Lie-Backlund transformations for residual symmetries in General Relativity

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Lie-Backlund transformations have been used to extend the criteria proposed by Ayón-Beato and Velázquez-Rodríguez for characterizing the residual symmetries of the gravitational ansatz developed according to Liepoint transformations. We found that non-local Lie-Backlund transformations allows us to obtain the more general residual symmetries of the metric. We present the generalized criteria for finding all residual symmetries for any metric ansatz in general relativity.

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