Dark energy does not exist
Big Bang and Big Crunch oscillation, from Ferent wall
God is eternal

Adrian Ferent

I discovered a new gravitation theory which breaks the wall of Planck scale; I discovered Big Bang and Big Crunch oscillation from Ferent wall, I explained the Eternity of God!

Abstract

My Nobel Prize - Discoveries

Dark energy does not exist
Big Bang and Big Crunch oscillation, from Ferent wall
God is eternal

It is our ultimate task to discover a new quantum theory which breaks the wall of Planck scale and creates a new frontier.
I found another wall, the Ferent wall beyond the Planck wall, where the Planck constant $h=6.62606957\times10^{-34}$ J·s is replaced by Ferent constant $a = 1.590511178\times10^{-76}$ J·s.
I replaced Max Planck equation $E = h \times f$ with the Ferent equation for the energy of a photon: $E = h \times f + a \times f$
I discovered graviton momentum: $p = a / \lambda$
I replaced Heisenberg Uncertainty Principle $\Delta p \times \Delta x \geq h / 4\pi$ with Ferent Uncertainty Principle: $\Delta p \times \Delta x \geq a$
I discovered a new electromagnetic theory.

"The majority of Dark matter is the core of supermassive black holes"

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The graviton has negative momentum, negative mass and negative energy.
I am the first who understood and explained that the gravitons with the speed of light, $c = 2.9979 \times 10^8$ m/s, are too slow to keep the constellations and the galaxy together. I explained Gravitation with high speed gravitons, $v_a = 1.001762 \times 10^{17}$ m/s.
Ferent gravitational force function:

$$F = \int_{-\infty}^{\infty} G \frac{m_1(t) m_2(t)}{r^2(t)} \delta(t - \frac{r(t)}{v(t)}) dt$$

"I am the first who understood and explained Gravitation with high speed gravitons $v = 1.001762 \times 10^{17}$ m/s, with Negative Momentum, Negative Mass and Negative Energy"

Adrian Ferent

"The Big Bang and Big Crunch oscillation, from Ferent wall"

Adrian Ferent

"Our Milky Way galaxy will be absorbed by a supermassive black hole from Ferent universe"

Adrian Ferent

"Dark energy does not exist"

Adrian Ferent

"God is eternal, because is beyond the Big Bang and Big Crunch oscillation between Ferent universe and Planck universe."

Adrian Ferent

My quantum gravity theory shows that the gravitons are too small to be detected by today's technology.

1. Introduction

All gravitation theories are limited to speed of light. In these theories speed of gravitations (gravitons) is equal with speed of light.
In my view the perturbation done by a photon in a gravitational field is equal with one graviton. Because light has gravitational property, light is deviated by mass; from here I started a new electromagnetic theory. Sometimes decoherence is due to gravitational field, to gravitational waves generated by an observer.
Perturbation of a photon in gravitational field is a graviton with the same frequency and speed as photon has; but the gravitons in my theory that mediates gravitational force, gravitons which mediates the interaction force, have different frequencies when the photon travels near an asteroid, near the Earth or near the Sun.

Electromagnetic force divided by gravitational force is photon energy divided by graviton energy.
This brought me to another wall beyond the Planck wall, with a length smaller than Planck length.
How about graviton speed?
I realized that speed of light is too small for graviton speed. If the graviton has only the speed of light, because black hole escape velocity is higher than the speed of light, my conclusion was: graviton speed is much higher than speed of light.
I discovered the Ferent gravitational force function.
Gravitational fields are conservative; the work done by gravity from one position to another is path-independent.

My theory

The oscillation of an electron emits, radiates to space a photon and a coupled graviton, with the same speed, the speed of light and the same frequency.
The energy E contained in a graviton, which represents the smallest possible 'packet' of energy in a gravitational wave, is the ‘a’ the Ferent constant times the frequency.
In my view the electromagnetic wave is the superposition of 3 sinusoids, because the photon has relativistic mass and travels with a coupled graviton.
I discovered a new gravitation theory and I found how gravitation and gravitons emerged at first Ferent wall. Here the gravitons have the speed equal with the speed of light and the Ferent length $l_a = 7.918359 \times 10^{-57}$ m.
Why gravitons faster than the speed of light?
Because I am the first in the world who understood and explained that the gravitons with the speed of light are too slow to keep the constellations together. The gravitons with the speed of light are too slow for the escape velocity of a black hole.
During the Big Bang first emerged the gravitational force with the speed of the gravitons:
$v_a = 1.0017620 \times 10^{17}$ m/s
These gravitons with the speed much bigger than the speed of light at the second Ferent wall have negative momentum, negative mass and negative energy.
At the second Ferent wall, the Ferent length $l_F = 1.296 \times 10^{-69}$ m.

The energy E of a photon

Planck discovered that physical action could not take on any indiscriminate value. Instead, the action must be some multiple of a very small quantity called Planck constant.
The Planck constant is a physical constant that is the quantum of action, describing the relationship between energy and frequency.
The energy E contained in a photon, which represents the smallest possible 'packet' of energy in an electromagnetic wave, is Planck’s constant times the frequency:
E = Planck’s constant × frequency.

$$E = h \times f$$

Max Planck equation for the energy of a photon $E = h \times f$ is incorrect because does not contains the energy of the graviton, because light has gravitation!
Ferent equation for the energy of a photon:

$$E = h \times f + a \times f$$

Where h – is the Planck constant $h=6.62606957 \times 10^{-34}$ J·s and a – is the Ferent constant $a = 1.590511178 \times 10^{-76}$ J·s
The electromagnetic field is a physical field that is produced by electrically charged objects.
However, gravitational force is extremely weak when compared to electromagnetic force. In fact it is only about 1/s of the strength of the electromagnetic force.

$$s = 4.166 \times 10^{42}$$

2. The Ferent wall

Field

Field is a physics term for a region that is under the influence of some force that can act on matter within that region.
The electromagnetic field is mediated by the exchange of photons.
The gravitational field is mediated by the exchange of gravitons.
For example, the Sun produces a gravitational field that attracts the planets in the solar system and thus influences their orbits.

The ratio s

The magnetic force always acts at right angles to the motion of a charge, it can only turn the charge, it cannot do work on the charge.
The strength s, of the electromagnetic force relative to gravity force:

$$s = \frac{F_e}{F_g} = \frac{k_e q_e^2}{G m_e^2} = \frac{(8.99\times10^{9})(1.60\times10^{-19})^2}{(6.67\times10^{-11})(9.10\times10^{-31})^2}$$

$s = 4.166 \times 10^{42}$
With ‘s’ I calculated the Ferent constant.

Gravitation

Gravitation is a phenomenon by which all things attract one another including sub-atomic particles, planets, stars and galaxies.
The four fundamental forces: the gravitational force, the electromagnetic force, the strong nuclear force and the weak nuclear force are the four fundamental forces.
The gravitational force is mediated by a massless particle called the graviton.
Because gravitation is an inverse square force of apparently infinite range it can be implied that the rest mass of the graviton is zero.
Gravitational fields are conservative; the work done by gravity from one position to another is path-independent.

The ‘a’ constant

The electric and gravitational fields are quite similar.
In my view, the energy E contained in a graviton, which represents the smallest possible 'packet' of energy in an gravitational wave, is the ‘a’ constant times the frequency

$E = a \times f$

Now I consider the case of a photon and of a coupled graviton with the same frequency and the same speed emitted by an electron.
Because the strength, of electromagnetic energy relative to gravity energy it is the strength $s = 4.166 \times 10^{42}$, photon energy $E_p = h \times f$, divided by graviton energy $E_g = a \times f$ is $s = 4.166 \times 10^{42}$

The value of 'a'

We have s = h / a
Adrian Ferent constant a = h / s
Planck constant h=6.62606957×10^{-34} J·s
This means the Ferent constant:

a = 1.590511178×10^{-76} J·s

The momentum of the graviton

The momentum of a photon: p = h / λ
The momentum of a graviton: p = a / λ
I derived this equation from Klein–Gordon equation.
Because the graviton has the rest mass equal to zero and the speed is equal to the speed of light: E = p × c

E = a × f from here p × c = a × f, and because f / c = λ, we have:
Graviton momentum:

p = a / λ

That is why the gravitons are too small to be detected by today's technology.

