PARTIAL INTEGRABILITY OF ALMOST COMPLEX STRUCTURES

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Abstract

The aim of the talk is to review some old and new results on the problem for local and global existence of holomorphic functions on almost complex manifolds. The following topics will be considered: *Existence of holomorphic functions and IJ-bundles, Hypersurfaces in* R7 *Nearly Kaehler manifolds, Homogeneous almost complex spaces, Partial integrability on twistor spaces.*
We will also discuss some related open algebraic, analytic and geometric problems on nilpotent Lie groups, hyperbolic twistor spaces and symplectic manifolds.