Knot theory is the subarea of topology that studies mathematical knots or different ways of placing a circle inside 3-dimensional space. Proving that two knots are distinct (or equivalent) is the main problem knot theorists deal with. In the talk, we will discuss methods used to distinguish knots. For a simple introduction click the following link:

https://wordplayblogs.nytimes.com/2014/05/26/charms/?r=0