Uncertainty Principle

Observables such as position and momentum are represented by self-adjoint operators. When considering pairs of observables, an important quantity is the comutator. For a pair of operators their commutator is defined as:

$$\left[\hat{A}, \hat{B}\right] = \hat{A}\hat{B} - \hat{B}\hat{A}$$

In the case of position and momentum, the commutator is:

$$\left[\hat{x}, \hat{p}\right] = i\hbar$$

Position and momentum are vectors of operators and their commutation relation between different components of position and momentum can be expressed as

$$\left[\hat{r}_i, \hat{p}_j\right] = i\hbar\delta_{ij}$$

The physical meaning of the non-commutativity:

$$\left[\hat{x}, \hat{p}\right]\left|\varphi\right\rangle = i\hbar\left|\varphi\right\rangle \neq 0$$

This implies that no quantum state can simultaneously be both a position and a momentum eigenstate.
In the case of position and momentum of a graviton, the commutator is:

$$\left[\hat{x}, \hat{p}\right] = i\underline{a}$$

Heisenberg Uncertainty Principle is limited for gravitons!
$\Delta p \times \Delta x \geq h / 4\pi$

Ferent Uncertainty Principle:
$\Delta p \times \Delta x \geq a / 4\pi$

From this equation: $p = a / \lambda$ by substituting Δx for λ :

$\Delta p \times \Delta x = a$ this means $\Delta p \times \Delta x \geq a$, much stronger inequality than the Heisenberg uncertainty principle.

This means $\Delta p \times \Delta x > a / 4\pi$ and in the same way like in the case of Heisenberg Uncertainty Principle, this equation can be refined to $\Delta p \times \Delta x \geq a / 4\pi$

The Uncertainty Principle implies that the gravitational field cannot be measured to arbitrary accuracy. The measured strength can only be given as an average over a spacetime region and not at individual spacetime points.

The energy of the graviton

Because $E = a \times f$ and $p \times c = a \times f$; $p = m \times c$; m – the relativistic mass of the graviton.

The energy of the graviton: $E = m \times c^2$

The Ferent length

Using the same equations as for the Planck units I can calculate all the units at Ferent wall.
Gravitational constant $G = 6.67384 \times 10^{-11}\ m^3 \cdot kg^{-1} \cdot s^{-2}$
The Ferent length $l_a = 7.918359 \times 10^{-57}$ meters

$$l_a = \sqrt{\frac{aG}{c^3}}$$

The Ferent wall

I found another wall the Ferent wall beyond the Planck wall, where the Planck constant $h = 6.62606957 \times 10^{-34}$ J·s is replaced by Ferent constant $a = 1.590511178 \times 10^{-76}$ J·s.
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I discovered the momentum of the graviton: $p = a / \lambda$
I replaced Heisenberg Uncertainty Principle $\Delta p \times \Delta x \geq h / 4\pi$ with Ferent Uncertainty Principle: $\Delta p \times \Delta x \geq a$
The energy of a graviton: $E = m \times c^2$

The Ferent length $l_a = 7.918359 \times 10^{-57}$ m
I discovered a new electromagnetic theory.
At Ferent wall emerged the gravitation and the gravitons with the energy $E_g = a \times f$ and the speed equal with the speed of light. Now I can calculate using the same equations from the Planck wall for the Planck units, the Ferent length, the Ferent time, the Ferent energy…and I can define very well the Ferent wall!
During the Big Bang first emerged the gravitational force at Ferent wall and after that the electromagnetic force, the strong nuclear force and the weak nuclear force.
This means I discovered a new gravitation theory and I found how the gravitation and the gravitons emerged at Ferent wall!
I can stop here with my gravitation theory.

Why to go beyond, what I considered it is limited is the speed of the gravitons equal with the speed of light.
Why gravitons faster than the speed of light?

3. **Faster than speed of light!**

I am the first in the world who understood and explained that gravitons with the speed of light are too slow to keep constellations together. Gravitons with the speed of light are too slow for the escape velocity of a black hole. The black hole escape velocity exceeds that of light.
I discovered the graviton: the momentum of the graviton, the energy of the graviton, the speed of the graviton, the frequency of the graviton, the mass of the graviton.
First problem: If gravitons have the speed of light will not be able to keep constellations together.
Second problem: the black hole has the escape velocity higher than the speed of light, this means the gravitons will not escape and the black holes will not attract anything.
These two problems convinced me that the gravitons have the speed much higher than the speed of light. The warping of spacetime is an effect of perturbation, not an interaction how I explained in my theory.
That is why General relativity theory, String theory, LQG...are wrong because are limited to speed of light.

Big Bang

The Universe is all of time and space and its contents like galaxies, the contents of intergalactic space and all matter and energy.

The theories may have insurmountable obstacles to complete testing them. Physics is an experimental science and there are limitations to pushing exploration to ever higher energies.
For example full exploration of the Planck scale may never be possible and the best that we may hope for is an occasional and limited test.
Multiverse theories may have different obstacles. The inherent limitations of testing multiverse theories will prove to be a barrier to full knowledge of the origin of the

fundamental interactions if this is the solution that Nature has chosen. However, as always, more work is needed. We are far from complete in our exploration of either conventional theories or multiverse theories.

General relativity predicts the existence of spacetime singularities.
My theory is the same if the universe did not start with the Big Bang. My gravitation theory explains what happened at Ferent wall and after the expansion of the Universe attains the Ferent wall.

Two important walls:
The Ferent wall: here at time $t = 1.294 \times 10^{-86}$ s were created Ferent matter and gravitons with the speed of the gravitons $v_a = 1.001762 \times 10^{17}$ m/s.
The Planck wall: here at time $t = 5.391 \times 10^{-44}$ s were created matter and photons, with the speed of the photons $c = 2.997924 \times 10^{8}$ m/s.

The Universe is composed almost completely of dark energy, dark matter and ordinary matter**.**

The Universe will eventually stop expanding and start collapsing in on itself, the so called Big Crunch.

Einstein field equations

General relativity is the geometric theory of gravitation published by Einstein and the current description of gravitation in modern physics.
General relativity generalizes special relativity and Newton's law of universal gravitation, providing a unified description of gravity as a geometric property of space and time.
General relativity is a metric theory of gravitation.

Einstein's field equations:

$$R_{\mu\nu} - \frac{1}{2} R g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu}$$

On the left-hand side is the Einstein tensor, a specific divergence-free combination of the Ricci tensor and the metric.
The right-hand side of the field equations describes matter sources, the behavior of which is governed by quantum theory. The left-hand side of the field equations describes gravitation as a classical field. If the right-hand side represents quantized matter then the field equations as they stand are inconsistent.
On the right-hand side, is the energy–momentum tensor and contains the speed of light.
“Einstein, Hilbert General Relativity theory, String theory, LQG, all Quantum gravity theory are incorrect because are limited to the speed of light” Adrian Ferent

The Einstein (Hilbert) field equations can be interpreted as a set of equations dictating how matter/energy determines the curvature of spacetime.

Einstein reinterpreted the gravity not as a force pulling on objects but as a curvature of spacetime.
For Einstein objects falling in a gravitational field like around the Earth aren't being pulled but are simply moving along geodesics in the warped spacetime surrounding the Earth.
For Einstein, the ball falls because spacetime is curving, not because there is a force pulling it back to Earth!

Einstein was erroneous, because in my view, the gravitons, with high speed v_a moving in the gravitational field are the force carriers!

Einstein general relativity theory does not work at quantum level and galaxy level.

Discrete space

Today we know that the space is not an infinitely divisible continuum, it is not smooth but granular and Planck length and Planck volume gives the size of its smallest possible grains.
Planck length, $l_P = 1.616199\times10^{-35}$ m
Planck volume, $l_P^3 = 4.22419\times10^{-105}$ m^3

Conservation of Energy

The law of conservation of energy states that the total energy of an isolated system cannot change in time.
Planck energy is nature's maximum allowed matter energy for point-energy (quanta).
During the Big Bang, this means the Ferent energy at Ferent wall, is equal with the Planck energy.
From here I calculated the speed of a free (not coupled) graviton!

The speed of the graviton

The speed of the graviton v_a , where $\underline{a}=a/2\pi$
Gravitational constant $G = 6.67384\times10^{-11}$ $m^3 \cdot kg^{-1} \cdot s^{-2}$

$$\sqrt{\frac{\underline{a}v_a^5}{G}} = \sqrt{\frac{\hbar c^5}{G}}$$

From this equation the speed of the graviton is $v_a = 1.001762 \times 10^{17}$ m/s much faster than the speed of light!

