

## Solitonic Information Transmission in General Relativity

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**Abstract:** An exact solution of the vacuum Einstein's field equations is presented, in which there exists a congruence of null geodesics whose shear behaves like a travelling wave of the KdV equation. On the basis of this exact solution, the feasibility of solitonic information transmission by exploiting the nonlinearity intrinsic to the Einstein field equations is discussed.

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Key words: Newman-Penrose tetrad, KdV wave, solitonic information transformation

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