

## **Acknowledgement**

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## **Abstract**

In this work Hamiltonian energy and momentum expressions are derived from the expression of energy- momentum tensor of generalized Einstein generalized general relativity.

The Hamiltonian momentum relation together with the ordinary operator formalism in quantum mechanics is used to obtain gravitational quantum equation this is used to construct quantum wave equation for static field. This equation is solved for flat, weak and strong gravity. It shows that gravitational field is quantized and can move as a travelling wave with the speed of light. The solution for spherical coordinate shows the quantization of energy, orbital angular momentum Z-component. It shows also the gravity quantization by the existence of graviton moving with speed of light. The graviton energy is itself quantized as a multiple of Plank energy.

## المستخلص

في هذا العمل إستنتجت صيغ طاقة هاملتون والإندفاع من صيغة ممتد الطاقة والإندفاع الخاص بالنظرية النسبية العامة المعممة. أستخدمت علاقة الطاقة بالإندفاع مع الصيغة العادية للمؤثرات في ميكانيكا الكم لإيجاد معادلة التناقل الكمية. أستخدمت هذه المعادلة لإيجاد المعادلة الموجية للمجال الساكن. هذه المعادلة تم حلها للفراغ الإقليدي والمجال التناقلي الضعيف والقوي.

وقد بينت أن المجال التناقلي مكمم ويكن لها الإنتقال بسرعة الضوء. وقد بينت الحل في الإحداثي الكروي تكمم الطاقة ومركبة الإندفاع الزاوي المداري في إتجاه z.

وبينت كذلك تكمم التناقل بوجود حامل القوى التناقلية (الغرافيتون) الذي يتحرك بسرعة الضوء وتكون طاقته من مضاعفات طاقة بلانك.

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