

ON SOME INVARIANTS OF SINGULARITIES

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I will start with an overview of old and new points of view regarding an invariant of singularities, called the log canonical threshold. These different approaches connect this invariant with complex powers, the Bernstein polynomial, p -adic zeta functions and spaces of arcs. In the second half of the talk, I will describe some conjectures relating the log canonical threshold with an invariant which comes from commutative algebra in positive characteristic, and I will give some evidence for these conjectures. This is based on joint work with Shunsuke Takagi and Kei-ichi Watanabe.