

Abstract

In this talk, I will briefly review the existence of bistable traveling waves for monotone semiflows in an abstract setting. Then I will report our research on the uniqueness and stability of such bistable waves. Under appropriate assumptions, we establish the uniqueness and stability of bistable waves for discrete and continuous-time semiflows in a continuous habitat by appealing to a global convergence theorem for monotone semiflows. We also extend this result to time-periodic semiflows, and apply the general theory to a class of reaction-diffusion-advection systems in a cylinder.