



ESPG Special Seminar

When: **Thursday November 17th 2011, 3:30 pm**

Where: **University of South Florida St. Petersburg, Davis Hall (DAV102)**

“Eutrophication in Flowing Waters: Nutrient Enrichment, Primary Production and Algal Proliferation in Florida’s Springs”

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Abstract

Nutrient enrichment of surface and groundwater is a major environmental challenge. Of particular local relevance is the ongoing and ubiquitous nitrate enrichment of the Upper Floridan Aquifer, the source of water for our springs and most of our drinking water supply. Understanding the ecological effects of nutrient enrichment has been a research priority since the 1970's, but our understanding and ability to predict these effects in flowing waters has lagged progress in other aquatic systems. In this seminar, I will present a general theory to help predict eutrophication in flowing waters in response to nutrient enrichment, and animate some of ideas in that theory with work in the spring-fed rivers of North and Central Florida. This new theory was derived to a large extent from looking at the results from deploying a new class of environmental sensor which greatly increases the sampling resolution of nitrate. I will also present some of the fundamentals of those new sensors, and the new avenues for aquatic ecosystem research that they create.