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Suzanne Lenhart* (lenhart@math.utk.edu), U of Tennessee, Math Dept, Knoxville, TN 37996,
and **Rachael Miller Neilan**, Louisiana State University, Oceanography Dept, Baton Rouge, LA
70803. *Optimal control of a spatio-temporal epidemic model.*

We discuss optimal control of vaccination in spatio-temporal epidemic model using system of coupled parabolic partial differential equations. This model is applied to the distribution of vaccine baits to raccoons to slow the spread of rabies. Numerical solutions for optimal vaccine distribution will be illustrated using heterogeneous spatial domain. (Received September 16, 2010)