Thought Force Moves Real Objects—Energy Amplifier by Nature

Dr. Tamas Lajtner

Contact via web site: ww.lajtnermachine.com

Abstract:

Space is what matter uses as space. Space is not dependent on its texture; it can be made out of matter or non-matter. Time is one characteristic of the given space. Using this new approach called space-matter theory, we can find different spaces that exist in reality, but we have never considered these as spaces. In many spaces, the faster-than-light phenomena (fast waves) are reality.

In our experiments we measured the energy of thought force that didn't appear as an electromagnetic wave; its energy was as big as the micro wave's is. The brain doesn't radiate micro waves. How can our brains send such a large amount of energy? Using fast waves that are new fundamental forces. Generally: the velocity of fast waves depends on the space where the wave travels. If the matter wave changes its space, it will change its velocity and its "rest action", while its energy remains unchanged. Changing spaces is an "action amplifier of wave" made by nature.

Keywords:

kinetic energy of wave, space-matter theory, Lajtner-submarine, more than one space, faster-than-light wave, thought force

1. WHAT IS THIS PAPER ABOUT?

be hardly understood without This study can its two sources. The first one: my experiment with thought force and my earlier publications about these experiments give the first basics of this paper [1-3]. For more than fifteen years I have researched the force of thought. Thought force is a "mystical phenomenon" that never appears as electric/electromagnetic force, but as a new fundamental interaction. Thought force wasn't measured until our experiment. (or at least, the results haven't been published). We have found more ways to measure the force of thought. This force is small, but it doesn't mean that it is insignificant. It is an existing, measurable force that is even able to move real objects.

In the following the expression "thought force" is understood as the force of thought that cannot be measured as electric/electromagnetic waves of the brain [1-3].

Thought force has its mystics. It is always a very surprising experience when a person is suddenly faced with the existence of his thought force. I've met people several times who have run real objects with thoughts in our experiments, but they've refused to accept the existence of thought force. Thought force seems to be ignored by our European and American culture. It's strange, since the force of thought is real, testable and essential. We use it always—unconsciously. Long story short: the force of thought and thought-run objects are reality.

The second source: Measuring and testing thought force are exciting activities. It is very interesting to design thought-run objects, but the biggest challenge is to understand how thought force works, and to give a theory that is able to describe thought force. There is neither a physics nor a philosophical theory that can describe the force of thought This is obvious: if the existence of thought force is not accepted, then we need no theory to describe it. But thought force exists. How can we put it in the system of physics? The well-known theories don't help us, since thought force is a new fundamental interaction. We need a new theory. This new theory is called the space-matter theory. It gives new definitions and axioms. The space-matter theory redefines our old concept of time, space and matter. Using these new definitions, we can describe the force of thought.

Surprisingly, space-matter theory also solves more mysteries of physics, putting these into one system. Grouping these phenomena in a new way, we can find their common roots, so we can explain, for example, how double-split, tunneling, spooky action and accelerating Universe work [4]

Using an analogy: the space-matter model seems to span a "super cluster" which has more clusters. Our current physics terms and theories are based on some clusters. If we dare change some of our old axioms, we can use the "super cluster". The change of axiom is always a big step. Euclidean geometry gave us a brilliant parallel postulate. The geometry by Bólyai and Lobachevsky rewrote this old postulate and opened a new world of geometry that contains Euclidean's postulate and many others.

Thought force is a new fundamental interaction. There are two different ways to model it. Solution A: we suppose that thought force is a wave made from matter, a new particle. This particle is different from the well-known particles, since it must be faster than light. Solution B: Thought force is the change of the wavelengths of space waves, where the space waves are faster than light. Both solutions work, but they are far from the mainstream of academic physics. Both solutions are useful, both have different advantages. In the following study thought force is described as a matter

wave, because I stress in this study the *force* of thought. If we want to stress thought force *communication*, we should use the modified space waves instead of matter waves.

2. WHAT IS THOUGH FORE?

Thought force is able to leave the head and to move properly designed real objects. The motions of the thought-run objects are visible to the naked eye, and recordable with cameras and computers. In our experience, the average thought energy of a seemingly ordinary person that rotated the paper wheel was $E_{rot} = 1.011 \times 10^8$ eVolt. Our brain has about $n = 10^{11}$ neurons [5]. E_{rot} energy must be created by neurons. If every neuron of the brain worked exclusively on the rotating the paper wheel (which is, of course, impossible) and $E_{rot} = \sum_{i=1}^{n} E_{i \text{ neutron}}$, then every neuron should produce an average energy value of $E_{neuron} = 1.011 \times 10^{-3}$ eVolt and transmit this energy to the wheel. Sending energy from the brain to the wheel presupposes electromagnetic waves. According to Planck's formula, $E = h \times f$, where h is the Planck constant [6], [7]. Thus, the average frequency of the electromagnetic waves is $f_{neuron} = 2.45 \times 10^{11}$ Hz. There ain't no such thing as microwave radiation of the brain. How does the brain send the E_{rot} ? Using a new fundamental force. It makes possible to send the same amount of energy created with smaller than h action. How?

