# What means parallel after infinity?

By Johannes Ganser, 12.06.2018

**Speaking of lines, what could it mean that they are "not straight"?**

The first answer that came to my mind was that two parallel lines meet in infinity. This is true for the projective geometry, meaning to stand above the Euclidean plane, looking onto the parallel lines, that get (relatively) closer to each other the further away from the point of perspective. Thus meeting somewhere in infinity. Meaning that lines that we draw, and thus are perceived from a perspective were never straight to begin with.

So lets start to imagine. What if our perspective would go further away? What if it never was a question of two parallel lines but many? And what happens behind that intersection point of infinity? Obviously their already is a way to describe that kind of state: UNDEFINED.

Undefined can be interpreted as random behavior. Since any not random behavior, would lead to a defined situation. Thus my project idea is to see what kind of insights a computer will provide for the question of what will happen after infinity.

The algorithm will use a number of parallel lines and then changing from Euclidean geometry to projective it will start to take a perspective from above the plane into account. Than by changing the angel of the perspective it will merge the lines on the horizon of that perspective. The next step will be to compute the direction and curve of each line randomly after the intersection and to jump to that point in Euclidian Plane to perceive what happened.