Speed-robust scheduling is a two-stage scheduling problem with a makespan objective. We are given processing times of n jobs, number of machines m and number of bags b. We have to group the jobs into bags that are to be scheduled on machines of currently unknown speed. The goal is to minimize the worst-case ratio of our makespan and makespan of an adversary who does not have to create bags and assigns jobs directly to machines. So far, the problem has been mostly studied for $b = m$.

We generalize previously known results for infinitesimal jobs (called *sand*) and prove that the best achievable competitive ratio is $\frac{m^b}{m^b-(m-1)^b}$. We present an algorithm for the case of identical jobs (called *bricks*) with competitive ratio at most 1.6 in the case $b = m$, improving the best previously known value of 1.8.

We introduce a new category called *p-pebbles*, those are jobs with processing time at most p times the average load of a machine. Pebbles are half way between sand and the general case (called *rocks*). We present an algorithm for pebbles that has better robustness factor than the best known algorithm for rocks for small values of p (for p less than $2 - \frac{e}{e-1}$ in the case $b = m$).