

Approximation of analytic sets by topologically equivalent algebraic sets

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It is known that germs of analytic sets are topologically equivalent to germs of algebraic sets. We show that for any analytic germ one can choose an equivalent algebraic one in such a way that both germs are tangent with any prescribed order of tangency. Moreover, the space of arcs contained in the algebraic germ approximates the space of arcs contained in the analytic one, in the sense that they are identical up to a prescribed truncation order. This is joint work with K. Kurdyka, A. Parusinski and G. Rond.