3. ENERGY CONVERTER BY NATURE

Energy conversion is the transformation of energy from forms provided by nature to forms that can be used by humans. This definition [8] is not always true in the following study. In the case of though force, the original energy is made by humans, and the changed energy can be used by humans and non-humans.

In this study I will speak about the energy of matter waves. It is possible to create the same energy of matter wave with more and with fewer actions depending on the velocity of the wave. It is possible to increase a wave's action without extra energy added. Here kinetic energy will be turned into action (and action into kinetic energy). In the case of the matter wave we can speak about a special conversion "instrument": the conversion is made by spaces.

I introduce the "action conversion efficiency" η_h that describes the ratio between the h_{rest0} rest action and the output rest action h_{rest1} that are the "rest actions" of the same wave in different spaces. This category is not in our physics books.

4. WHAT IS SPACE

Space is a boundless, three-dimensional extent in which objects and events occur and have relative position and direction [9]. From this definition, we don't know what space is made of. Is space a kind of "something" or is it an "empty pool"? Aether theories propose the existence of a substantial medium, the so-called aether that fills

this "pool". Aether is a space-filling substance, and a transmission medium for the propagation of gravity forces (and even the electromagnetic force) according to physicists at the end of the 19th and the beginning of the 20th century. The works of Lorentz [10], [11] represent the theory.

In Einstein's four-dimensional space-time model (three spatial dimensions and one time dimension) [12-18], space itself is an object that produces action and reaction in harmony with actions of mass (and energy). This four-dimensional space-time has two parts: time and space. What is time, what is space?

Today's physicists claim that time is what we measure as time. What does the phrase "what we measure" mean? Just energy and mass are measurable. The physics concept of measuring time is derived from two "bodies" acting upon each other, where the "bodies" can only be matter—for example, the Earth's rotation in relation to the Sun, the motion of a spring inside a wall clock, or atomic vibration powering an atomic clock. The essence is always the same. One matter moves in relation to another matter. One second is defined as a changing character of the cesium 133 atom [19] that we can measure. One second has its start and has its end that we measure. The main element of time is the change. If there is no change, there is no time. We measure changes of matter measuring time.

Can we measure space? Measuring space, we measure matter. The meter is the length of the path travelled by light in a vacuum during a given time interval [20]. We can measure neither time nor space at all. We measure only matter. Do we measure all matter? No. Heisenberg's Uncertainty Principle gives us a limit on what we can measure [21]. From now on I refer to matter as 'measurable and immeasurable matter'. Let's say the following: where there is matter, there is no space; where there is space, there is no matter. This definition says three things:

- Space and matter exist, if two objects exist, and one of them acts as space while the other one acts as matter,
- We cannot generally answer the question: "What is space made of?" Space depends on its relationships. Space is what matter senses as space;
- Time originates from the given space, if it interacts with the given matter.

More details in [4]. There you can find more details of the space-matter theory, too.

5. WHAT CAN BE SPACE; OR, THE LAJTNER-SUBMARINE

Let's introduce the following notations:

- space: This is a three-dimensional extent that matter uses as space. It can be built out of space or matter.
- Space: This is *the* Space we know as space, made out of space.
- Time: This time generated by Matter and Space.

 Note the definition of time in modern physics (expressed by the terminology of space-matter theory) is based on the action-reaction of Space and Mass. Light has no time according to modern physics. In

space-matter theory light has time, but it is different from the time made by mass.

Matter: Matter is a three-dimensional extent that exist in the given Space_{act} exists as matter. There are different forms (and different limits of velocities) of the same matter in different spaces.

- Space_{act}. This is the space, where the object made out of matter travels. Space_{act} is the space that the given matter is using as space.
- Time_{act}. This is the time that is given by the Space_{act}, where the object travels.
- Space_m. This is a space made out of matter (with or without mass) that another matter (with or without mass) uses as space.
 - Time_m. This is the time that is given by Space_m.
 - Space wave_{MV1}. This is a space wave in Space created by Matter Wave₁.
 - Space_L This is a space made out of light that another light uses as space.
 - Time_L. This is the time that is given by Space_m.
 - Space wave_L. This is a space wave in Space generated by light.
 - Space wave_{MV2}. This is a space wave in Space created by Matter Wave₂.

