

Algebraic Geometry - Mariusz Koras in memoriam

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## COMPLETE ALGEBRAIC VECTOR FIELDS ON AFFINE SURFACES

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ABSTRACT. Let  $\text{AAut}_{\text{hol}}(X)$  be the subgroup of the group  $\text{Aut}_{\text{hol}}(X)$  of holomorphic automorphisms of a normal affine algebraic surface  $X$  generated by elements of flows associated with complete algebraic vector fields. Our main result is a classification of all normal affine algebraic surfaces  $X$  quasi-homogeneous under  $\text{AAut}_{\text{hol}}(X)$  in terms of the dual graphs of the boundaries  $\bar{X} \setminus X$  of their SNC-completions  $\bar{X}$ .