

Abstract Submitted
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Dynamics of Confident Voting DANIEL VOLOVIK, SIDNEY REDNER, Boston University — In the classical voter model, a voter has no intrinsic confidence in its current opinion. We introduce the confident voter model in which each voter can be in one of two opinions, and can additionally have two levels of commitment to an opinion — confident and vacillating. Upon interacting with an agent of a different opinion, a confident voter becomes less committed, or vacillating, but does not immediately change opinion. However, a vacillating agent changes opinion upon interacting with an agent of a different opinion. In the mean-field limit, a population of size N is quickly driven to a mixed state before consensus is eventually achieved in a time of order $\ln N$. In two dimensions, the distribution of consensus times is characterized by two distinct times — one that scales linearly with N and another that scales as $N^{3/2}$. The longer time arises from configurations that fall into long-lived stripe states, which are caused by an effective surface tension between domains of different opinion states, before consensus is finally reached.

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