

It is easy to construct operators which to a line arrangement (ie a finite number of lines in the plane) returns another line arrangement.

We will show that one can rephrase some classical theorems (Pappus, Pascal, Desargues...) as results on a peculiar operator Λ .

We will then introduce a certain family of arrangements of six lines and show that this operator Λ is a self-map on such family.

It is then a natural question to investigate the dynamic of Λ on these arrangements and to study the line arrangements which are periodic.

As we will see these periodic line arrangements are related to the well-known and prominent examples: the Ceva line arrangements.

This talk may be attended by a large audience: the only prerequisite is to know what is a projective plane.