

On curvature of piecewise flat manifolds

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Regge Calculus is a discrete version of Riemannian geometry, where metrics are piecewise constant with respect to some triangulation, and satisfy a partial continuity condition on interfaces. That reasonable curvatures can be defined, is remarkable in view of the fact that coordinate expressions feature non-linear combinations of zero, first and second order derivatives of metric components. I will relate Regge Calculus to finite element methods and propose a justification of the definition of curvature provided by Regge, by hand so to say.