## Sensitivity Analysis for Scientific Applications

## Steven L Lee

slee@llnl.gov

Lawrence Livermore National Laboratory, Center for Applied Scientific Computing,

Computer simulations are used widely in the analysis of complicated, large-scale, physical systems. In this talk, we describe parallel solvers designed to perform sensitivity analysis on simulations that can be expressed as initial-value problems in ordinary differential equations or differential-algebraic equations. In particular, we examine issues related to the accuracy and expense of computing sensitivities in some problems related to climate modeling and radiation transport.