

Geometry of Para-Hyperhermitian surfaces

Prof. Johan Davidov (Bulgarian Academy of Sciences, Bulgaria)

The purpose of this talk is to review some recent results on the Hermitian geometry of neutral signature metrics in dimension four and their twistor spaces. The following topics are considered: Existence of parahyperhermitian structures on complex surfaces, Classification of compact para-hyperkähler surfaces, Walker metrics, Hyperbolic twistor spaces.