1995	<i>Joint Appointment</i> Paul Scherrer Institute (PSI) in Switzerland (4m / y) and Univ. of GA (8m / y).	PSI	4m salary	PI
1994	<i>Collaboration in the CEC program "International Cooperation on the Evaluation of the Consequences of the Accident at the Chernobyl Nuclear Power Plant"</i>	European Union	\$40,000; 1y	coPI
1993	Renewed		\$30,000; 1y	coPI
1992	Proposal first accepted		\$12,000; 1y	coPI
1992	<i>Collaborative Research within the Commission of European Communities Nuclear Fission Safety Program</i>	European Union	\$80,000; 1.5y	coPI
1992	<i>Collaborative Research with Eastern Block Countries</i>	Swiss Federal Technology	\$7,000; 1y	PI
1992	<i>The Transport of Contaminants in Agroecosystems by Resuspension</i>	Swiss Department of Environment	\$15,000; 6m	PI
1991	<i>Travel Grant. to visit four institutes in the UK in order to assess collaborative research possibilities in radioecology</i>	British Research Council and the Swiss Nat. Sci. Foundation	\$1,250; 1m	PI
1991	<i>Radioecology at Chernobyl</i>	Swiss Government	\$10,500; 1m	PI

AWARDS and PROFESSIONAL SERVICE

- National Academy of Sciences, Young Investigators Award for 1993 - 1994 (Nuclear Accidents and Radioactive Contamination, collaboration with Ukraine and Belarus).
- National Environmental Excellence Award for Environmental Management in recognition of work conducted on the U.S. Department of Energy's Biota Dose Assessment Committee (July 2001).
- Member of National Council on Radiation Protection and Measurement's committee on Cesium in the Environment (1996-current).
- Member of Centers for Disease Control and Prevention committee on Savannah River Health Effects (1995 to 2002).
- Biota Dose Assessment Committee, a DOE committee tasked with developing guidelines for ecological risk calculations (2002- 2004).

- Member of International Atomic Energy Agency forum tasked with summarizing the environmental effects of the Chernobyl accident (2003-present).
- One of eight members on an international board tasked with reviewing the Laboratory of Radioecology and Ecotoxicology at Cadarache, and the Laboratory of Human Radiation Protection and Toxicology at Pierrelatte (2003 and 2005).
- End User Group Member to European Union funded ERICA project (*Environmental Risks from Ionising Contaminants: Assessment and Management*), Aix-en Provence, France. 2004 to present.

INTERNATIONAL SYMPOSIA and WORKSHOPS ORGANIZED

- 2nd *International Conference on Radioactivity in the Environment*. Member of the Scientific Committee. Nice, France, to be held 2-6 October 2005.
- *Exploring Collaborative Research in Human Risks and Ecotoxicological Research using Medaka as a Model Organism*. I designed, organized and hosted an international workshop that highlighted the use of medaka as a model organism for human and ecological risks, and showcased the Savannah River Ecology Laboratory's Low Dose Rate Irradiation Facility. University of Georgia, Athens, GA and Aiken, SC. 24-27 March 2004.
- *International Congress on the Scientific Basis for Environmental Protection Against Radioactivity*. Member of the Scientific Committee and a Session Chair. Aix-en-Provence, France, 6-10 September 2004.
- *International Conference on Radioactivity in the Environment*. Member of the Organizing and Scientific Committees Monaco, 2-5 September 2002.
- *International Congress on the Radioecology-Ecotoxicology of Continental and Estuarine Environments*. Member of the Scientific Committee and a Session Chair. Aix-en-Provence, France, 3-7 September 2001.

RESEARCH EXPEDITIONS

Participated in five expeditions to Chernobyl contaminated areas within Ukraine and Belarus:

- 1991, 1-30 July. *Chernobyl area* (Paul Scherrer Institute, Switzerland sponsored research).
- 1993, 31 May - 6 June. *Chernobyl area* (Commission of European Communities sponsored research).
- 1993, 2-11 July. *Chernobyl area* (Commission of European Communities sponsored research).
- 1993, 18 July - 10 August. *Kiev, Chernobyl, and Minsk* (U. S. National Academy of Sciences, Young Investigators Program).
- 1993, 21-24 September. *Minsk and Gomel, Belarus* (Commission of European Communities sponsored research).

POST DOCTORAL or RESEARCH ASSOCIATE SUPERVISOR of:

- Dr. Kouichi Aizawa, 2005 - present
- Dr. Bonjun Koo, 2003 - 2004
- Dr. Anna Knox, 2000 - 2002
- Dr. Yi Yi, 2000 - present
- Dr. Scott Webb, 1997- 1998

GRADUATE STUDENT COMMITTEE MEMBER for:

Ph.D. candidates

- Karolina Stark, Ecology Department, Stockholm University, Stockholm Sweden, (2005-present).
- Wendy Kuhne, Radiological Health Sciences, Colorado State University, (2001- present).
- Brandt Ulsh, Radiological Health Sciences, Colorado State Univ., Fort Collins, CO (1997 - 2002).

