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Derivation of Quantum Gravity Using A_Kolanchi's Laws of Space Time Physics and Theory of Space Availability

Akash Kolanchi

U.G. Student, Department of Computer and Communication Engineering, Amrita Vishwa Vidyapeetham, Coimbatore,
Tamilnadu, India

ABSTRACT: Theory of space availability defines the object on space by calculating available space of object , aki function defines the existence and parameters of an object in space A_Kolanchi's laws of space time physics says about the rules followed in space time physics , this paper contains the derivation of quantum gravity using the laws and concepts mentioned

KEYWORDS: quantum gravity, spacetime physics, available space, laws of space of space time physics

I. INTRODUCTION

The Theory of space availability defines the n-dimensional object by calculating the available space of the object (for an n-dimensional object, it is equal to the nth dimensional volume of an n-dimensional object). Through A_Kolanchi's laws of dimensions, we can say: When actual space is greater than or equal to available space of the object, the object exists on space otherwise it distorts and forms, such available space of object is equal to actual space of that universe; When the higher dimensional object enters into lower-dimensional Universe it expands such that extradimensional available space expands between existing lower-dimensional available space; when a lower-dimensional object enters into the higher dimensional universe, there will not be any change.so the Available space of the n-dimensional Sagi can be generalized by the formulae. Kolanchi's law of spacetime physics says Acceleration due to space-time fabric oscillation is directly proportional to the partial derivative of the potential difference between two points caused by charges with respective distance and also Every particle in the n-dimensional universe is made up of nth dimensional SAGI. Aki function or space function describes the shape of its space existence about an n-dimensional object. Kolanchi's wave equation: Schrodinger wave equation approaches quantum mechanics in probabilistic approach while Kolanchi's wave equation approaches in a realistic way it defines a velocity function for a wave function which leads you to determine the exact position of an electron. According to kolanchi's first law of space-time physics, quantum gravity is equivalent to the partial derivative of the change in potential with respective x. Potential difference is directly proportional to mass difference Relative mass change and length contractions are observed in the quantum level. So, multiply relative factor of gravity the quantum gravity equation derived before and velocity function is obtained from kolanchi's wave equation.

II. RELATED WORK

Quantum gravity is a theory which describes gravity in which quantum effects cannot be neglected. until now there is no specific theory which explains quantum gravity therefore the term quantum gravity is more like an open problem, quantum gravity is presented as most important problem in fundamental physics ^[1]all existing quantum gravity

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proposals share a same problem. It is practically impossible to test these predictions experimentally unlike electromagnetic field quantum effects in gravitational field is extremely small. gravitational force is the weakest force among all forces this is because coupling constant of gravity is 43 orders of magnitude smaller than the fine structure, which governs the light matter interaction [2]8In string theory, gravity is just one of the excitations of a string or other extended object, living on some metric space. The existence of such background spaces, in which a theory is defined, is the key technical tool for the formulation and the interpretation of the theory, at least in the case of the perturbative definition of the theory. In tentative nonperturbative definitions, such as aiming to define the physical theory indirectly via a boundary quantum field theory, the theory relies only on the background “at infinity”, needed for the definition of the boundary quantum field theory. In all cases, for a physicist with a high-energy background, the central problem of quantum gravity is reduced to an aspect of the problem of understanding the still mysterious nonperturbative theory that has the various perturbative theories as its perturbation expansion. General relativity has taught us not only that space and time share the property of being dynamical with the rest of the physical entities, but also — more crucially — that spacetime location is relational (see S. Quantum mechanics has taught us that any dynamical entity is subject to Heisenberg’s uncertainty at small scale. Therefore, we need a *relational notion of a quantum spacetime* in order to understand Planck-scale physics. Thus, for a relativist, the problem of quantum gravity is the problem of bringing a vast conceptual revolution^[3]

III. THEORY OF SPACE AVAILABILITY

Theory of space availability defines n dimensional object by calculating available space of the universe
What is the available space?

Available space of n dimensional object is equal to the nth dimensional volume of an n dimensional object for example, available space of one-dimensional object is its length, available space of a two-dimensional object is its area and available space for a three-dimensional object is its volume.

Our universe contains of three dimensions of shape and a dimension of time and there is a possibility of many dimensions of shape in the space

Sagi:

To understand about sagi an object that is obtained when we draw a line of length(r) from a point to all directions in One dimension it’s a line in two dimensions it is a circle in three dimension its sphere.