Ferent volume
Ferent length: $l_F = 1.296 \times 10^{-69}$ m
Ferent volume $l_F^3 = 2.18 \times 10^{-207}$ m^3

$$l_F = \sqrt{\frac{\underline{a}G}{v_a^3}}$$

Ferent time
Ferent time $t_F = l_F / v_a = 1.294 \times 10^{-86}$ s

$$t_F = \sqrt{\frac{\underline{a}G}{v_a^5}}$$

Ferent frequency
Ferent frequency:
$f_F = 1 / t_F = 7.728 \times 10^{85}$ Hz

Ferent energy
Ferent energy $E_F = \underline{a} \times f_F = 1.956 \times 10^{9}$ J

$$E_F = \sqrt{\frac{\underline{a}v_a^5}{G}}$$

Ferent mass
Ferent mass:
$m_F = E_F / v_a^2 = 1.949 \times 10^{-25}$ kg

Ferent density
Ferent density $\rho_F = m_F / l_F^3 = 8.94 \times 10^{181}$ kg/m^3

$$\rho_F = \frac{v_a^5}{\underline{a}G^2}$$

The volume of the universe

Mass of the universe: $M = 3 \times 10^{52}$ kg
The volume of the universe at Planck wall:
$V_P = M / \rho_P = 3 \times 10^{52}$ kg / 5.155×10^{96} kg/m^3 = 5.819×10^{-45} m^3

The volume of the universe at Ferent wall:
$V_F = M / \rho_F = 3 \times 10^{52}$ kg / 8.94×10^{181} kg/m^3 = 3.355×10^{-130} m^3

This means at Ferent wall the volume of the Universe was smaller than the atom volume. This means between Ferent wall and Planck wall the universe expanded $V_P / V_F = 1.546 \times 10^{85}$ times in a period $t = t_P - t_F = 5.391 \times 10^{-44}$ s.

This is the volume of Plank universe.

Dark matter

Dark matter is only one of the most important questions which astrophysicists are struggling with today.
The concept of dark energy is another very important question.
The nature of dark matter of Universe is one of the most difficult problems facing modern cosmology.
Bottom-up motivation for multiverse theories: there are a lot of ground states with different parameters and the universe realizes domains (subuniverses) with these diverse parameters.
We find ourselves in a domain or subuniverse with the right properties.

Where is the mysterious dark matter?
Scientists who have sought after for decades for the stuff that comprises most of the mass of the universe are starting to worry that they are looking in the wrong places.
After the latest null results, the chances for the scientists to detect dark matter are very small.
The observed flatness of the rotation curves of spiral galaxies is a clear indicator for dark matter.

Direct evidence of dark matter has been obtained through the study of gravitational lenses. On the theoretical side, we predict the presence of dark matter (or dark energy) because:
1) it is a strong prediction of most inflation models (and there is at present no good alternative to inflation).
2) our current understanding of galaxy formation requires substantial amounts of dark matter to account for the growth of density fluctuations.

Perhaps no other object from physics has had as much influence on public consciousness in recent times as the black hole has.

What is dark matter in my Gravitation theory?
At Ferent wall due to the extraordinarily small scale of the universe at that time, gravitation was the only physical interaction.
At Ferent wall were created Ferent matter and gravitons.
What is Ferent matter?
Ferent density ≥ Ferent matter density > Planck density
8.94×10^{181} kg/m^3 ≥ Ferent matter density > 5.155×10^{96} kg/m^3
That is why Ferent matter particles do not carry any electric charge.
Only a small percentage of Ferent matter becomes matter at Planck wall. Ferent matter is 84.5% of the total matter in the universe.
The majority of Ferent matter is the core of the supermassive black hole, in the center of each galaxy. Ferent matter plays a central role in galaxy formation and evolution.
Supermassive black holes of millions of solar masses exist in the centers of galaxies.
The best evidence for a supermassive black hole comes from studying the proper motion of stars near the center of our own Milky Way galaxy.

At the largest-size scales dark matter dominates the dynamics of galaxy clusters and superclusters.
How you can see the properties of Ferent matter are the properties of dark matter!
This means Dark matter is Ferent matter, interacts only gravitationally.
My gravitation theory explains dark matter!

"The majority of Dark matter is the core of the supermassive black holes" Adrian Ferent

Proposed quantum gravity theories: String theory, LQG

There have been numerous theories of gravitation since ancient times.
The graviton in String theory is a closed string with the length of couple Planck lengths.
This means the graviton is gigantic that is why the String theory is limited to the speed of light!
LQG: the predicted size of this structure is the Planck length.
According to this theory, there is no meaning to distance at scales smaller than the Planck scale.
My quantum gravity theory breaks the wall of Planck scale.
A fundamentally geometric nature for gravitation would mean that a completely rigorous unification of all fields is not possible.

Anyway there are numerous quantum gravity theories, but all of them are limited to the speed of light.

My quantum gravity theory and information

In the beginning was the qubit.
At the beginning was the qubit of information.
In my view the information of our universe is in the gravitational field carried by gravitons (qubits).
Only a small part of the information is carried by photons.
The gravitons were not detected because they have a very small energy; the gravitons are too small to be detected by today's technology.
The light can not escape from the black hole, but the small gravitons with high speed and high frequency can very easy go through the event horizon.
In my view the gravitons with high speed and high frequency carry the black hole information!

Quantum entanglement explained

Quantum entanglement explains that information moves faster than light. If we have two electrons close together, they can vibrate in unison, entangled electrons, according to quantum theory.
If we then separate them an invisible cord emerges and connects the two electrons, even though they may be separated by many light years.

If we jiggle one electron, the other electron 'senses' this vibration faster than the speed of light. Einstein named 'spooky action at a distance'; he thought that this contradicts the quantum theory, since nothing can go faster than light.
In my view when the electron is jiggled it is a change in the gravitational field and the gravitons with a speed v_a = 1.0017620 $\times 10^{17}$ m/s faster than the speed of light will change the state of the entangled electron.

4. Gravitons with negative momentum, negative mass and negative energy

At Ferent wall started our Universe: matter has positive energy and the gravitational field has negative energy. If the two values cancel out, the universe has zero energy and can theoretically last forever.
The negative energy (- E) is needed to offset the positive energy +E of matters, negative gravitational potential energy offset positive energy.
E = 0 = +E + (- E)

$$E = (\sum + mc^2) + (\sum \frac{-GMm}{r})$$

The gravitons give a negative momentum to mass-carrying particles to attract them!
This means the momentum of the graviton is negative p = - m × v and I calculated the speed of the graviton v_a. Because the momentum is negative, the relativistic mass - m of the graviton is negative!
If the relativistic mass m of the graviton is negative, this implies that the energy of the graviton is negative, E = - m × v_a^2 !
Gravitational fields are conservative; the work done by gravity from one position to another is path-independent.
Conservative vector field is a vector field that is the gradient of a scalar potential V(r).
Gravitational field: g(r) = - ∇V(r)
Conservative vector fields have the property that the line integral is path independent, this means the choice of integration path between any point and another does not change the result.

Negative mass and Negative energy

Negative mass possess this property such as accelerating in the direction opposite of applied force.
Negative mass is mathematically consistent and introduces no violation of conservation of momentum or energy.
Newton's law of universal gravitation states that any two bodies both with positive mass or both with negative mass in the universe attract each other. But in the case of both bodies having negative mass the motion will be repulsive.
For two gravitons the equation:

$$-m\vec{a} = -G\frac{(-m)(-m)}{r^2}\hat{r}$$

Two objects with negative mass would accelerate away from each other, they repel each other.
This means the gravitons repel each other because they have negative mass.
Another case: a negative mass (energy) less massive (talking about absolute values here) than a positive mass body, is accelerated in the direction of positive mass body and it would move much faster and will 'catch up' with the positive mass body (attractive effect).
Positive mass has attractive effect on each other so it forms planets, stars and galaxies.
Negative mass has repulsive effect on each other so it can not form planets, stars and galaxies.
Positive mass–Ferent matter and negative mass-gravitons emerged together at Ferent wall in the energy and momentum conservation state.
Uniformly distributed negative mass receive attractive effect from massive positive mass, this is gravitation.

My Gravitation theory explains that the gravitons traveling between galaxies are the negative energy. These gravitons repel each other because they have negative mass and negative energy.

