

Evolutionary potential games

György Szabó

MTA TTK MFA

Abstract

For the potential games there exists a potential function related to the payoff variation of those player who modify her strategy. First we survey the general features of these games and discuss the evaluation of potential for some cases. Multi-agent spatial models will be constructed from pair interactions and studied for a specific evolutionary rule when these systems evolve into the Boltzmann statistics and become equivalent to the Ising type models used widely in solid state and statistical physics. Finally we briefly discuss the spatial version of a counter example.