

On an n-player game and its numerical simulation

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This talk discusses diffusion-control ranking games with only a few players, for which a mean-field description does not apply and one needs to fall back on non-asymptotic methods for analyzing equilibria.

For a stylised two-player zero-sum game, it is known that there is an equilibrium in closed form, but little is known for more general settings, e.g. the case of three or more players.

Formally, equilibria in these settings can be analytically characterised in terms of systems of coupled PDEs.

The talk discusses first results and open problems on existence of solutions and numerical approximations.