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## DISCOVERY IN TIME AS A VECTOR PLUS POLARITY OF GRAVITATIONAL FORCE

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### ABSTRACT

After having proved time values matching numbers in all number lines ( $x_t$ ,  $y_t$ ,  $z_t$ ), we tried to find the next characteristics of time as this study's objective. Numbers and time values matching the numbers in three principal axes were used to be data. A mathematical vector was used to prove the magnitudes and time values directions in a three-dimensional body. The investigation found time as a vector, law of directions of time, time-fields inside a three-dimensional body. This new knowledge concerning the time after Einstein had found time as a relative value in 1905 led us to discover the polarity of gravitational force. The new characteristic of gravitational force will help the unity of four fundamental forces in nature as possible. This study's benefits may lead us to get advanced technology on vehicles and construction and find many weak points in theoretical demand and supply curves. After having corrected those weak points and developed theoretical economics, we hoped to see economics as a new branch of science with an open system entirely.

### INTRODUCTION

In the paper titled "The Time Equation Explaining Equations in Physics and Economics," we can prove that time values are in a number line or  $S = f(t)$  where  $S$  represents distance, which we can use as x-axis, y-axis, z-axis, and any number lines. Each time value is matching with each number in a number line. With mathematics, we found something new. The distance depends on the only time value,  $S = f(t)$ . The line relies on the amount of time, not two dimensions that are the speed of moving and the importance of time. Besides, distance is still positive, so the value of time always is positive [10]. Similarly, the distances on the three axes are positive. The time values matching with all numbers on the axes are positive too. Time always is in the three principal axes ( $x_t$ ,  $y_t$ ,  $z_t$ ), not following Minkowski's 4D model ( $x$ ,  $y$ ,  $z$ ,  $t$ ).

The exact position of each time value matching with each number in the x-axis can be calculated by using the time equation:  $t_x = \frac{|x|}{R_x \cdot v_x} = \frac{S_x}{v_x} = S_x \left( \frac{\Delta t_x}{\Delta S_x} \right)$ . Where  $x$  represents a number in the x-axis;  $v_x$  represents the velocity the drawer used to draw the line;  $R_x$  represents the ratio between absolute of  $x$  and distance which the drawer used to determine the exact position of the number  $x$ . Similarly, the exact position of each time value matching with each number in the y-axis and z-axis can be calculated by using the time equation:  $t_y = \frac{|y|}{R_y \cdot v_y} = \frac{S_y}{v_y} = S_y \left( \frac{\Delta t_y}{\Delta S_y} \right)$  and  $t_z = \frac{|z|}{R_z \cdot v_z} = \frac{S_z}{v_z} = S_z \left( \frac{\Delta t_z}{\Delta S_z} \right)$ , respectively. In general, the exact position of each time value matching with each number in the any axes can be calculated by using the time equation:  $t = \frac{|N|}{R \cdot v} = \frac{S}{v} = S \left( \frac{\Delta t}{\Delta S} \right)$  where  $N$  represents a number in any axes;  $v$  represents the velocity the drawer used to draw a line;  $R$  represents the ratio between absolute of  $N$  and distance which the drawer used to put the number [10]. From the time equation, there are ways naming points in three principal axes can be concluded as follow: (1)  $|x| = R_x v_x t_x = S_x R_x$ , (2)  $-x = -(R_x v_x t_x) = -(S_x R_x)$ , (3)  $|y| = R_y v_y t_y = S_y R_y$ , (4)  $-y = -(R_y v_y t_y) = -(S_y R_y)$ , (5)  $|z| = R_z v_z t_z = S_z R_z$ , (6)  $-z = -(R_z v_z t_z) = -(S_z R_z)$ , and (7)  $|N| = R v t = S R$ , (8)  $-N = -(R v t) = -(S R)$ .

## DATA AND METHODOLOGY

Numbers and time values matching the numbers in three principal axes were used to be data. Mathematical vector was used to prove the positions and directions of the three-dimensional body's time values.

