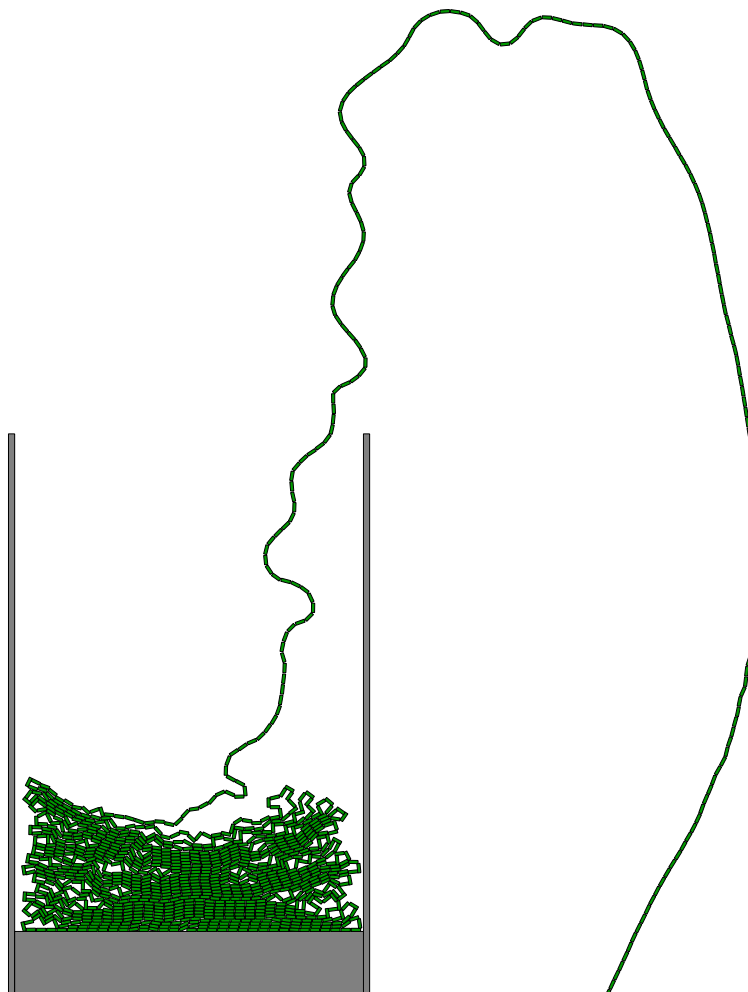


## Simulation of the Chain Fountain

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Although chain dynamics has been under investigation since the 17th century, chains exhibit counterintuitive behaviours which are not fully understood yet. The chain fountain is one of them and can be established by pulling one end of an appropriate chain over the rim of its container. Then, it 'flows' out due to gravity. However, instead of just sliding on the rim the chain forms a fountain. Biggins and Warner argued (Proc. R. Soc. A 470, 2014) that the origin of the chain fountain should be a pushing reaction force from the pot during pickup process. To simulate this phenomenon I altered a two-dimensional DEM simulation for granular matter to establish links between polygonal particles, represented by damped springs. This allows me to study the behaviour of chains of different geometry with little restrictions and to get insight into the tension acting in the chain and thus into the origin of the fountain formation.

