

MODELS OF SEGREGATION

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Mathematically, segregation describes the configuration of several different species that diffuse but are penalized for overlapping. This involves many phenomena beyond segregation of species: Particle annihilation, harmonic maps into singular manifolds, phase transitions.

We will discuss recent work, one involving fully non-linear diffusion, related to optimal control, the other on the case of local-non-local interaction when a species propagates continuously and the other through Levy jumps.