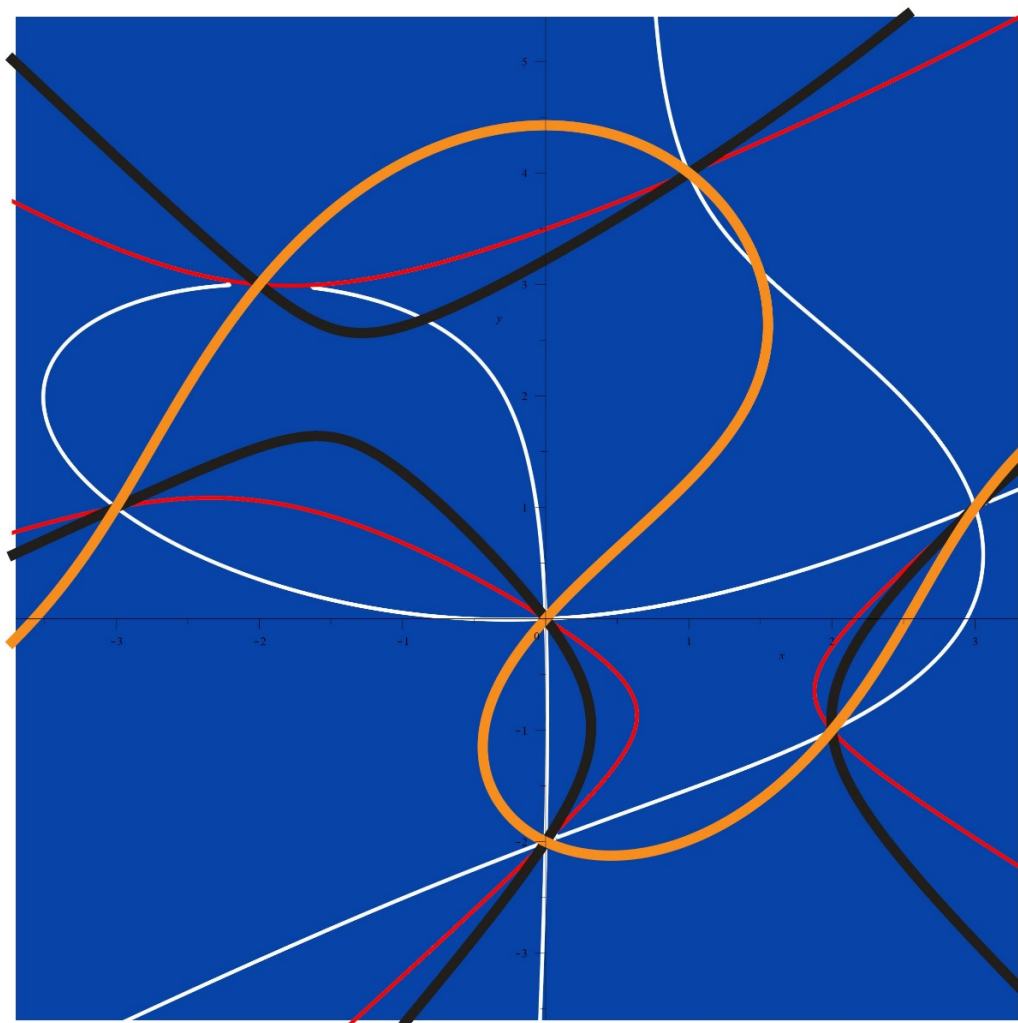


No wonder



The white curve in The Bertini incidence is a so-called *involution curve* for a pencil of cubic (degree 3) curves. The pencil contains the black curve and the orange curve, which are also depicted here in No wonder.

The involution curve in The Bertini incidence is of degree 4 and has one triple point which lies on every curve of the pencil. The incidental tangency is quite a miracle. For other involution curves such a miracle does not seem to occur.

Counting intersection numbers shows the existence of (infinitely) many higher degree involution curves. One wonders why.

No wonder displays a curve of degree 7, which has 3 triple points, 5 double points, and 1 simple point in common with every curve of the pencil. The curve is an involution curve because the sum of intersection numbers $3*3+5*2+1*1=20$ is one less than the product of the degrees $7*3=21$.

In No wonder we see the degree 7 curve factorise as a product of a degree 4 involution curve (white, with 3 double points), and a degree 3 curve which belongs to the pencil (red). No wonder there are so many higher degree involution curves.