

THE ALGEBRAIC DENSITY PROPERTY FOR AFFINE TORIC VARIETIES

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In this talk we generalize the algebraic density property to notnecessarily smooth affine varieties relative to some closed subvariety containing the singular locus. This property implies the remarkable approximation results for holomorphic automorphisms of the Andersén-Lempert theory. We show that an affine toric variety X satisfies this algebraic density property relative to a closed T -invariant subvariety Y if and only if the complement of Y in X is different from T . For toric surfaces we are able to classify those which possess a strong version of the algebraic density property (relative to the singular locus). The main ingredient in this classification is our proof of an equivariant version of Brunella's famous classification of complete algebraic vector fields in the affine plane.

Joint work with Frank Kutzschebauch (Bern Universität, Switzerland) and Matthias Leuenberger (Bern Universität, Switzerland).