Conservation of momentum and conservation of energy

My theory is completely mathematically consistent and introduces no violation of conservation of momentum or energy. We have two masses equal in magnitude but opposite in sign, and then the momentum of the system remains zero if they both travel together and accelerate together, no matter what their speed:

Conservation of momentum:

$P = m\times v + (- m) \times v = [m + (- m)] \times v = 0 \times v = 0$

Conservation of the kinetic energy:

$E = m\times v^2 \times 1/2 + (- m) \times v^2 \times 1/2 = [m + (- m)] \times v^2 \times 1/2 = 0 \times v^2 \times 1/2 = 0$

We have positive mass m, the anti-gravitons and the negative mass –m, the gravitons at Ferent wall.
Ferent matter contains the anti-gravitons. Positive mass has attractive effect on each other so it forms dark matter and matter at Planck wall.
This means Ferent matter at Planck wall was divided in dark matter and matter.
Because the Ferent matter, the positive mass can not have the speed of the gravitons, between the Ferent wall and the Planck wall the universe had a negative acceleration:
$(c - v_a) / (t_P - t_F) = (- 1.001762 \times 10^{17} \text{ m/s}) / 5.391 \times 10^{-44} \text{ s} = - 1.858 \times 10^{60} \text{ m/s}^2$.
The others gravity theories do not explain why the universe expanded and why the universe slowed down.
I discovered the graviton:

the momentum of the graviton, the energy of the graviton, the speed of the graviton, the frequency of the graviton and the mass of the graviton.

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Dark energy

The expansion of the Universe is speeding up and not slowing down.

That is why perhaps there is some strange kind of energy that filled the space, possibly Einstein's theory of gravity is wrong and a new theory could include some kind of field that creates this cosmic acceleration. But physicists have given the solution a name and the name is dark energy.
Astronomical observations of universe in the past few decades, strongly invalidated astronomers' view point that the universe was entirely composed of "baryonic matter".
Dark energy is an unidentified form of energy which is hypothesized to permeate all of space, tending to accelerate the expansion of the universe. Dark energy is the mainly accepted hypothesis to elucidate the observations since the 1990s indicating that the universe is expanding at an accelerating rate.

Theoretically the universe had to slow because is full of matter and the attractive force of gravity pulls all matter together.

The standard model of cosmology shows that the best current measurements indicate that dark energy contributes 68.3% of the total energy in the observable universe. The mass–energy of dark matter is 26.8% and ordinary (baryonic) matter is 4.9%, respectively and other components such as neutrinos and photons contribute a very small amount.
The dark energy is uniform across space the density of dark energy ($\sim 7 \times 10^{-30}$ g/cm^3) is very low, much less than the density of ordinary matter or dark matter inside galaxies.
Dark Energy is a hypothetical form of energy that applies a negative, repulsive pressure, behaving like the opposite of gravity.
A number of ideas for the dark energy have been discussed including quantum vacuum energy (cosmological constant), a very light and slowly evolving scalar field and a frustrated network of topological defects. None is convincing and all have severe conceptual problems.
Another possibility is that Einstein's theory of gravity is not correct; already there are new candidate theories.
There are two proposed forms for dark energy; the cosmological constant, a constant energy density filling space homogeneously and scalar fields such as quintessence or moduli, dynamic quantities whose energy density it changes over time and space.
Energy is supposed to have a source either matter or radiation.
Measuring the equation of state for dark energy is one of the biggest efforts in observational cosmology today.
We have to decide between dark energy possibilities like a property of space, a new dynamic fluid or a new gravitation theory.
Dark energy is thought to be very homogeneous, not very dense and is not known to interact through any of the fundamental forces other than gravity.

Possible solutions for dark energy; one is that the universe is filled with a changing energy field, known as quintessence and another is that scientists do not properly understand how gravity works.

"Dark energy does not exist"

Adrian Ferent

Einstein's theory of gravity is not correct

Ferent Gravitation theory: Gravitation is a force mediated by gravitons, not limited to the speed of light.
In Einstein Gravitation theory the gravitational waves have the speed of light, detected by LIGO?
In Ferent Gravitation theory the gravitational waves have the speed of the gravitons 10^{17} m/s, not detected by LIGO!

Why the Graviton smaller 10^{42} times than a photon, can not travel faster than the speed of light?

In the last 100 years physicists did not understand Gravitation, they considered that the space pushes them into their chairs, following Einstein gravitation theory.

"I am the first who understood and explained Gravitation with high speed gravitons v = 1.001762×10^{17} m/s, with Negative Momentum, Negative Mass and Negative Energy"

Adrian Ferent

Nobel Prize and Dark Energy

Saul Perlmutter, Brian Schmidt and Adam Riess won for their shared discovery that the cosmos is expanding at an accelerating rate.
Only couple decades ago most of the scientists believed that the universe could be described by Albert Einstein and Willem de Sitter's simple and elegant model from 1932 in which gravity is gradually slowing down the expansion of space; but today we know that the cosmos is expanding at an accelerating rate.

"The acceleration is thought to be driven by dark energy, but what that dark energy is remains an enigma - perhaps the greatest in physics today. What is known is that dark energy constitutes about three quarters of the Universe. Therefore the findings of the 2011 Nobel Laureates in Physics have helped to unveil a Universe that to a large extent is unknown to science."

This was an amazing finding.
This means there must be a force much more strange and bizarre than anyone had thought. Nobody knows what this force is, but after another decade of calculations, physicists know it makes up about 74 percent of the universe. "We call it dark energy to express ignorance" Perlmutter said in a lecture in 2008.

Professor Schmidt speculates that it may change over time, but not enough in order for us to detect it.
"Dark energy has the property that the bigger the Universe becomes, the more dark energy we will have" and adds immediately, "It's really weird! That's why we don't like this stuff".

If it does turn out that dark energy does not interact at any level, then we can't make it and we can't detect it. "That would be really frustrating", Schmidt said and "It could potentially stay a mystery to us forever."

"Dark energy does not exist"
Adrian Ferent

Perturbation and interaction. LIGO, LISA

Einstein's General Relativity theory is the perturbation of the gravitational field by the presence of an object, of a mass. That is why Einstein's General Relativity theory does not explains gravitation, explains only an effect of gravitation.
In Einstein's General Relativity theory gravitational force is not an interaction force, does not explains how the gravitons mediate the gravitational force.

That is why there are wrong projects like LIGO, LISA
LISA is a proposed European Space Agency mission designed to detect and accurately measure gravitational waves the small ripples of spacetime from astronomical sources. Gravitational wave astronomy seeks to use direct measurements of gravitational waves to study astrophysical systems and to test Einstein's theory of gravity.
In my view LIGO, LISA measures only a perturbation in the gravitational field, not the flux of gravitons (with a speed much bigger than the speed of light), the real gravitational wave, the interaction force.
Einstein's General Relativity theory is only the geometric theory of gravitation.

I realized that people do not understand in my theory the difference between perturbation and interaction! That is why there are developed wrong projects like LIGO, LISA…
The perturbation of a photon in the gravitational field is a graviton with the same frequency and speed as the photon has; but the gravitons in my theory that mediates the gravitational force, the gravitons which mediates the interaction force have different frequencies when the photon travels near an asteroid, near the Earth or near the Sun.
To understand this you have to understand the amplitude modulation of an electrical signal in electronics.
The amplitude (signal strength) of the carrier wave is varied in proportion to the waveform being transmitted.

In LIGO, LISA, Einstein General Relativity theory… waveform being transmitted is considered the carrier wave and that is a mistake.

Ferent gravitational force function

Newton formulation of a gravitational force law requires that each particle with mass respond instantaneously to every other particle with mass irrespective of the distance between them; Newton's theory assumes the speed of gravity to be infinite.
Einstein applied his field equations to cosmology. He liked the idea of a static universe (one that neither expands nor contracts) but he found that his equations would not produce one. That is why he added a term to the curvature side of the equation called the cosmological constant, keeping the model static. This shows that Einstein like Newton did not understand the dynamical universe.
In 1922 Friedmann published a paper where he used Einstein's original equations without the cosmological constant term to show that the universe must be dynamical.
The gravitational force on a particle at a given location d, and time t, depends on the position of the source particles at an earlier time due to the finite speed of the gravitons.
Ferent gravitational force function is a convolution of two functions, the Newton (Hooke) law of universal gravitation function and Dirac delta function.

