On the Bounded Confidence Model Of Opinion Dynamics

Carl Graham
CMAP, Ecolé Polytechnique

Abstract

The bounded confidence model of opinion dynamics is a popular stochastic model for the evolution of continuous-valued opinions within a group of peers. It is proved that, as time goes to infinity, the opinions evolve globally into a random set of clusters too far apart to interact, and thereafter all opinions in every cluster converge to their barycenter. Propagation of chaos is then proved: as the number of peers goes to infinity in adequately started systems and time is rescaled accordingly, the opinion processes converge to i.i.d. nonlinear Markov (or McKean-Vlasov) processes. It is also proved that, as time goes to infinity, the limit process converges to a law concentrated on isolated opinions too far apart to interact. Sufficient conditions are given for the limit law not to depend on the initial condition, and to be concentrated at a single opinion.

The talk is based on joint work with Javier Gomez-Serrano and Jean-Yves Le Boudec.

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