
ALETHEA BARBARO, Case Western Reserve University

A Kinetic Perspective on Fearful Crowds

Much of our life outside the home is spent in crowds: walking through the park on a warm summer day, watching a concert along with hundreds of other individuals, or racing to your classroom in the final minute before class. Buildings, parks, and concert halls are carefully designed to accommodate the masses. But what happens when disaster strikes? In this talk, we will introduce a new microscopic model for crowd dynamics in the presence of a strong emotion such as fear by including an emotional contagion component into the dynamics. We then derive a kinetic version of the model and explore its properties.