## RESULTS

### *Time as a vector*

All tangible things consist of width, length, and thickness. Mathematicians used the three principal axes to explain the width, the length, and the thickness. We can find time values matching numbers in six sides of three principal axes; thus, we can divide the three-dimensional body into eight parts by using time. Each part has its ordered triple as follow:

The first part consists of  $(x, y, z)$  or  $[(R_x v_x t_x), (R_y v_y t_y), (R_z v_z t_z)]$ . The second part consists of  $(x, y, -z)$  or  $[(R_x v_x t_x), (R_y v_y t_y), -(R_z v_z t_z)]$ . The third part consists of  $(-x, y, -z)$  or  $[-(R_x v_x t_x), (R_y v_y t_y), -(R_z v_z t_z)]$ . The fourth part consists of  $(-x, y, z)$  or  $[-(R_x v_x t_x), (R_y v_y t_y), (R_z v_z t_z)]$ . The fifth part consists of  $(x, -y, z)$  or  $[(R_x v_x t_x), -(R_y v_y t_y), (R_z v_z t_z)]$ . The sixth part consists of  $(x, -y, -z)$  or  $[(R_x v_x t_x), -(R_y v_y t_y), -(R_z v_z t_z)]$ . The seventh part consists of  $(-x, -y, -z)$  or  $[-(R_x v_x t_x), -(R_y v_y t_y), -(R_z v_z t_z)]$ . The eighth part consists of  $(-x, -y, z)$  or  $[-(R_x v_x t_x), -(R_y v_y t_y), (R_z v_z t_z)]$ .

We found the resultant directions of these eight parts. The result pointed out that the time dimension shows its eight resultant directions in any three-dimensional body. The result was also concrete evidence supporting the time dimension as a vector, not a scalar [5]. Mathematical proof of the magnitudes and the directions of time in eight parts can be shown as follows:

parts      Magnitudes and directions of the time value in each part

1	$rt_{oc1} = \sqrt{(R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ And $rt_{oc1} = (R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k}$
2	$rt_{oc2} = \sqrt{(R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ And $rt_{oc2} = (R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k}$
3	$rt_{oc3} = \sqrt{(-R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ And $rt_{oc3} = -(R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k}$
4	$rt_{oc4} = \sqrt{(-R_x v_x t_x)^2 + (R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ And $rt_{oc4} = -(R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k}$
5	$rt_{oc5} = \sqrt{(R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ And $rt_{oc5} = (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k}$
6	$rt_{oc6} = \sqrt{(R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ And $rt_{oc6} = (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k}$
7	$rt_{oc7} = \sqrt{(-R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (-R_z v_z t_z)^2}$ And $rt_{oc7} = -(R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k}$
8	$rt_{oc8} = \sqrt{(-R_x v_x t_x)^2 + (-R_y v_y t_y)^2 + (R_z v_z t_z)^2}$ And $rt_{oc8} = -(R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k}$

### *Law of the directions of time*

We can find the resultant directions of the time dimension in all three-dimensional bodies. The importance of time directions is one of the crucial aspects concerning all subjects in the academic world because everything is under the control of the time dimension, and the time values have been changing all the time [9]. One of the crucial aspects we can find is what the law of the time directions is as follows: "different time directions show different time values and others concerning the time values [6]." We can find different directions of time in many types of research. [12][13]

In detail, different time directions show different time values. For example, if the left-hand or the back or the bottom sides of zero are negative, the right-hand or front or upper sides of zero are positive. The time of California State or town or house at the left-hand side is different from those on the right-hand side. If we consider a tiny thing, the time of a cell wall at the left-hand side is also different from that on the right-hand side. Everything is unique.

