

Prof. Magdi Selim

Professor of Soil Physics and Graduate Coordinator
George and Mildred Caldwell Endowed Professor of Soil Science
Louisiana State University



Degrees Received

- Ph.D., Soil Physics, Iowa State University, 1971
- M.S., Soil Physics, Iowa State University, 1969
- B.S., Soil Science, Alexandria University, 1964

Positions Held:

2005 – present, George and Mildred Caldwell Endowed Professor of Soil Science at LSU.

1977 – 1984, Assistant and Associate and full Professor, Louisiana State University (LSU)

1973 – 1977, Research Fellow, University of Florida

1973 – 1977, Assistant Professor, University of the West Indies

Honors and Awards

- Justus von Liebig International Soil Science Award (2014)
- Soil Science Research Award, SSSA (2012)
- Fellow of the American Society of Agronomy (1996)
- Fellow of the Soil Science Society of America (1996)
- EPA Regional Administrator's Environmental Excellence Award (1996)
- Gamma Sigma Delta and Phi Kappa Phi Research Award, among others.

Contributions and Service to the Soil Science Profession

Professor Selim focused his contributions in the areas of reactive chemicals and water flow in unsaturated and saturated soils, water management of irrigation and drainage systems, spatial and temporal variability of soil physical properties, and chemical and physical processes governing the interactions and transport of solutes in the root zone. He is the original developer of the two-site (kinetic-equilibrium) model for retention of dissolved chemicals in soils and natural materials and subsequent multi-step/multi-reaction kinetic models, which have been successfully used for the description of heavy metals, radio-nuclides, explosive contaminants, phosphorus and pesticides in soils and subsurface media. Other research interests include: best management practices (BMPs) of applied chemicals to soil; runoff and subsurface water losses; and total maximum daily load (TMDL); implementation and monitoring of management approaches to identify sources of pollutants at the watershed level.

Professor Selim has taught a variety of courses over the past forty years. His course on fundamentals of soil physical processes was taken by students from broad disciplines (e.g., Civil, Chemical, and Agricultural Engineering, Botany, Forestry, Environmental Studies). A number of graduate students were trained under Professor Selim's program. Their expertise varied from mathematics, civil engineering and soil physics. Professor Selim's research program published numerous scientific contributions. He has written two books and edited nine others. He is the internationally recognized authority in chemical transport and retention in soils. He organized several symposia and a cofounder of International Society of Trace Element Biogeochemistry.