The real version of Nobile's theorem

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Abstract

The famous Nobile's theorem, which is very important in the study and understanding of Nash blow-ups of algebraic varieties, states that the Nash blow-up of an algebraic variety X is an isomorphism if and only if X is non-singular (over an algebraically closed field of characteristic zero; in prime characteristic, this statement is false).

In this talk, we present a version of Nobile's theorem that holds over the reals and the complex numbers. We will also present a definitive version (with minimal assumptions) of this theorem.

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