

Algebraic Geometry - Mariusz Koras in memoriam

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## ZARISKI CANCELLATION PROBLEM FOR SURFACES

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ABSTRACT. The Zariski Cancellation Problem asks when a stable isomorphism of affine varieties over an algebraically closed field implies an isomorphism. This is true for affine curves (Abhyankar, Eakin, and Heinzer '72), for the affine plane in zero characteristic (Miyanishi-Sugie and Fujita '79-'80), but false for general affine surfaces in zero characteristic (Danielewski '88) and for the affine space  $\mathbb{A}^3$  in positive characteristic (N. Gupta '13). The talk is devoted to a recent progress in the surface case over a field of zero characteristic (Bandman-Makar-Limanov, Dubouloz, Flenner and Kaliman, et.al). It occurs to be possible to describe the moduli space of pairs of surfaces with isomorphic cylinders.