### *Six time-field in a three-dimensional body*

If we made groups of these eight resultant time directions, we found something new called six time-fields in a three-dimensional body. These six time-fields as pyramidal shapes consist of details: the first group, at least the four resultant directions of time from the following parts (1, 4, 5, and 8), can form the front time-field. The second to the sixth groups, at least four resultant directions of time from parts (2, 3, 6, 8), (1, 2, 3, 4), (5, 6, 7, 8), (1, 2, 5, 6), and (3, 4, 7, 8) can form the back, upper, bottom, right, and left time-fields, respectively. Having calculated the resultant directions of these six time-fields, we found something new in the three-dimensional body as well. The resultant directions of these six time-fields will move along the six directions of the three principal axes.

We can see these at least six resultant directions of the six time-fields in the three-dimensional body by calculation as follows:

$$\begin{aligned} \text{The magnitude of the resultant direction of the front} \\ \text{time-field} = TF_{\text{front}} &= |\mathbf{rt}_{oc1} + \mathbf{rt}_{oc4} + \mathbf{rt}_{oc5} + \mathbf{rt}_{oc8}| \\ &= \sqrt{[4(\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z)]^2} = 4(\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \end{aligned}$$

$$\begin{aligned} \text{The resultant direction of the front time-field} \\ &= \mathbf{TF}_{\text{front}} = \mathbf{rt}_{oc1} + \mathbf{rt}_{oc4} + \mathbf{rt}_{oc5} + \mathbf{rt}_{oc8} \\ &= (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} + (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad - (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} + (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad + (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} - (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} + (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad - (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} - (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} + (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} = 4(\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \end{aligned}$$

$$\begin{aligned} \text{The magnitude of the resultant direction of the back} \\ \text{time-field} = TF_{\text{back}} &= |\mathbf{rt}_{oc2} + \mathbf{rt}_{oc3} + \mathbf{rt}_{oc6} + \mathbf{rt}_{oc7}| \\ &= \sqrt{[-4(\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z)]^2} = 4(\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \end{aligned}$$

$$\begin{aligned} \text{The resultant direction of the back time-field} \\ &= \mathbf{TF}_{\text{back}} = \mathbf{rt}_{oc2} + \mathbf{rt}_{oc3} + \mathbf{rt}_{oc6} + \mathbf{rt}_{oc7} \\ &= (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} - (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad - (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} - (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad + (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} - (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} - (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad - (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} - (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} - (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} = -4(\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \end{aligned}$$

$$\begin{aligned} \text{The magnitude of the resultant direction of the upper} \\ \text{time-field} = TF_{\text{upper}} &= |\mathbf{rt}_{oc1} + \mathbf{rt}_{oc2} + \mathbf{rt}_{oc3} + \mathbf{rt}_{oc4}| \\ &= \sqrt{[4(\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y)]^2} = 4(\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \end{aligned}$$

$$\begin{aligned} \text{The resultant direction of the upper time-field} \\ &= \mathbf{TF}_{\text{upper}} = \mathbf{rt}_{oc1} + \mathbf{rt}_{oc2} + \mathbf{rt}_{oc3} + \mathbf{rt}_{oc4} \\ &= (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} + (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad + (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} - (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad - (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} - (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} \\ &\quad - (\mathbf{R}_x \mathbf{v}_x \mathbf{t}_x) \mathbf{i} + (\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} + (\mathbf{R}_z \mathbf{v}_z \mathbf{t}_z) \mathbf{k} = 4(\mathbf{R}_y \mathbf{v}_y \mathbf{t}_y) \mathbf{j} \end{aligned}$$

The magnitude of the resultant direction of the bottom time-field =  $TF_{\text{bottom}} = |\mathbf{rt}_{oc5} + \mathbf{rt}_{oc6} + \mathbf{rt}_{oc7} + \mathbf{rt}_{oc8}|$

$$= \sqrt{[-4(R_y v_y t_y)]^2} = 4(R_y v_y t_y)$$

The resultant direction of the bottom time-field

$$\begin{aligned} &= \mathbf{TF}_{\text{bottom}} = \mathbf{rt}_{oc5} + \mathbf{rt}_{oc6} + \mathbf{rt}_{oc7} + \mathbf{rt}_{oc8} \\ &= (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k} \\ &+ (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k} \\ &- (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k} \\ &- (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k} = -4(R_y v_y t_y) \mathbf{j} \end{aligned}$$

