Alethea Barbaro

A convection-diffusion system for gang territorial development

Street gangs often lay claim to territory by sending younger members to tag the area with gang graffiti. Here, we introduce a dynamically evolving lattice model for gang territorial development motivated by graffiti marking. In the discrete model, we numerically observe two different phases as parameters are changed. We then derive a system of four coupled PDEs which displays a similar phase transition. This is joint work with Abdulaziz Alsenafi.