Seminar/Talk

The role of chance in the survival of the fittest

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Host:

Population expansions are ubiquitous in nature. They control the speed of many important dynamical processes, including multicellular development, biological evolution and epidemic outbreaks. Yet, the theoretical description of spreading behaviors has been limited largely to mean-field models that ignore the randomness inherent to living systems. In this talk, I present theoretical arguments and experimental results that elucidate how noise influences spreading processes on many scales, ranging from cellular scales, where jamming cells impede their own expansion, to global scales, where epidemic spread relies on rare long-range jumps. Our results underscore that carrying excellent genes does not guarantee success in evolution - the pure luck of being in the right place at the right time can be equally, or more, important.

Monday, May 8, 2017 09:00am - 10:00am
Mondi Seminar Room 2, Central Building

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