N dimensional sagi	Available space of n dimensional sagi
One dimensional sagi	$2 \pi *r$
Two dimensional sagi	$2 \pi r^2$
Three dimensional sagi	$4/3 \pi r^3$
Four dimensional sagi	$2/3 \pi r^4$

Available space of the n dimensional sagi can be generalized by the formulae

$$\oint_A^n = \frac{2^n \pi r^n}{n!}$$

A_Kolanchi’s laws of dimensions

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A_Kolanchi's 1st law of dimension:

When actual space is greater than or equal to available space of object the object exist on space otherwise it distorts and forms such available space of object is equal to actual space of that universe

A_Kolanchi's 2nd law of dimension:

When the higher dimensional object enters into lower dimensional Universe it expands such that available space of extradimensional space spreads between existing lower dimensional available space

A_Kolanchi's 3rd law of dimension:

If a lower dimensional object enters into the higher dimensional universe it does not undergo any change

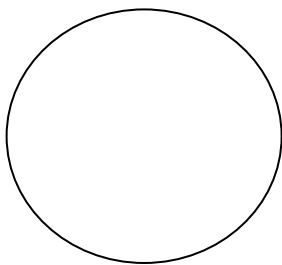
Dimensions

One dimension: There is a single axis Available space of SAGI is $2 * \pi * r$ Light travels in single direction in one dimensional universe

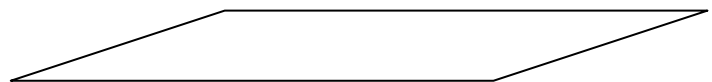


Two dimensions

It consists of two Axis which are perpendicular to each other Available space of SAGI $= 2\pi r^2$ The objects SAGI forms a circle Light travels in both the directions in two-dimensional universe



Circle



Plane

Axis combine to form a plane 3 dimensions:

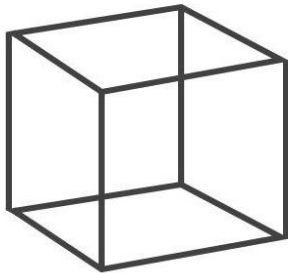
It consists of three Axis which are perpendicular to each other Available space of SAGI $= 4/3 \pi r^3$ The object SAGI forms a three-dimensional sphere. In three-dimensional Universe light travels in all the three directions

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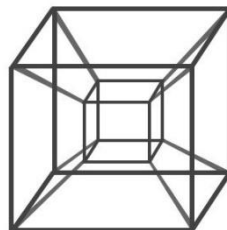
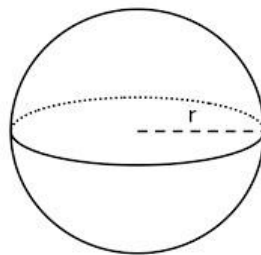


Cube

Three axes combine to form a cube

4 dimensions:

It has 4 axis which are perpendicular to each other as we are three dimensional beings we can't judge the shape of fourth dimension Available space of SAGI= $\frac{2}{3}\pi r^4$. In four-dimensional Universe light travels in all IV direction. The objects SAGI forms 4th dimensional sphere

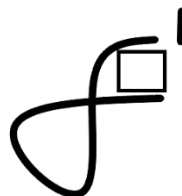


Tesseract

Four axes combine to form tesseract

N dimension

It has n axisAs we are three dimensional beings, we can't judge the shape of n dimension. All n axis is perpendicular to each other Available space of n dimensional SAGI= $\frac{2^n}{n!} \pi r^n$ The given object SAGI forms a n dimensional sphereNomenclature for axis



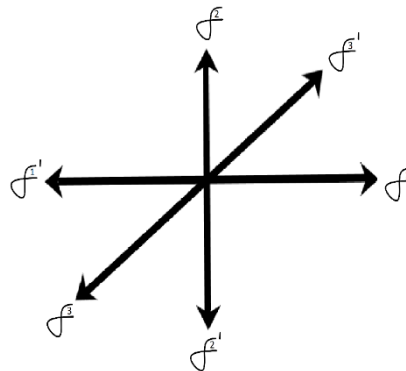
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Dash symbol is used for representing opposite axis Nth number of axis is written in the both For naming different axis symbol Aki is usedE.g.: For the representation of 3D axis replace x, y, z with



Symbol is called as aki and x axis is read as aki1 and x dash axis is read as aki dash 1 axis and so on.

Space time physics: Kolanchi's first law of spacetime physics:

Acceleration due to space time fabric oscillation due to charge is directly proportional to partial derivative of potential difference between two points due to charge with respective distance

Kolanchi's second law of space time physics:

Every particle in the n dimensional universe is made up of nth dimensional SAGI

First law of space time physics explains about acceleration due to space time fabric oscillation. space time fabric oscillates due to potential difference caused by charges e.g.: electrostaticforce, magnetic force , gravity .

