

Jumping numbers associated with complete ideals of 2-dimensional local regular rings

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In the talk, we will consider a complete ideal \mathfrak{a} in a 2-dimensional local regular ring with algebraically closed residue field \mathbb{k} . When the characteristic of \mathbb{k} is zero and \mathfrak{a} simple, we will recall which is the set of attached jumping numbers and we will show an explicit expression of the Poincaré series of the multiplier ideals (an algebraic object that gathers jumping numbers and multiplier ideals). This expression will allow us to prove that the Poincaré series is a rational function. In addition, independently of the characteristic of \mathbb{k} , we will give a formula for the log-canonical threshold of a reduced plane curve in terms of the dual graph of its log-resolution and the associated maximal contact values and, as a byproduct, a formula for the log-canonical threshold of a (non-necessarily simple) complete ideal.