Convergence to equilibrium for linear run and tumble chemotaxis models

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I will discuss the linear run and tumble equation which is a kinetic equation for chemotaxis. We can show convergence to equilibrium for this equation using Harris's theorem from kinetic theory. This method of proof is very flexible in the linear setting and I will explain recent results about how it can be applied to biologically realistic collision kernels where the bacteria turning angle is restricted. This is based on joint work with Havva Yoldas.