Newton (Hooke) law of universal gravitation:

$$F = G\frac{m_1 m_2}{r^2}$$

where:
F - the force between the masses
G - the gravitational constant
m_1 - the first mass;
m_2 - the second mass;
r - the distance between the centers of the masses

Dirac delta function can be thought of as a function on the real line which is zero everywhere except at the origin, where it is infinite.
The Dirac delta function can be rigorously defined either as a distribution or as a measure.

$$\delta(x) = \begin{cases} +\infty, & x = 0 \\ 0, & x \neq 0 \end{cases}$$

and which is also constrained to satisfy the identity

$$\int_{-\infty}^{\infty} \delta(x)dx = 1$$

Because Newton formulation of a gravitational force law is not right and Einstein, Hilbert General Relativity theory is limited to the speed of light, here is how I calculated the gravitational force:

Ferent gravitational force function:

$$F = \int_{-\infty}^{\infty} G \frac{m_1(t) m_2(t)}{r^2(t)} \delta(t - \frac{r(t)}{v(t)}) dt$$

where:
m(t) – I considered the mass a function of time
r(t) – the distance between the centers of the masses
v(t) – the speed of the gravitons

Ferent gravitational force function:

$$F = \int_{-\infty}^{\infty} G \frac{m_1(t) m_2(t)}{r^2} \delta(t - \frac{r}{v}) dt$$

where:
m(t) – I considered the mass a function of time
r – the distance between the centers of the masses
v – the speed of the gravitons

If the mass is not a function of time:

$$F = G \frac{m_1 m_2}{r^2} \int_{-\infty}^{\infty} \delta(t - \frac{r}{v}) dt$$

Because the speed of the gravitation is not infinite like Newton considered.
Newton's theory assumes that the speed of gravitons to be infinite, this implies a static model for the universe; this static model is presented today to the students.

Ferent electric force function

Coulomb's law is requires infinite speed for the photons, but the speed of the photons is limited; it is the speed of light.

$$F = k_e \frac{q_1 q_2}{r^2}$$

where:
F – the force between two point charges
k_e – the Coulomb's constant

q_1 – the first charge
q_2 – the second charge
r – the distance between the charges

Ferent electric force function is a convolution of two functions, the Coulomb's law and Dirac delta function.

$$F_e = \int_{-\infty}^{\infty} k_e \frac{q_1(t)q_2(t)}{r^2(t)} \delta(t - \frac{r(t)}{c(t)})dt$$

where:
q(t) – I considered the charges function of time
r(t) – the distance between the charges
c(t) – the speed of the photons

The gravitational field equation g(r,t)

The gravitational force F = Mg

The gravitational field equation is:

$$g = -\nabla\psi - \frac{\partial D}{\partial t}$$

ψ - scalar potential of gravitational field
D - vector potential of gravitational field

The Liénard–Wiechert potentials describe the classical electromagnetic effect of a moving electric point charge in terms of a vector potential and a scalar potential. These potentials describe the complete, relativistically correct, time-varying electromagnetic field for a point charge in arbitrary motion, but are not corrected for quantum mechanical effects.
I used these potentials which describe the classical electromagnetic effect of a moving electric point charge, as potentials which describe the classical gravitational effect of a moving mass and to calculate the gravitational field equation.

The retarded time t_r:

$$t_r = t - \frac{|r - r_s|}{v_a}$$

The scalar potential of gravitational field:

$$\psi(r,t) = G\left(\frac{m}{(1-n\beta)\left|r-r_s\right|}\right)_{t_r}$$

where:

$\beta(t) = \frac{v_s(t)}{v_a}$ and $n(t) = \frac{r - r_s(t)}{\left|r - r_s(t)\right|}$

where:

v_a – the speed of the gravitons

v_s – the speed of the mass m

r_s – the position of the mass m

The vector potential of gravitational field:

$$D(r,t) = \frac{\beta(t_r)}{v_a}\psi(r,t)$$

The gravitational field equation is:

$$g(r,t) = G\left(\frac{m(n-\beta)}{\gamma^2(1-n\beta)^3\left|r-r_s\right|^2} + \frac{mn\times((n-\beta)\times\dot{\beta})}{v_a(1-n\beta)^3\left|r-r_s\right|}\right)_{t_r}$$

where:

$$\gamma(t) = \frac{1}{\sqrt{1-\left|\beta(t)\right|^2}}$$

The (n – β) is part of the first term updates the direction of the field toward the instantaneous position of the mass m, if it continues to move with constant velocity. This term is connected with the 'static' part of the gravitational field of the mass m.
The second term, which is connected with gravitational radiation by the moving mass m, requires mass acceleration.

5. Quantization of the gravitational field

Modern physics has two basic theories: quantum physics and general relativity.
Quantum physics studies the very smallest objects in nature, while relativity studies nature on the scale of planets, galaxies, and the universe as a whole.
The gravitational field consists of discrete energy quantity, the gravitons.
The problem with quantum gravity is that quantum gravitational effects are only expected to become apparent near the Planck scale, a scale far smaller in distance and equivalently far larger in energy than what is currently accessible at high energy particle accelerators.
That is why quantum gravity is a mainly theoretical project.

At present, one of the deepest problems in theoretical physics is harmonizing the theory of general relativity, which describes gravitation, and applications to large-scale structures (stars, planets, galaxies), with quantum mechanics, which describes the other three fundamental forces acting on the atomic scale.

I explained Gravitation with quantum mechanics; this means all four fundamental forces acting on the atomic scale are described with quantum mechanics.
Gravitons are massless particles of definite energy and definite momentum.
The gravitational field consists of discrete energy quantity $a\nu$, where a is Ferent's constant and ν is the frequency of the graviton.

A quantum mechanical graviton state $|k,\mu\rangle$ belonging to mode (k,μ) has the following properties:

$m_{graviton} = 0$

$H|k,\mu\rangle = a\nu|k,\mu\rangle$ with $\nu = v_a|k|$

k - the wave vector
μ - the spin of the graviton
The single-graviton state is an eigenstate of the momentum operator, and $\underline{a}k$ is the eigenvalue (the momentum of a single graviton).

$P|k,\mu\rangle = \underline{a}k|k,\mu\rangle$

These equations say respectively: a graviton has zero rest mass; the graviton energy is $h\nu = av_a|k|$ (k is the wave vector, v_a is speed of graviton) and its gravitation momentum is $\underline{a}k$.

The gravitational field equation is:

$$g = -\nabla\psi - \frac{\partial D}{\partial t}$$

ψ - scalar potential of gravitational field
D - vector potential of gravitational field

The field equations contain only derivatives of the field. Their plane wave solution has the form:

$$\Psi = \mathrm{Re}\left\{De^{i(kx-\omega t)}\right\}$$

where:
k – wave vector related to the frequency ω

The momentum operator:

$$\hat{p}_x = -i\underline{a}\frac{\partial}{\partial x}$$

$$\hat{p} = -i\underline{a}\nabla$$

The energy operator:

$$\hat{E} = i\underline{a}\frac{\partial}{\partial t}$$

Ferent wave equation of the graviton:

$$i\underline{a}\frac{\partial}{\partial t}\left|\Psi\right\rangle = E\left|\Psi\right\rangle$$

Ψ – the wave function of the graviton

With the Hamiltonian operator:

$$\hat{H}\left|\Psi\right\rangle = E\left|\Psi\right\rangle$$

Interactions of gravitational fields with matter

Coupling of the quantized gravitational field to nonrelativistic charges is considered.
The interaction is to modify the four-momentum of the particle of mass m:

The momentum p becomes $p - \frac{m}{v_a}D$

The energy E becomes $E - mA$

Where A is the scalar gravitational potential and D is the vector gravitational potential.

The energy operator is $E = i\hbar\frac{\partial}{\partial t}$ and the momentum operator is $p = -i\hbar\nabla$.

