

# Introduction to evolutionary game theory

## 1. Introduction

Game theory. Formalization, Normal forms Strategies. Nash equilibrium. Stability

## 2. Social Dilemmas

2x2 games, Prisoner dilemma. Hawks and doves. Snowdrift. Stag hunt

## 3. Evolutionary games.

Evolutionary stable strategies. Dominant strategies Replicator and Imitation dynamics. Other dynamics

## 4. Applications

Experiments. Games on networks. Examples from real life

## Bibliography

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J. Hofbauer and K. Sigmund, Evolutionary games and population dynamics. (Cambridge, 1998)

P. Straffin. Game theory and strategy. (Mathematical Association of America, 1993)

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