The magnitude of the resultant direction of the right time-field =  $TF_{\text{right}} = |\mathbf{rt}_{oc1} + \mathbf{rt}_{oc2} + \mathbf{rt}_{oc5} + \mathbf{rt}_{oc6}|$

$$= \sqrt{[4(R_x v_x t_x)]^2} = 4(R_x v_x t_x)$$

The resultant direction of the right time-field

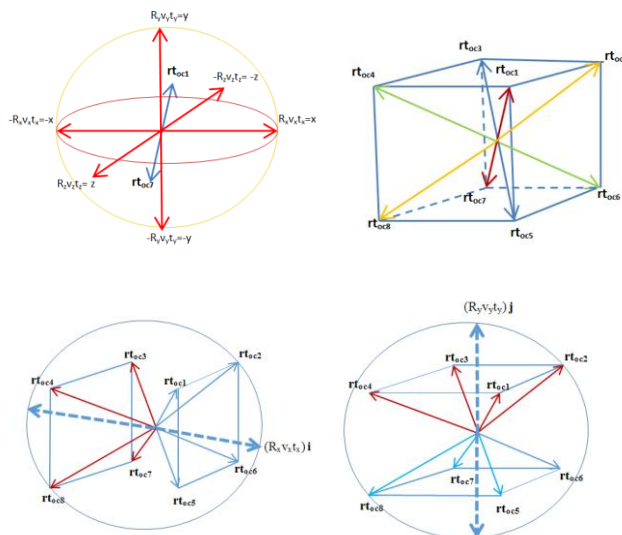
$$\begin{aligned} &= \mathbf{TF}_{\text{right}} = \mathbf{rt}_{oc1} + \mathbf{rt}_{oc2} + \mathbf{rt}_{oc5} + \mathbf{rt}_{oc6} \\ &= (R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k} \\ &+ (R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k} \\ &+ (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k} \\ &+ (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k} = 4(R_x v_x t_x) \mathbf{i} \end{aligned}$$

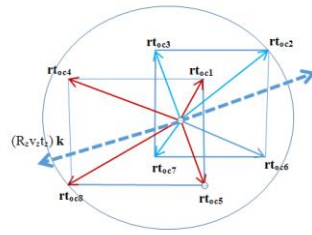
The magnitude of the resultant direction of the left time-field =  $TF_{\text{left}} = |\mathbf{rt}_{oc3} + \mathbf{rt}_{oc4} + \mathbf{rt}_{oc7} + \mathbf{rt}_{oc8}|$

$$= \sqrt{[-4(R_x v_x t_x)]^2} = 4(R_x v_x t_x)$$

The resultant direction of the left time-field

$$\begin{aligned} &= \mathbf{TF}_{\text{left}} = \mathbf{rt}_{oc3} + \mathbf{rt}_{oc4} + \mathbf{rt}_{oc7} + \mathbf{rt}_{oc8} \\ &= -(R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k} \\ &- (R_x v_x t_x) \mathbf{i} + (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k} \\ &- (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} - (R_z v_z t_z) \mathbf{k} \\ &- (R_x v_x t_x) \mathbf{i} - (R_y v_y t_y) \mathbf{j} + (R_z v_z t_z) \mathbf{k} = -4(R_x v_x t_x) \mathbf{i} \end{aligned}$$





**Figure 1:** The Resultant Directions of Six Time-Fields

Having proved mathematically time as a vector, we saw the six resultant directions of the six time-fields showing the different characteristics. For example, if the left-hand side of zero is night, then the right-hand side is a day. If the bottom side of zero is in summer, then zero's upper side is in winter. If the back of zero is the South Pole, the front side of that is the North Pole. There are time values in trees, as well. If the left-hand side of zero is the root of a plant, which is substantial, the right-hand side of zero is the plant's top, which is light [6].