Schrödinger equation:

$$\left[\frac{p^2}{2m} + V(r)\right]\Psi(r,t) = i\hbar\frac{\partial}{\partial t}\Psi(r,t)$$

The interaction with the gravitational field:

$$\left[\frac{(p - \frac{m}{v_a}D)^2}{2m} + V(r) + mA\right]\Psi(r,t) = i\underline{a}\frac{\partial}{\partial t}\Psi(r,t)$$

Then the Hamiltonian:

$$H = \left[\frac{(p - \frac{m}{v_a} D)^2}{2m} + V(r) + mA \right]$$

Fermi's golden rule is a simple formula for the constant transition rate (probability of transition per unit time) from one energy eigenstate of a quantum system into other energy eigenstates in a continuum, affected by a perturbation.

$$\omega_{I \to F} = \frac{2\pi}{\hbar} \left| \langle \Psi_F | H_1 | \Psi_I \rangle \right|^2 \rho$$

In first order time-dependent perturbation theory, if an effective potential that is acting is $V(t) = V_0 e^{-i\omega t} + V_0^{\dagger} e^{+i\omega t}$, the transition amplitude according to the Born approximation is:

$$\langle f | U(t_0) | i \rangle = \frac{-i}{\hbar} \int_0^t d\tau e^{i\omega_{fi}\tau} \langle f | V(\tau) | i \rangle$$

The absorption of a graviton and the emission of a graviton:

The frequency depends on the difference in energy of the initial and final states of the matter.

$$\omega_{fi} = \frac{E_f - E_i}{\underline{a}}$$

Ferent function for the absorption of a graviton:

$$\int_0^t d\tau e^{i\frac{E_f - E_i}{\underline{a}}\tau} e^{-i\omega_k \tau} = \frac{e^{i(\frac{E_f - E_i}{\underline{a}} - \omega_k)t} - 1}{i(\frac{E_f - E_i}{\underline{a}} - \omega_k)}$$

Ferent function for the emission of a graviton:

$$\int_0^t d\tau e^{i\frac{E_f - E_i}{\underline{a}}\tau} e^{+i\omega_k \tau} = \frac{e^{i(\frac{E_f - E_i}{\underline{a}} + \omega_k)t} - 1}{i(\frac{E_f - E_i}{\underline{a}} + \omega_k)}$$

Graviton energy

The harmonic oscillator Hamiltonian has the form:

$H = \hbar\omega(a^\dagger a + \frac{1}{2})$

ω ≡ 2πν is the fundamental frequency of the oscillator. The ground state of the oscillator is | 0 ⟩ and is referred to as vacuum state. It can be shown that $a^\dagger$ is a creation operator, it excites from an n fold excited state to an n+1 fold excited state:

$a^\dagger |n\rangle = |n+1\rangle\sqrt{n+1}$

The annihilation operator:

$a|n\rangle = |n-1\rangle\sqrt{n}$

We have a number of non-interacting one-dimensional harmonic oscillators:

$$H = \sum_i \hbar\omega_i (a^\dagger(i)a(i) + \frac{1}{2})$$

With the substitution:

$i \to (k, \mu)$

The Hamiltonian of the Gravitational field can be looked upon as a Hamiltonian of independent oscillators of energy ω = |k|v_a and oscillating along direction e^μ

$$H = \sum_{k,\mu} \underline{a}\omega(a^{\dagger(\mu)}(k)a^{(\mu)}(k) + \frac{1}{2})$$

The effect of H on a single graviton state $H|k, \mu\rangle$

$$H(a^{\dagger(\mu)}(k)|0\rangle) = \underline{a}\omega(a^{\dagger(\mu)}(k)|0\rangle) = \underline{a}\omega|k, \mu\rangle$$

The single graviton state is an eigenstate of H and the corresponding energy is aν.

Particle and graviton interaction as tensor product

A tensor product of two Hilbert spaces is another Hilbert space.
Hilbert spaces have inner products:
If H_1 and H_2 have orthonormal bases $\{a_i\}$ and $\{b_j\}$, then $\{ a_i \otimes b_j \}$ is an orthonormal basis for $H_1 \otimes H_2$. The Hilbert dimension of the tensor product is the product of the Hilbert dimensions.
In Quantum Mechanics, a tensor product is used to describe a system that is made up of multiple subsystems.
We have two systems, the particle system P and the graviton system G with Hilbert spaces H_P^N and H_G^M.
The independent quantum numbers which describe the values of conserved quantities in the dynamics of a quantum system, required to specify completely a state, give you the number of subspace products.
The numbers of possible values each quantum number can have provide the dimension of each subspace.

For the particle system P and the graviton system G, with Hilbert spaces H_P^N and H_G^M with orthonomal bases vectors i and j, where i runs from 1 to N and j from 1 to M.
The tensor product $H_P^N \otimes H_G^M$ is the NM dimensional Hilbert space spanned by the vector pairs.

We have two wavefunctions:
If system P is in state:

$$\varphi_P = \sum_{i=1}^{N} a_i |i\rangle$$

System G is in state:

$$\varphi_G = \sum_{j=1}^{M} b_j |j\rangle$$

Then the combined system is in the state represented by the tensor product for the two wavefunctions:

$$|\varphi_P, \varphi_G\rangle = |\varphi_P\rangle \otimes |\varphi_G\rangle$$

$$\varphi_P \otimes \varphi_G = \sum_{i=1}^{N} \sum_{j=1}^{M} a_i b_j |i, j\rangle$$

This means all states in a tensor-product space can be expressed as a linear combination of tensor product states:

$$|\varphi_{PG}\rangle = \sum_{i=1}^{N} \sum_{j=1}^{M} c_{ij} |i, j\rangle$$

How do we construct operators that act on the vector space $H_P^N \otimes H_G^M$?
Let T be an operator in H_P^N and S be an operator in H_G^M .

$$(T \otimes S)(|\varphi_P\rangle \otimes |\varphi_G\rangle) = T|\varphi_P\rangle \otimes S|\varphi_G\rangle$$

Subuniverses

Multiverse represents multiple domains in the universe with different properties.

Fundamental theories allow parameters to take on different values and perhaps these different values can be realized differently in various domains of the universe. This would be the multiverse solution, a universe that contains more subuniverses.
Fundamental physical constants are subject to measurement so that their being constant, independent on both the time and space of the measurement. The number of fundamental physical constants depends on the physical theory accepted as fundamental.
If one considers Grand Unified Theories (GUT) with more complicated scalar potentials, such theories most often contain multiple ground states, again with greatly different properties; this means we can have multiverse. Here multiverse means multiple subuniverses, means multiple contiguous domains within a larger universe, each with different properties such as different values of the physical parameters and different gauge structures.

Our subuniverse is an island where the parameters, the space have enough complexity, to lead to a fascinating world, with forms of life.

Our subuniverse is the Planck universe.

My gravitation theory explains what happened at Ferent wall and after the expansion of the Universe attains the Ferent wall.

Two important walls:
The Ferent wall: here at time $t_F = 1.294 \times 10^{-86}$ s were created Ferent matter with Ferent density $\rho_F = 8.94 \times 10^{181}$ kg/m^3 and gravitons with the speed of the gravitons $v_a = 1.001762 \times 10^{17}$ m/s.
The Planck wall: here at time $t_P = 5.391 \times 10^{-44}$ s were created matter with Planck density $\rho_P = 5.155 \times 10^{96}$ kg/m^3 and photons, with the speed of the photons $c = 2.997924 \times 10^8$ m/s.

At Ferent wall:
here at Ferent time $t_F = 1.294 \times 10^{-86}$ s, with Ferent length $l_F = 1.296 \times 10^{-69}$ m started Ferent universe.

At Planck wall
here at Planck time $t_P = 5.391 \times 10^{-44}$ s, with Planck length, $l_P = 1.616199 \times 10^{-35}$ m started Planck universe.

It is an oscillation Big Bang and Big Crunch.

Because there are 3 walls, there are 3 subuniverses: God universe, Ferent universe and Planck universe.
Our Universe may contain more then 3 subuniverses.

"Only with Ferent matter (dark matter) is possible the oscillation Big Bang and Big Crunch"

Adrian Ferent

"It is not possible to have a Big Bounce from the Planck scale"

Adrian Ferent

When the density of matter inside the black hole (that contain only matter) reaches the Planck density, would generate radiation, gamma rays and will be the end of black hole.
This means black holes made of matter, not dark matter, will not reach a density higher than Planck density.

Quantum gravitational effects prevent the universe from collapsing to infinite density. Instead, the universe "bounces" when the energy density of matter reaches the Planck scale.
Big Crunch is when the metric expansion of space eventually reverses and the universe recollapses, ultimately ending as a black hole singularity or causing a reformation of the universe starting with another Big Bang.

