

1116-VC-2707 **Thomas G. Stojsavljevic*** (tgs@uwm.edu), 1428 E. Capitol Drive, Apartment 1, Shorewood, WI 53211. *Parameter identification and sensitivity analysis for a phytoplankton competition model.*

Phytoplankton live in a complex environment with two essential resources forming various gradients. Light supplied from above is never homogeneously distributed in a body of water due to refraction and absorption from biomass present in the ecosystem and other sources. Nutrients in turn are typically supplied from below. Here we present a model of two phytoplankton species competing for two nutrients. The parameter space of the model is then analyzed for parameter identifiability- the ability for a parameter's true value to be recovered through optimization, and for global sensitivity- the influence a parameter has on model response. The results of these analyses are then interpreted within their biological context. (Received September 22, 2015)