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Suzanne Lenhart* (1lenhart@math.utk.edu), University of Tennessee, Dept. of Math. 227 Ayres Hall, 1403 Circle Drive, Knoxville, TN 37996-1320. *Optimal control of PDE models for populations*. Preliminary report.

Using parabolic partial differential equations, we investigate population strategy questions via optimal control tools. The advective coefficient is chosen for the control representing the choice of the population to move to benefit its abundance. Controlling the advective coefficient is explored in the case on one population and then in the case of two competing populations. (Received September 04, 2014)