How the Rules of Engagement Affect the Emergence of Consensus

ABSTRACT. Opinion dynamics in human crowds and flocking of birds are two prototypical examples for systems which are driven by the “social engagement” of members in such crowds. The “social engagements” are formulated by certain rules which quantify how each member interacts with its neighbors. These local interactions may lead, over time, to global patterns of the whole crowd, such as the emergence of consensus of opinions, flocking of birds etc. We explore the question how specific rules of interaction lead to the emergence of consensus/flocking.