M.S. candidates

- Adina Carver, Department of Environ. Eng. and Sci., Clemson University, Clemson, SC. (2003 - 2004).
- Maisha Richard, Department of Environ. Eng. and Sci., Clemson University, Clemson, SC. (1998 - 1999).
- Jennifer Rubrake, Department of Environ. Eng. and Sci., Clemson University, Clemson, SC. (1998 - 1999).
- Tracy Tostowarky, Radiological Health Sciences, Colorado State Univ., Fort Collins, CO (1997 - 2000).
- Jim Abraham, Radiological Health Sciences, Colorado State Univ., Fort Collins, CO (1996 - 1998).
- Justin Mohler, Radiological Health Sciences, Colorado State Univ., Fort Collins, CO (1995 - 1996).

SUMMER UNDERGRADUATE TRAINING PROGRAM

- Siobhan Watson, Vassar College, 2003
- Natalia Johnson, Claflin University, 2001
- Sean Dennis, DOE/TRAC-teacher training program, 1996.

Dan Connor, GA Institute of Technology, 1995 & 96.
 Charles Mitchell, Emory University, 1995.
 Fred James, Paine College, 1995.

PROPOSAL REVIEWS

National

Chaired Proposal Review Committee, *Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry*, 2004.
 DOE's *Nuclear Engineering Education Research Program*, 2000 and 2005.
U.S. Civilian Research & Development Foundation, 2001.
National Research Council, Collaboration in Basic Science and Engineering Program, 2001.

International

National Science and Engineering Research Council of Canada, 2004.
Research Council of Norway, 2004 and 2005.

SHORT COURSES TAUGHT

- *Human and Ecological Risks from Radioactive and Non-radioactive Contaminants*. T. Hinton and S. Dyer; to Westinghouse Savannah River Company employees, 3 December 2004.
- *Presentation of Data*; T. Hinton and J. Harris; to SREL undergraduate students; yearly since 2003.
- *The Principles of Radioecology: Studying the Fate and Effects of Radioactive Contaminants in the Environment*; T. Hinton, L. Brisbin, & C. Jagoe; to the 14th annual meeting of the Society of Environmental Toxicology and Chemistry, Houston, TX.

EDITORIAL WORK

Associate Editor, *Journal of Environmental Radioactivity*. Associate Editors at JER are responsible for all aspects of the publication process, from receiving manuscripts, finding appropriate reviewers, requesting revisions, accepting/rejecting the manuscript, as well as making sure that the journal guidelines and style are followed. 2003 – present.

Reviewed manuscripts for: *Environmental Science and Technology*; *Environmental Toxicology and Chemistry*; *Environmental Pollution*; *Health Physics*; *Journal of Environmental Radioactivity*; *Radiation Research*; *Radiochemica Acta*; *Science of the Total Environment*; *Soil Science Society of America*; *Water, Air and Soil Pollution*

Reviewed book for Joseph Henry Press; *Wormwood Forest: A Natural History of Chernobyl* by Mary Mycio. 2005.

Reviewed eight chapters for SCOPE RadSite book. Chapters were from Chinese, German, US, Former Soviet Union, France and UK authors. 2003- 2005.

Book Proposal Review for *Elsevier*. Radiation exposure estimation in residents of the Semipalatinsk region bordering the Chinese nuclear test site. 2001.

PROFESSIONAL SOCIETIES

- Health Physics Society (1982 - present)
 - Founding Member, International Relations Committee, Health Physics Society, 1997 to 2000
- International Union of Radioecologists (1988 - present)
 - Regional Coordinator for North America, <http://www.iur-uir.org/regionalcoordinators.htm> 2004 to present.
- Society of Environmental Toxicology and Chemistry (1994 - present)
- Radiation Research Society (2004 – present)
- Society of the Sigma Xi (1986 - 2000)

SERVICE TO THE SAVANNAH RIVER ECOLOGY LABORATORY

Strategic Planning Committee (1997); Internet Committee (1997); Capital Equipment Committee (1997 to present); Special Investigative Committee on Contamination of SREL from Chernobyl Samples (2000); Alternative Funding Model Committee (2000, 2001 & 2004); 50th Year Anniversary Committee (2000, 2001); Search Committee for New Faculty (2001); Committee to Evaluate Personnel Satisfaction (2001 & 2002); Facilities Committee (2002 to present); Executive Council (2004 to present).