

Examples of things in previous demos that I found interesting

Representing bulk substrate movement rather than individual particles or surfaces

Can we zoom into an area and view deformation as stacked surface patches?

Can we zoom in further and view deformation as particles?

Icons to represent basic motion of substrate (collapse, extraction lift)

Can more icons be created to fill in other processes (passing around toe/leg, collapse)?

Are 4-5 icons sufficient to describe almost all the interactions?

Tracing different parts of the same starting surface through time (tiles, cubes, discs)

Can this be done at higher resolution (finer grids)

Zoom in on smaller patches?

Is rotation/scaling of icon required?

Breaking down motion and track into different phases

Can this be applied to surface tracks?

Foot positions shown in pairs provided strong motion context

How can different substrate representations work with these best?

Simplicity of track silhouettes

Can silhouettes evolve through time at each surface?

Can borders of silhouettes be associated with specific parts of the foot?

Things that have yet to be addressed much

Basic flow around a moving cylinder

Can particle paths and surface deformations be shown as 2D sections through time/space?

Can patterns be identified within each surface predicting particle descent?

Comparison of movement and tracks among substrates

Comparison between guineafowl and fossil dinosaur tracks

Possible interactive elements:

Foot visibility

Foot solid/mesh

Surface visibility

Particle path visibility

Particle path colored by phase or velocity or some other parameter