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**Suzanne Lenhart\*** ([1lenhart@math.utk.edu](mailto:1lenhart@math.utk.edu)), University of Tennessee, Mathematics Department, Knoxville, TN 37996-1300. *Optimal Control of Boundary Habitat Hostility for Interacting Species.*

We consider boundary control for a parabolic system describing the evolution of two interacting species in a bounded habitat. The control models the hostility of the boundary environment to the maintenance of the species. The objective functional represents the balance between ecological benefit (measured by the size of the two populations) and the economic cost of maintaining an ecological favorable boundary environment. (Received September 29, 2000)