

On the global existence and qualitative behavior of solutions to a model for urban crime

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We consider the no-flux initial-boundary value problem for the cross-diffusive evolution system which was introduced to describe the dynamics of urban crime. In bounded intervals I will first discuss the existence of global classical solutions for all reasonably regular non-negative initial data. Next I will address the issue of determining the qualitative behavior of solutions. Finally, I will conclude with some numerical simulations exploring possible effects that may arise when considering large cross diffusion terms not covered by our qualitative analysis.