

Influence of the memory persistence in the opinion of a mobile community

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The propagation of a concept (an idea, a rumour, etc) among people that move in a given environment and socially interact depends, mainly, on two factors; the ability that has the cited concept to pass through an individual to another and the relevance of the concept (or the probability that people forget the idea). In the present work we study the transport rumour dynamics by means of a self-propelled agent model. Agents can move freely in a two dimensional space. Also, interactions are considered to be in pair. As a first matter of our study, we consider a dynamic determined by the agent time interaction in order to describe the oral transmission process. At a given meeting, each agent who wants to transmit the information, arises the probability to remember to the other agent. the forgotten factor is modeled by an external field that affects to all agents in the same way. By means of simulations and solving the equation system, we show a transition in the dynamics of the transport of the information. This transition divides the phase space into two regions, one where the rumour is totally forgotten and the other one where rumour persists.