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Suzanne Lenhart*, University of Tennessee, Dept of Math., Knoxville, TN 37996. *Optimal Control of the Directed Flow in a Parabolic PDE representing an Invasive Population in a River.*

Invasive populations in rivers may be managed by adjustment of flow rates. Using a parabolic PDE model, we investigate optimal control of the water discharge rate (advective term) to prevent the invasive population from going upstream. We illustrate some numerical simulations in which parameters are varied to determine how far upstream the invasive population moves. (Received January 12, 2021)