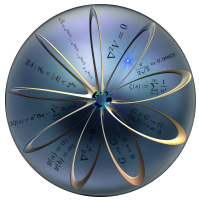

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algebraic manifold

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Synonym	k-algebraic submanifold
Defines	Nash manifold
Defines	Nash submanifold

Definition. Let k be a field and let $M \subset k^n$ be a submanifold. M is said to be an *algebraic manifold* (or k-algebraic) if there exists an irreducible algebraic variety $V \subset k^n$ such that $\dim V = \dim M$ and $M \subset V$. If $k = \mathbb{R}$, then M is called a *Nash manifold*.

It can be proved that such a manifold is defined as the zero set of a finite collection of analytic algebraic functions.

References

[1] M. Salah Baouendi, Peter Ebenfelt, Linda Preiss Rothschild. , Princeton University Press, Princeton, New Jersey, 1999.