

# A numerical study of fixation probabilities for strategies in the Iterated Prisoner's Dilemma

Marc Harper and Vincent Knight

## Abstract

TBD

## 1 Introduction

Main questions are:

1. What strategies are good invaders?
2. What strategies are good at resisting invasion?
3. How do 1 and 2 change as a function of population size?

Structure:

- Overview of Moran processes;
- Review of the literature;
- Short discussion about the Axelrod library.

## 2 Validation

Structure:

- Compute fitness landscape for some strategy pairs;
- Verify against the data;

## 3 Numerical results

Structure:

- General overview of the data obtained;
- Inclusion of most of the work in `Moran.ipynb`.

## 4 Conclusion