Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) Vol. XII (2013), 717-734

Systems of symplectic forms on four-manifolds

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Abstract. We study almost-Hermitian 4-manifolds with holonomy algebra, for the canonical Hermitian connection, of dimension at most one. We show how Riemannian 4-manifolds admitting five orthonormal symplectic forms fit in this picture and we classify them. In this set-up we also fully describe almost-Kähler 4-manifolds.

Mathematics Subject Classification (2010): 74K20 (primary); 74B20 (secondary).