•

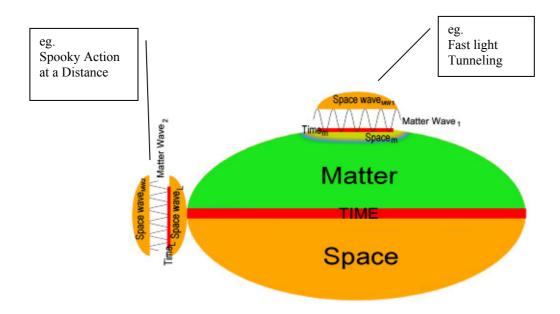


Figure 1. Spaces, Matter and Time in Space-Matter Theory displayed as Lajtner-submarine (not proportional). Matter means particles with or without mass. According to the modern physics just mass has time and the photon(light) doesn't. The Lajtner-submarine shows a different picture supposing that light has time, too.

The illustration sketches the complexity of space and time. It doesn't try to display every possible opportunity. It emphasizes that the question "What is space?" cannot be answered without knowing whose space we're talking about. Figure 1. shows there are different spaces. Light and mass are able to generate space, and they are also able to appear as space for another matter. Space is a wider category than just "Space", space must always be understood in relations.

Let's look at the top of the Figure 1. It shows space can be created from matter, it is Space_m. Its time is Time_m. This is the case of tunneling [22-25]. A given waving matter particle called Matter Wave₁ can travel in Space and in Space_m. For Matter Wave₁ Space_{act}=Space_m, but the following can be possible, too: Space_{act}=Space. In Figure 1. Matter Wave₁ uses Space_m. If the Matter Wave₁ jumps from Space_{act}=Space into Space_{act}=Space_m or back, then the Matter Wave₁ has to change itself, too. Matter Wave₁ creates Space wave_{MW1}.

Light itself also can be space; see the fast lights experiments [26-28]. Saying this, not only Space, but mass, light and their space waves can be used and are used as space in many cases.

Let's look at the left side of Figure 1. The light generates Space wave_L that is used by Matter Wave₂. For example the spooky action at a distance (the non-local correlation in quantum entanglement which speed is greater than the speed of light [29], [30]) travels on Space wave_L. The red line here symbolizes the time of this space. Matter Wave₂ creates Space wave_{MW2}.

$$Space_{act} \neq Space$$
, (1)

that is, their wavelengths (λ) are different. If

$$\lambda_{Space_{act}} \gg \lambda_{Space}$$
, (2)

then the velocity of the Matter Wave v_{MW} is greater than the speed of light c,

$$v_{MW} >> c \tag{3}$$

There are shown many spaces in Figure 1. Every space and time wave can be described by the Space waves created by Masses.

$$\gamma_{act} = f_{space_{act}} / f_{Space} \tag{4}$$

where γ_{act} depends on the given Space_{act} and f means the frequencies.

6. SPACES AND VELOCITIES

Table 1 shows that *space* can be the lack of matter or even the matter itself. Everything we know (space, mass, energy) can act as space. Non-space waves can use different spaces; in different spaces they have different velocities.

MATTER= SPACE=	Mass	Light (energy)	Spooky action	Tunneling wave	Gravity	Thought force
Space	v _{act} < c	$v_{act} = c$	-	mass and light outside the barrier $v_{act} < c$ $v_{act} = c$	velocity disputed $v_{act} \ge c$	X $v_{act} \ge c$
Mass	mass can turn into tunneling waves $v_{act} > c$	light (energy) can turn into tunneling waves $v_{act} > c$		inside the barrier $v_{act} > c$?	
Light (energy)	?	$v_{act} > c$	Х	-	-	
Space wave caused by mass	-	$v_{act} = c$	-	light outside the barrier $v_{act} = c$	velocity disputed $v_{act} \ge c$	thought force as particle $v_{act} \ge c$
Space wave _L caused by light	?		$v_{act} > c$	-	"gravity" of non- mass, it's refused by physics $v_{act} > c$	thought force as particle $v_{act} > c$
Can exist the MATTER travelling in any SPACE described as modifications of wavelength of SPACE waves instead of MATTER waves?	·		yes $v_{act} > c$	\mathbf{x} $v_{act} > c$	yes $v_{act} > c$	yes $v_{act} > c$ thought force communication

Table 1. What can be space for different matters?

