Our paper studies reshaping particle configurations by collisions with rigid bodies.

First, we study angle of repose.

These robots are programmed to go toward the brightest light in the room and all move in the same direction.

This experiment examines angle of repose of a swarm of kilobots on a rigid rod inclined at different angles.

Our paper analytically determines how to maximize torque for different angles of repose.

The green triangle outlines the final distribution.

These simulations show how the boundary layer can be used to control correlation.

Particles move more slowly in the boundary layer.

The maximum possible correlation caused by a single control command is determined by the area of the particle configuration, the length of the workspace, and the height of the boundary layer.

We demonstrate correlation control with kilobots when the boundary layer is the diameter of a single robot.

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and is used to calculate the angle of repose.

Granular media piles up in a characteristic shape.

The angle formed perpendicular to the angle of attack is the angle of repose.