

## **PDE methods to study evolution in spatially structured populations**

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### **Abstract:**

The understanding of many biologic phenomena indeed require to consider both Darwinian evolution and spatial dynamics. We consider a population structured by a phenotypic trait (that is a physical characteristic of an individual, e.g. its weight or size), as well as a spatial variable. The models are then parabolic equations with non local competition terms. For those models, we are able to describe the propagative fronts that appear when a species invades an a priori hostile environment.