Kirill Korolev  
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September 17, 2019  
Tuesday

3:30 - 4:30 PM  
Refreshments at 3:00PM

SCI 109  
590 Commonwealth Ave

Reaction-diffusion waves describe diverse natural phenomena from crystal growth in physics to tumor growth in biology. Many aspects of these phenomena are stochastic because expanding entities---whether atoms or cells---are discrete. A quantitative description of fluctuations in growing populations remains an open problem. Recently, we have made significant progress in this direction by looking at physical processes through the lens of biology. I will show that expanding populations fall into one of three universality classes with very different physical and genetic properties. As a result, external perturbations can be used to control evolutionary outcomes in growing populations.