

Master thesis: The greedy strategy in the all-heads coin game (May 2026)

In the *all-heads coin game* a player repeatedly tosses a pool of coins, each landing heads with probability p . After every round, all coins showing heads are set aside and the remaining coins (tails) are re-tossed. A round in which no coin shows heads is lost; the player wins as soon as the pool is empty. The *greedy* strategy — set aside every head — yields the success probability $b_{n,p}$ when starting with n coins.

Recently, I have assistend AI to find a formula for $b_{n,p}$. The goal of the thesis is to check all arguments, as well as a proper write-up. See [paper2.pdf](#).

**Albert-Ludwigs-
Universität Freiburg**

Mathematisches Institut

Peter Pfaffelhuber

T +49 761 / 203-5667

p.p@stochastik.uni-freiburg.de

pfaffelh.github.io/hp

Ernst-Zermelo-Str. 1

Raum 233

79104 Freiburg

01.06.2026