

## Form Invariance of Raitzin's Canonical Equations of Relativistic Mechanical System

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**Abstract:** A form invariance of Raitzin's canonical equations of relativistic mechanical system is studied. First, the Raitzin's canonical equations of the system are established. Next, the definition and criterion of the form invariance in the system under infinitesimal transformations of groups are given. Finally, the relation between the form invariance and the conserved quantity of the system is obtained and an example is given to illustrate the application of the result.

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**Key words:** form invariance, conserved quantity, Raitzin's canonical equation, relativistic holonomic system

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