



Mathematical Physics

Constant curvature solutions of Grassmannian sigma models: (1) Holomorphic solutions

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We present a general formula for the Gaussian curvature of curved holomorphic 2-spheres in Grassmannian manifolds $G(m, n)$. We then show how to construct such solutions with constant curvature. We also make some relevant conjectures for the admissible constant curvatures in $G(m, n)$ and give some explicit expressions, in particular, for $G(2, 4)$ and $G(2, 5)$.

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