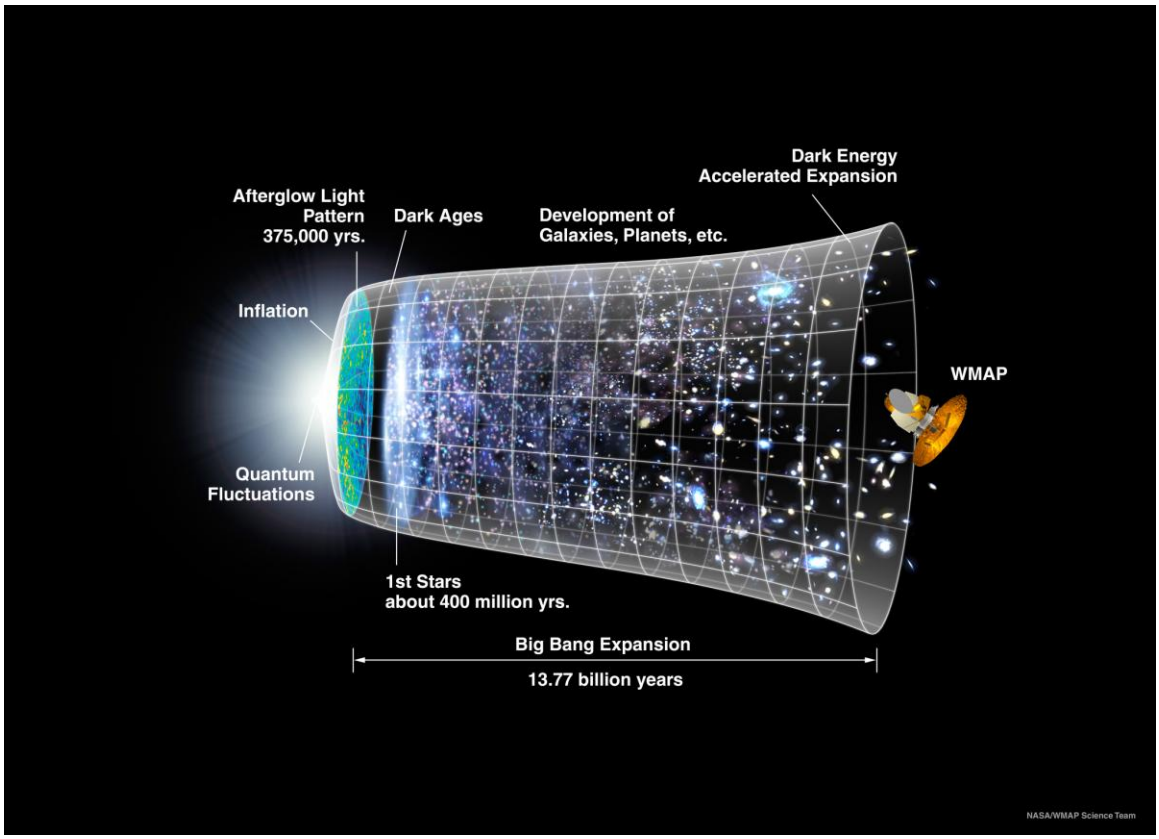
The universe will collapse to the state where it began and then initiate another Big Bang so in this way the universe would last forever, but would pass through phases of expansion, the Big Bang and contraction the Big Crunch.

Should the universe end in a big crunch the opposite of a big bang?
The "bounce" of the universe happens only when the matter reaches the Ferent density.

Wrong picture of Universe

Big Bang near the beginning involves extreme conditions that neither relativity nor quantum theory can explain on its own.
In inflationary models, once inflation happens, it never stops and produces not just one universe, but a number of universes.
The Standard Model with the measured values for the parameters has a unique ground state.
The multiverse means the existence of many universes with different physical constants.

This is the wrong picture of the Universe because doesn't shows Planck universe and Ferent universe.



God

At Soul wall started God universe.
Soul constants, at Soul wall:
Soul constant: $a_s = 1.92762 \times 10^{-133}$ J·s
Soul length: $l_s = 6.82301 \times 10^{-140}$ m
Soul time: $t_s = 8.44687 \times 10^{-174}$ s
Speed of soultons: $v_s = 8.077343 \times 10^{33}$ m/s

The energy of a soulton: $E = a_s \times f$

This means we have 3 walls: Planck wall, Ferent wall and Soul wall.
"Because there are 3 subuniverses: God universe, Ferent universe and Planck universe"

Adrian Ferent

"God is eternal, because is beyond the Big Bang and Big Crunch oscillation between Ferent universe and Planck universe"

Adrian Ferent

This means:
"God is the same for all galaxies"

Adrian Ferent

Proof for my theory

We can say that practically the whole of information and knowledge which has been built up of the outside Universe has been acquired in this way, by the analysis of the energy which arrives constantly from space.

When people saw the same constellations for years, they were supposed to understand that the gravitons with the speed of light are too slow to keep those stars together. That is why Einstein-Hilbert field equations, String theory, LQG… are limited, because are limited to the speed of light.
A graviton or a virtual graviton needs less then one second to travel between stars located within 10 light-years.
A light year value is $ly = 9.460536207 \times 10^{15}$ m, the speed of the graviton $v_a = 1.001762 \times 10^{17}$ m/s and $t = 10 \times ly / v_a$, this means $t < 1s$.

Another proof for my theory

The incoming radiation is accurately measured in terms of its direction of arrival, its intensity, its polarization and their changes with time by appending analyzing equipment to the radiation collector and recording the information with appropriate devices.
The developments of astronomical theories regularly engage long and complicated mathematics, in areas such as celestial mechanics for the theory of orbits, stellar atmospheres and cosmology.
The greater part of our knowledge of astronomical objects is based on the observation of electromagnetic energy which is collected by satellite instrumentation or transmitted directly through the atmosphere and collected by telescope.

There are galaxies 11 billion light years away, which are receding from us.
Why?
Because in my view the speed of the graviton v_a is too small to keep the galaxies together.

Dark energy does not exist. Big Bang and Big Crunch oscillation

The expansion of the Universe is speeding up and not slowing down.
Dark energy does not exist.
During the Big Bang the Planck universe started at Planck wall inside the Ferent universe.
The expansion of our universe, the Planck universe is speeding up because of attraction from Ferent universe that contains dark matter.
The majority of dark matter from Ferent universe is in the core of supermassive black holes.
This means, our universe, the Planck universe is surrounded by supermassive black holes from Ferent universe. Ferent universe with supermassive black holes is speeding up the expansion of Planck universe, not the dark energy.

My gravitation theory shows that dark energy does not exist!

These supermassive black holes from Ferent universe absorb, take in, the galaxies from Planck universe.

"Our Milky Way galaxy will be absorbed by a supermassive black hole from Ferent universe"

Adrian Ferent

"The gravitational force between Ferent universe and Planck universe is speeding up the expansion of Planck universe and will collapse Ferent universe"

Adrian Ferent

The Ferent universe will collapse to the state where it began and the Big Bang will start again from Ferent wall, the Ferent density $\rho_F = m_F / l_F^3 = 8.94 \times 10^{181}$ kg/m^3

Quantum gravitational effects prevent the universe from collapsing to infinite density. Instead, the universe "bounces" when the energy density of matter reaches the Ferent scale.

That is why:

"The Big Bang and Big Crunch oscillation, from Ferent wall"

Adrian Ferent

"Dark energy does not exist"

Adrian Ferent

Black holes and gravitons

Perhaps no other object from physics has had as much influence on public consciousness in recent times as the black hole has. General relativity predicts that black holes will be formed whenever sufficient mass is reduced into a small enough volume. The gravitational force at surface becomes so large that nothing can escape, no matter how fast it accelerates. Not even a beam of light can escape, hence the name black hole. Black holes are typical strong gravity phenomena.
Black holes are very massive, but occupy only a small region.
Once they have formed, black holes can easily gather mass from the dust and gas around them.
Because of the relationship between mass and gravity, this means they have a very powerful gravitational force.
Planets, stars and other matter must pass close to a black hole in order to be pulled into its grasp. When they reach a point of no return they are said to have entered the event horizon, the point from which any escape is impossible for the reason that it requires moving faster than speed of light.

Once a Supermassive black hole has formed, it can continue to grow by absorbing additional matter like planets, stars…
Black holes can accrue unlimited amounts of matter; they simply become even denser as their mass increases.
It is okay to observe a black hole if you stay away from its event horizon, this zone is the point of no return, think of it like the gravitational field of a planet.

Shortly after the formulation by Einstein of the theory of general relativity in 1915, Karl Schwarzschild discovered the exact solution of the gravitational field equations outside a spherically symmetric body, for example a star.

