ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

8. Analysis

1991 MS Classification: 53, 58

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Almost-Clifford structures on manifolds

Almost-Clifford structures can be introduced on differentiable manifolds in a similar way as almost-complex structures and almost-quaternionic structures. Namely, $J^1, \ldots, J^n$ are fiberwise endomorphisms of the tangent bundle $T(X)$ of the n-dimensional manifold X such that $J^r J^s + J^s J^r = -2\delta(r,s)I, (r, s+1, \ldots, n)$, where I is the identity endomorphism on $T(X)$. Almost-Clifford manifolds are necessarily of dimension $(2^n)k$, with k a natural number. The differential of a Clifford analytic mapping between almost-Clifford manifolds (i. e. whose differential is compatible with the almost-Clifford structures) is a Clifford linear mapping of the corresponding tangent spaces. This concept is a simple and natural one and for $n = 1$ coincides with holomorphy in one complex variable, for $n = 2$ with Q-holomorphy in quaternionic analysis (which is different from Fueter-regularity), but it is different from the nongenic concept as given f. i. in Brackx, Delanghe, Sommen and Soucek. Reference: W. Krolikowski, On Fueter-Hurwitz regular mappings, Dissertationes Math. 353 (1996)