



## Matrix Model for membrane and dynamics of D-Particles in a curved space-time geometry and presence of form fields

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We study dynamics of a membrane and its matrix regularisation. We present the matrix regularisation for a membrane propagating in a curved space-time geometry in the presence of an arbitrary 3-form field. In the matrix regularisation, we then study the dynamics of D-particles. We show how the Riemann curvature of the target space-time geometry, or any other form fields can polarise the D-Particles, cause entanglement among them and create fuzzy solutions. We review the fuzzy sphere and we present fuzzy hyperbolic and ellipsoid solutions.

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