Jumping numbers of a simple complete ideal in a two dimensional regular local ring

Eero Hyry

This is joint work with T. Järvilehto. We give a formula for the jumping numbers in terms of the multiplicity sequence of the ideal. Remarkably, the jumping numbers conversely determine the multiplicity sequence. The set of jumping numbers turns out to divide into subsets corresponding to the stars in the dual graph of the associated minimal resolution. Our result applies also to jumping numbers of an analytically irreducible plane curve. In particular, its equisingularity class is determined by the jumping numbers.