At the event horizon of the black hole from our galaxy the Gravity = 0, because the escape velocity is greater than c - speed of light and by Einstein gravitation theory, String theory, LQG...the gravitons have the speed of light. This means the black hole do not attract anything.
I am the first in the world who realized that the gravitons with the speed of light will not escape a black hole and find a solution. This means if the (gravitation) gravitons have the speed of light like Einstein field equations confirm, the black holes will not attract anything.
For a non-rotating spherically symmetric massive body such as a star or a planet the escape velocity at a given distance r, is calculated by the formula:

$$v = \sqrt{\frac{2GM}{r}}$$

where:
G is the universal gravitational constant
M is the mass of the object
r is the distance from the point in space to its center mass

The Schwarzschild radius:

$$r_S = \frac{2GM}{c^2}$$

where:
r_S is the Schwarzschild radius
M is the mass of the object
c is the speed of light

If I will replace r with r_S in the escape velocity formula, I will obtain:
v = c
This means the escape velocity for a black hole is greater than c - the speed of light and this shows that my gravitation theory is right and Einstein gravitation theory is incorrect.
The black holes will attract stars and planets only if the (gravitation) gravitons have a speed much higher than the speed of light.
I calculated the speed of the (gravitation) gravitons $v = 1.001762 \times 10^{17}$ m/s.

"I am the first who understood and explained the Gravitation with high speed gravitons $v = 1.001762 \times 10^{17}$ m/s, with Negative Momentum, Negative Mass and Negative Energy"

Adrian Ferent

Each of my theory, Evolution theory and Science and Spirituality theory contains couple of my quotations.
Here there are few of my quotations related to my Gravitation theory:

Ferent Quotations

"My Nobel Prize - Discovery: the Photon – Graviton pair (coupled) has the same speed and frequency, and the photon energy divided by the graviton energy is the electromagnetic energy divided by the gravitational energy, the electromagnetic force divided by the gravitational force"

"Ferent equation for the energy of a photon $E = h \times f + a \times f$ "

"In Ferent electromagnetic theory, gravity does collapse quantum superpositions, gravity bends light because light has 3 sinusoids, has a gravitational sinusoid!
In Maxwell electromagnetic theory, gravity does not collapse quantum superpositions, gravity does not bend light, because light has only 2 sinusoids!"

"Two important walls:
The Ferent wall: here at time $t = 1.294 \times 10^{-86}$ s were created Ferent matter and Gravitons, with the speed of the gravitons $v = 1.001762 \times 10^{17}$ m/s.
The Planck wall: here at time $t = 5.391 \times 10^{-44}$ s were created Matter and Photons, with the speed of the photons $c = 2.99792458 \times 10^{8}$ m/s"

"Ferent matter is matter with the density less than or equal to Ferent density and greater than Planck density"

"In the beginning was the qubit"

"I am the first in the world who Understood and Explained the Gravitation with high speed gravitons, $v = 1.001762 \times 10^{17}$ m/s"

"Lorentz, Poincaré, Einstein's Special relativity is limited to the speed of light and to the photon energy"

"Special relativity can not be applied to the Graviton with energy much smaller than the photon energy"

"During the Big Bang first emerged the gravitational force with the speed of the gravitons: $v = 1.001762 \times 10^{17}$ m / s"

“Gravitons with speed of light, $c = 2.9979 \times 10^8$ m/s, are too Slow to keep the galaxy together”

“The majority of Ferent matter is the core of the supermassive black hole, in the center of each galaxy”

“The properties of Ferent matter are the properties of dark matter”

“Einstein, Hilbert General Relativity theory, String theory, LQG, all Quantum gravity theories are incorrect because are limited to the speed of light”

“Science will begin only when the scientists will understand the Gravitation”

“When the electron is jiggled it is a change in the gravitational field and the gravitons with a speed faster than the speed of light, $v = 1.001762 \times 10^{17}$ m / s will change the state of the entangled electron”

“It is not possible to have a Big Bounce from the Planck scale”

“The energy E contained in a graviton, which represents the smallest possible 'packet' of energy in an gravitational wave is ‘a’ the Ferent constant times frequency $E = a \times f$ ”

"In the beginning was the gravitation"

“I am the first who understood and explained Gravitation with high speed gravitons $v = 1.001762 \times 10^{17}$ m/s, with Negative Momentum, Negative Mass and Negative Energy”

“First try to understand gravitation and after do the calculations. If not you will follow Einstein and Hilbert who explained gravitation with geometry”

“The Photon – Graviton pair (coupled) has the same speed and frequency and this means the light has gravitation”

“Decoherence explained: the electromagnetic wave is the superposition of 3 sinusoids; this means the electromagnetic wave will be collapsed by the presence of an electric field, of a magnetic field, of a gravitational field, another electromagnetic wave…”

“When people saw the same constellations for years, they were supposed to understand that the gravitons with the speed of light are to slow to keep those stars together. That is why Einstein-Hilbert gravitational field equations are wrong, because are limited to speed of light”

“All scientists followed Einstein equations looking for big gravitational waves created by binary star systems and they built very expensive gravitational waves detectors. I was looking for a wave created by a single graviton”

"There are galaxies 11 billion light years away, which are receding from us, because the speed of the graviton $v = 1.001762 \times 10^{17}$ m/s is too small to keep the galaxies together"

"The majority of Dark matter is the core of the supermassive black holes"

"The Big Bang and Big Crunch oscillation, from Ferent wall"

"Our Milky Way galaxy will be absorbed by a supermassive black hole from Ferent universe"

"The gravitational force between Ferent universe and Planck universe is speeding up the expansion of Planck universe and will collapse Ferent universe"

"Dark energy does not exist"

"God is eternal, because is beyond the Big Bang and Big Crunch oscillation between Ferent universe and Planck universe."

6. Conclusions

I consider the theory of gravity the most important theory because since ancient times brightest people tried to explain the most common force in nature and how the universe began.
I discovered the graviton: the momentum of the graviton, the energy of the graviton, the speed of the graviton, the frequency of the graviton and the mass of the graviton.
I found another wall the Ferent wall beyond the Planck wall, where the Planck constant $h=6.62606957\times10^{-34}$ J·s is replaced by Ferent constant $a = 1.590511178\times10^{-76}$ J·s.
I replaced Max Planck equation $E = h \times f$ with the Ferent equation for the energy of a photon:

$$E = h \times f + a \times f$$

I discovered the momentum of the graviton:

$$p = a / \lambda$$

I replaced Heisenberg Uncertainty Principle $\Delta p \times \Delta x \geq h / 4\pi$ with Ferent Uncertainty Principle:

$$\Delta p \times \Delta x \geq a$$

I discovered a new gravitation theory and I found how the gravitation and the gravitons emerged at first Ferent wall. Why gravitons faster than the speed of light?
I am the first in the world who understood and explained that the gravitons with the speed of light are too slow to keep the constellations together.
During the Big Bang first emerged the gravitational force with the speed of the gravitons:
$v_a = 1.0017620 \times 10^{17}$ m/s
These gravitons with the speed much bigger than the speed of light at the second Ferent wall have negative momentum, negative mass and negative energy.
The others gravity theories do not explain why the universe expansion is speeding up.
I discovered a new electromagnetic theory.

When people saw the same constellations for years, they were supposed to understand that gravitons with the speed of light are to slow to keep those stars together. That is why Einstein-Hilbert gravitational field equations, String theory, LQG… are limited, because are limited to speed of light.
Particle and graviton interaction as tensor product:

$$\varphi_P \otimes \varphi_G = \sum_{i=1}^{N} \sum_{j=1}^{M} a_i b_j \left| i, j \right\rangle$$

My gravitation theory explains dark matter and explains that dark energy doesn't exist.
Ferent gravitational force function is a convolution of two functions, the Newton (Hooke) law of universal gravitation function and Dirac delta function.
Ferent gravitational force function:

$$F = \int_{-\infty}^{\infty} G \frac{m_1(t) m_2(t)}{r^2(t)} \delta(t - \frac{r(t)}{v(t)}) dt$$

I explained quantum entanglement and decoherence.
The perturbation of a photon in the gravitational field is a graviton with the same frequency and speed as the photon has; but the gravitons in my theory that mediates the gravitational force, the gravitons which mediates the interaction force have different frequencies when the photon travels near an asteroid, near the Earth or near the Sun.

A lot of gravity theories explain that the universe was very hot this means electromagnetic radiation, beyond the Planck wall. My theory explains that beyond the Planck wall were only Ferent matter and gravitons.

"The majority of Dark matter is the core of the supermassive black holes"
Adrian Ferent

"The Big Bang and Big Crunch oscillation, from Ferent wall"
Adrian Ferent

"Dark energy does not exist"
Adrian Ferent

"God is eternal, because is beyond the Big Bang and Big Crunch oscillation between Ferent universe and Planck universe."
Adrian Ferent

My quantum gravity theory shows that the gravitons are too small to be detected by today's technology.

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