

First order gravity on the light front

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After a brief review of unusual features of the light front canonical formulations of field theories, I present the analysis of the canonical structure of the first order formulation of general relativity on a lightlike foliation. It appears to be quite different from the usual spacelike case leading, for instance, to the presence of tertiary constraints. Besides, I discuss the issue of the zero modes and argue that there might be some hidden correspondence with two-dimensional theories.

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