Aki function / space function:

This function describes about shape or its space existence about n dimensional object And this function is represented by aki symbol same nomenclature as available space

There are 4 forms of aki equations

Vector form of aki function

$$\vec{f}^n = x\vec{i} + y\vec{j} + z\vec{k}$$

Quantum form of aki function

$$f_Q^n = \frac{2^n \pi^n}{n!} \int \Psi' \Psi dx$$

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Available space

$$f_A^n = \frac{2^n \pi^n}{n!}$$

Macro for of aki function

$$f_m^n = \frac{2^n \pi^n}{n!} f_v^n$$

$$f_m^n = \frac{2^n \pi^n}{n!} (x \vec{i} + y \vec{j} + z \vec{k})$$

Kolanchi's wave equation:

Scrodinger wave equation appoches quantum mechanics in probabilistic appoch while KAT's wave equation appoches in a realistic way it defines a velocity function for a wave function which leads you to determine exact position of electron

Scrodinger's wave equation^[4]

$$\frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} + \frac{\partial^2 \psi}{\partial z^2} + \frac{8\pi^2 m}{h^2} (E - V) \psi = 0$$

Second derivative with respect to Z
Schrodinger wave Function

Position
Energy
Potential Energy

IV. KOLANCHI'S WAVE EQUATION

Kolanchi's wave equation defines the probability of finding electron by velocity function

Probability of finding electron is directly proportional to time interval of the electron in the sapce interval to the time period of the electron

$$\frac{\left(\int_a^b \frac{ds}{v(x,t)} \right)}{T}$$

Replace the time period of electron by frequency of the electron

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$$\left(\mu \times \int_a^b \frac{ds}{v(x,t)} \right) \text{probability of finding electron} \propto \left(\mu \times \int_a^b \frac{ds}{v(x,t)} \right)$$

Multiply by proportionality constant ψ

$$\text{probability of finding electron} = \psi \times \left(\mu \times \int_a^b \frac{ds}{v(x,t)} \right)$$

Replace probability of finding electron by integration of square of ψ with dx , limit from a to b

$$\int |\psi|^2 \cdot dx = \psi \times \left(\mu \times \int_a^b \frac{ds}{v(x,t)} \right)$$

By Schrödinger wave equation

$$\psi = - \frac{\left(\frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} + \frac{\partial^2 \psi}{\partial z^2} \right)}{\frac{8\pi^2 m}{h^2} (E-V)}$$

By substituting value of ψ from Schrödinger wave equation

$$\int \left| \frac{\left(\frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} + \frac{\partial^2 \psi}{\partial z^2} \right)}{\frac{8\pi^2 m}{h^2} (E-V)} \right|^2 dx = \psi \times \left(\mu \times \int_a^b \frac{ds}{v(x,t)} \right)$$

Above equation is the final form of Kolomochi's wave equation

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V. DERIVATION OF QUANTUM GRAVITY

Probability density equation is equal to probability of finding electron multiplied by partial derivative of density function of ψ with respect to ψ

$$\dot{\rho} = \int \left| \frac{\left(\frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} + \frac{\partial^2 \psi}{\partial z^2} \right)}{8\pi^2 m (E-V)} \right|^2 dx \frac{\partial \rho(\psi)}{\partial \psi}$$

M bubble is probability mass function and it's equal to integration of probability density function with respect to ψ

$$\dot{M} = \int \dot{\rho} \cdot d\psi$$

V is the potential function of the particle

V is equal to integration of m bubble with respect to 1 divided by derivative of ψ

$$v = \int \frac{\dot{M}}{d\psi}$$

According to Kolanchi's first law of space time physics, quantum gravity is equal to partial derivative of change in potential with respect to x

$$g_Q = \frac{\partial \Delta V}{\partial x}$$

Relative factor for gravity is equal to 1 divided by square root of one minus square of velocity function to the speed of light on that medium (c)

Relative factor of gravity = $\frac{1}{\sqrt{1-v^2/c^2}}$

Multiply relative factor of gravity the quantum gravity equation derived before and velocity function is obtained from Kolanchi's wave equation

$$g_Q = \frac{\partial \Delta V}{\partial x} \frac{1}{\sqrt{1-v^2/c^2}}$$

After multiplying with the relative factor we obtain final equation of gravity as below

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$$g_Q = \frac{\partial \Delta \int \int \int \left| \frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} + \frac{\partial^2 \psi}{\partial z^2} \right|^2 dx \frac{\partial \rho(\mathcal{F})}{\partial \mathcal{F}} \cdot d\mathcal{F} \cdot \frac{1}{d\mathcal{F}}}{\partial x} \times \frac{1}{\sqrt{1-v^2/c^2}}$$

VI. CONCLUSION

We have derived final equation of quantum gravity using kolanchi's laws of space time physics and theory of space availability

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