### *The polarity of gravitational force*

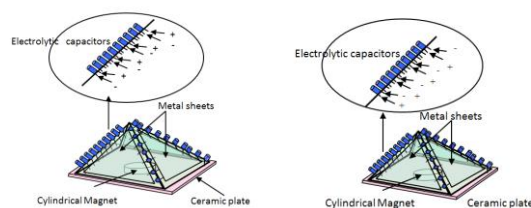
When we considered the three-dimensional body as the earth, there is a gravitational force in every point on the earth. Present physicists believe that gravitational force has a unique characteristic. It shows only the attractive force; thus, it could not unite with other fundamental forces: Weak force, Strong force, and electromagnetic force. In the three-dimensional body, these six time-fields are the minimum fields without considering rotation. In other words, when we are considering the rotation of the earth, we found  $N$  resultant directions of  $N$  time-fields on the earth. The six resultant directions of these six time-fields are the opposite of the gravitational force directions at the same points on the earth.

For example, when the resultant direction of the right time-field is  $(R_x v_{xt_x}) \mathbf{i}$ , the direction of gravitational force at the same position is  $-(R_x v_{xt_x}) \mathbf{i}$ . Similarly, when the resultant directions of the left, upper, bottom, front, and back time-fields are  $-(R_x v_{xt_x}) \mathbf{i}$ ,  $(R_y v_{yt_y}) \mathbf{j}$ ,  $-(R_y v_{yt_y}) \mathbf{j}$ ,  $(R_k v_{kt_k}) \mathbf{k}$ , and  $-(R_k v_{kt_k}) \mathbf{k}$ , the directions of gravitational force at those same positions are  $(R_x v_{xt_x}) \mathbf{i}$ ,  $-(R_y v_{yt_y}) \mathbf{j}$ ,  $(R_y v_{yt_y}) \mathbf{j}$ ,  $-(R_k v_{kt_k}) \mathbf{k}$ , and  $(R_k v_{kt_k}) \mathbf{k}$ , respectively.

Each time-field has different characteristics; thus, the gravitational forces at the different sides of the earth have different characteristics. The different characteristics show the different poles. The gravitational force has more than a pole. It looks like poles of a bar of a magnet. If a side of the bar shows the North Pole, another side will show the South Pole. Notably, the North and the South Poles can attract iron filling; however, the characteristics of these poles' forces are different from each other. We could not see the different characteristics of the two poles because we use only one magnet and iron filling. If we use another bar of a magnet; thus, we can see that the same kind

of poles from two bars of the magnet will show the repulsive force. The different kinds of poles from two bars of the magnet will show the attractive force. The conclusion was that the gravitational force's polarity exists by using the new characteristic of time as a vector. The characteristic of the gravitational force at the North Pole is different from that at the South Pole. However, the three-dimensional body has at least six poles; thus, the other four poles exist as well. Because of each pole's uniqueness, the bar of the magnet always shows two "dominant" poles and shows unclearly four "recessive" poles.

In 2011, four Thai scientists consisted of as follow: (1) Apichai Sivapraphagorn, a chemist, (2) Suporn Samran, a physicist, (3) Aranya Pimmongkol, and (4) Warinee Parasarn, two biologists, did their experiments by using two different kinds of their time-fields to increase and decrease the growth rate of plants. Their study indicated that it was precisely possible for us to control the time of living things [8]. The application can develop to control the time of growth of plants and meats for food and time of cancer growth for living longer of people who get sick. The by-product of the study showed time-field acting like a pole of a magnet. For example, when Sivapraphagorn made a pyramidal shape and used many electrolytic capacitors with different kinds of legs putting at the four edges from top to the base of the shape, the shape showed two characteristics of controlling of growth of plants [7]-[9].



