

# EVOLUTION AND THE THEORY OF GAMES

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*Exercises 05-12-2014*

## **22.**

Design your own champion strategy (possibly with a quitting option build in as well) for the iterated Hawk-Dove game with discounting factor  $\delta \in (0, 1)$  and with  $R < C$  (i.e., the resource is less valuable than the cost of injury in case of a lost escalated fight). To train your champion, also design a second strategy and have the two fight with one another and calculate their expected payoffs. During the exercise class the champions will have to fight one another in pairwise contest.

The champion of champions (i.e., winner of the contest in the exercise class) gets a reward of +0.5 grade-point extra on top of the exam grade.