## A GAME THEORY MODEL FOR WEALTH DISTRIBUTION

MAURO RODRIGUEZ CARTABIA (IMAS-CONICET AND DM-FCEN-UBA)

There are many works showing that the distribution of wealth in a population follows Gamma or Pareto distributions, with a power law decay. In this work we study a model where wealth exchanges depend on a symmetric zero sum game. After each interaction, players mixed strategies are updated looking for a better outcome in future games. We observe that, when the optimal way of play is a mixed strategy, the wealth distribution follows a Gamma distribution, and the parameters depend on both the variance of the optimal strategies and the amount of wealth interchanged. However, when Nash equilibrium is a pure strategy those players which learn it faster accumulate a significant part of the total wealth.