

Gordian Configurations

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While we are often interested in finding configurations that are "the best", those global optimizers of a nice function on configuration space, there is good reason to look at "the rest". In particular, there are often configurations that are critical, which implies a potential change the topology of configuration space for a threshold value of our function.

We will look at some cases appearing for spaces of points and curves; where our function is "physical", and our configuration is "Gordian", i.e. a hard shell potential yielding spheres and rope, and the connectedness of our configuration space changes."