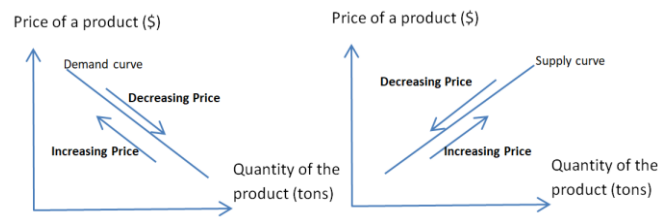
**Figure 2:** Two Different kinds of Legs of Electrolytic Capacitors

The benefit of time as a vector and the gravitational force's polarity will lead us to a new era of construction and vehicles. If we can produce the same kind of poles of gravitational force under our feet, we will "float" in the air without problems about weight. This study is different paradigms of any lifting. [11]

### ***Two directions of time in theoretical demand and supply curves***

In demand and supply curves of microeconomics, while the price of a product decreases and increases, each curve shows two directions of time from the concept called moving along the curve. With time as a vector, it showed something wrong about the direction of time in these curves [2]-[4]. The next study is supposed to investigate what something wrong about time in these curves. We hoped that those weak points were found and corrected. The new concept of these curves might push theoretical economics at a higher-level comparing to the present situation. Besides, we also hoped for economics as a new branch of science entirely in the final.





**Figure 3:** Two Directions of Theoretical Demand and Supply Curves while Moving along the Curves

## CONCLUSION

The tangible things consist of the width, the length, and the thickness. They are also called a three-dimensional body. All three-dimensional body has at least the six time-fields while we are considering it without rotating. In contrast, if we are considering the rotating of the three-dimensional body, we will see  $N$  time-fields inside the body. In 1905, Einstein found a new characteristic of time as a relative value [1]. For more than a century, no one found new characteristics of time. After having found time in all number lines, including three principal axes, we found the next characteristics of time and others concerning time values, such as time equation explaining equations in physics and economics, time as a vector, law of the direction of time, and time-fields in the three-dimensional body. These new characteristics of time help us to see the detail about something new in the three-dimensional body. The polarity of the gravitational force, for example, is a discovery in physics. It will help the unity of four fundamental forces in nature as possible [1]. If readers want to know how a time-field can show a magnet's pole, they are supposed to study the researching paper of Sivapraphagorn and his team [9]. The next paper will present mathematically other new knowledge about time in physics, such as the geometry of time dimension and economics, such as demand and supply curves, imaginary [2]-[4]. New characteristics of time will help us understand more about the nature in different paradigms that no present mainstream scientists and economists have ever seen.

## REFERENCES

- M. Kaku and J. Trainer, *Beyond Einstein*. New York: Bantam Books, 1987, pp. 26-30.
- P. Boonsri, "The Time Equation and the Weak Points of the Theoretical Demand and the Supply Curves in Microeconomic Theory", *The Journal of Interdisciplinary Networks*, 2013. [Online]. Available: [http://www.icird.mju.ac.th/icird2013/JIN1\\_CD.pdf](http://www.icird.mju.ac.th/icird2013/JIN1_CD.pdf). [Accessed: 12-Jun- 2018].
- P. Boonsri, "The study on time to develop an economic theory", in *The 5th International Conference on Business and economics*, Greece, 2014, pp. 186-197.
- P. Boonsri, "The time as the linkage between microeconomics and macroeconomics", in *The 3rd International Conference on Production and Supply Chain Management*, Spain, 2014, pp. 329-343.



