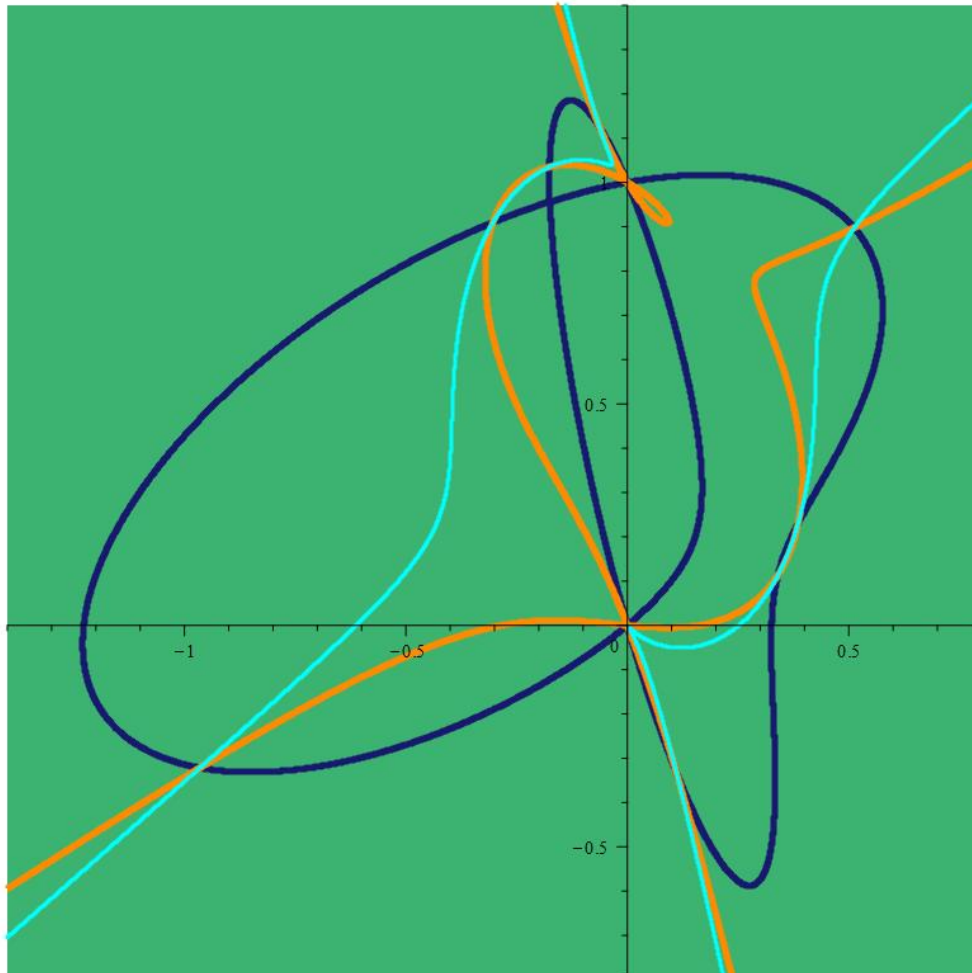


## On the cusp



The curves in Approaching an acnode, Passing through a crunode, and On the cusp are quartic curves which all visit the same two points twice, i.e. they come from the same pencil (family) of infinitely many curves with two singular base points at  $(0,0)$  and  $(0,1)$ .

A cusp is double point, where a curve comes in on an angle and goes out in a different direction. In this pencil of curves there are two special curves with a cusp, one at each singular base point. One of them is the cyan curve in On the cusp. The other is depicted in On the cusp II, see below.

One can imagine the left branch of the cyan curve connecting with the singular base point and merging onto the orange curve. In the other direction, there are quite a few transition phases before the cyan curve hits the blue. One of them is the blue curve in On the cusp II.

## On the cusp II

