

## Modeling Conflicts and Competitions in Evolutionary Systems

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**Abstract:** Conflicts and competitions are two common phenomena that can be easily observed in social and biological systems. Notably, while local interactions can be usually modeled by simple mechanisms, e.g. the variation of state of an individual/agent, the macroscopic dynamics of a whole population often shows an emergent complexity. In particular, the equilibria of an agent population can be studied according to analytical or numerical approaches, depending on the nature of the considered model. In this talk, I will present both methods in the context of sociophysics and evolutionary game theory. The former is focused on modeling of radicalization phenomena by an analytical approach (i.e. PDE), while the latter is focused on modeling social dilemma by using numerical simulations.