- P. Boonsri, "Mathematics proof of time dimension as a vector", The Journal of the Royal Institute of Thailand, vol. 27, no. 2, pp. 399-407, 2002. [Accessed 13 June 2016].
- P. Boonsri, The Power of Time: From Einstein with Time, 1st ed. San Bernardino, CA: Amazon.com, 2017.
- P. Boonsri, "Geometry of time dimension", 29th Congress on Science and Technology of Thailand, 20-22 October 2003, Golden Jubilee Convention Hall, Khon Kaen University, 2003.
- A. Sivapraphagorn, "Effect of Time Field on Rate of Redox Reaction", Journal of Science and technology, Ubon Rajathani University, vol. 8, no. 3-2006, pp. 69-81, 2006. Available: [http://www.ubu.ac.th/web/files\\_up/08f2013032215272079.pdf](http://www.ubu.ac.th/web/files_up/08f2013032215272079.pdf). [Accessed 4 June 2016].
- P. Boonsri, "The Time Equation Explaining Equations in Physics and Economics", International Journal of Engineering and Advanced Technology (IJEAT), vol. 8, no. 63, 2019, pp. 165-168, 2019. Available: <http://www.IJEAT.ORG>. [Accessed 31 October 2019].
- A. Sivapraphagorn, P. Boonsri and S. Sumran, "Feasibility of an Electromagnetic Cell", Thailand Citation Index-Thai journal, 2014. [Online]. Available: [https://www.tci-thaijo.org/index.php/sci\\_ubu/article/view/87089](https://www.tci-thaijo.org/index.php/sci_ubu/article/view/87089). [Accessed: 18- Dec-2019].
- A. Gulhane, G. Gawande, B. Gawande, S. Dhule and C. Deshmukh, "Fabrication of Automatic Side Stand Lifting Mechanism", International Journal of Emerging Technologies in Engineering Research, vol. 5, no. 4, 2017, 2017. Available: [http://International Journal of Emerging Technologies in Engineering Research \(IJETER\) Volume 5, Issue 4, April \(2017\) www.ijeter.everscience.org](http://International Journal of Emerging Technologies in Engineering Research (IJETER) Volume 5, Issue 4, April (2017) www.ijeter.everscience.org). [Accessed 5 October 2019].
- K. Alfawaz and E. Ibrahim, "The Role of Information and Communications Technology (ICT) in Developing English Language Teaching from Teacher's Perspective", International Journal of Emerging Trends in Engineering Research, vol. 6, no. 82018, 2018. Available: <http://www.warse.org/IJETER/static/pdf/file/ijeter01692018.pdf>. [Accessed 1 October 2019].
- M. Israr and A. Gangele, "A Quality Function Deployment Methodology for Product Development", International Journal of Emerging Trends in Engineering Research, vol. 2, no. 11, 2014, 2014. Available: <http://warse.org/pdfs/2014>. [Accessed 2 October 2019].



Dr. Poramest Boonsri

Poramest Boonsri attended the prestigious Faculty of Science at Khon Khen University, before going on to Ramkhamhaeng University, where he attained a second-class honor in quantitative economics. Poramest has also obtained a master's degree in quantitative economics, an Australian Diploma in Interdisciplinary Study, and a Ph.D., the last coming from his research on a new price model in economics from Bansomdejchaopraya Rajabhat University, one of the oldest universities of Thailand.

He has been the Associate Professor in Economics at his university for many years and tried to solve his incredible physics discovery in 1987. This discovery was the turning point in his life and became the catalyst that inspired him to write many papers concerning time. The first one published in the Scopus indexed journal was "The Time Equation Explaining Equations in Physics and Economics." The second one was "Discovery in Time as a Vector plus Polarity of Gravitational Force." Besides, "Discovery in Five Fundamental Angles at the Subatomic Level plus a Three-Dimensional Body" was the third.

Much of Poramest's writing career has centered on research papers, and he is hoping that his papers and book, "The Power of Time: From Einstein with Time," will be the inspiration that people need to become involved in science, economics, mathematics, and the theories surrounding time. He is also planning another book called Quantitative Buddhist Economics: base on Buddhist study.

Amongst many honors bestowed upon him, Poramest is the recipient of The Most Noble Order of the Crown of Thailand from H.M King Rama IX of Thailand (2012) and The Most Exalted Order of the White Elephant, also from H.M King Rama IX of Thailand (2015).