The notations in Table 1 are the following: "." means we don't have information; "?" means it may be, but not certain; "x" means this is to consider; "-" means no.

Table 1 shows that both space and matter can act as space. Space and matter seem to be a category that can be understood in relationships only. The relationship determines the space that determines the v_{act} , which is the velocity of the non-space object (matter) in the given space. Table 1 shows a fact: faster-than-light velocities come into existence in many ways. If the space-matter environment changes—that is, matter changes its space—matter's velocity changes as well. The table has been filled out using the following references [1-4].

The thought force as a *particle* is supposed to travel on the space wave caused by mass or Space wave_L made by the electromagnetic waves made by neurons.

7. LIGHT SPEED AND MAXIMUM REST ACTION

Using the theoretical background of space matter theory, we can say the following:

In the space-matter model, the c speed is the highest speed for carrying the biggest h_{rest} , where h_{rest} is the *rest action* of light. This category is not in our physics books. According to the space-time theory, Eq. (5) exists and shows two theoretical parts of Planck constant h.

$$h = h_{rest} + h_v , (5)$$

where h_{rest} is the action of the light and/or fast light, h_v is the action that depends on the v_{fl} velocity of fast light. If $v_{fl} = c$, then we suppose that $h_v = 0$ and $h = h_{rest}$. The above-mentioned remains true in the case of fast light and other matter fast waves too.

We can speak about different rest actions in different spaces of a given matter wave (particle). But every matter wave has its own h_{rest0} .

$$h \ge h_{rest} \ge h_{rest0} \tag{6}$$

where h_{rest0} is the minimum "inborn rest action" that the given matter wave needs to have to be able to exist as the given matter wave, and h_{rest} is the actual value of its rest action in the space where it is. The h_{rest} depends on the velocities of the wave. Let's see an example: a tunneling wave outside the barrier is $\psi(x)$. It appears as fast wave $\psi_{fw}(x)$ inside the barrier, where $v_{fw} > c$. Eq. (7) shows the changing rest action. Note the rest action of the wave doesn't exist according to physicists, and Eq. (5-11) aren't in our physics books either.

$$h \times (c/v_{fw}) = h_{fw rest}, \tag{7}$$

Eq. (5) turns into Eq. (8) in the case of fast waves.

$$h_{fw} = h_{fw rest} + h_{fw v}. ag{8}$$

where $h_{fw rest} = h \times (c/v_{fw})$ is the rest action of the fast wave in the given space. The velocity of the fast wave causes $h_{fw v}$.

In other words, if matter waves (particles) use different spaces, they will have different velocities and different h_{fwv} , which depend on the given space where the wave is.

We can calculate Eq. (9).

$$E_{fw} = (f_{fw} \times (h \times \frac{c}{v_{fw}})) \times (\kappa \times \frac{v_{fw}}{c}), \qquad (9)$$

where $\kappa > 0$, it is a factor that depends on the type of fast wave. In the case of fast light

$$\kappa = 1. \tag{10}$$

The value of κ may change in the case of different matter fast waves, but the method remains true. I suppose in the following that (10) remains true at every fast wave made out of matter.

$$E_{fw} = (f_{fw} \times (h \times \frac{c}{v_{fw}})) \times (1 \times \frac{v_{fw}}{c}) = f_{fw} \times h . \tag{11}$$

Eq. (11) shows that the same wave has E_{fw} energy in every space.

The additional energy of the fast wave is the kinetic energy of the wave caused by v_{fw} , where $v_{fw} > c$. If $v_{fw} = c$, then the wave travels with c, and we get back the original Planck constant.

8. NO PROBLEM HOW FAST?

Eq. (11) must be true. Why? The fast light experiment shows that the fast light and the "normal" light have the same energy. Where do the energies come from? In the case of light the energy depends on the photon's frequency—higher frequency, bigger energy. The "unit energy" is the h action, the frequency shows the number of repetitions of this action. The h actions travel with c velocity. When the photon meets a big mass for example, it means, that the light wave, that is, the action h bumps into the mass with c velocity. By meeting, the speed of photon (and h) decreases, $c \to 0$. So, the energy comes from the action h that travels with c. How is it in the case of fast light? If $h_{rest} = h_{fiv rest}$, and the fast light travels with $v_{fiv} > c$, and the fast light meets the mass, then the same $h_{rest} = h_{fw \, rest}$ action meets the mass, but now much faster than c. In other words, the hits of fast light must be greater than the hits of light. This is not the case. Now we can choose from two possibilities. First, there is no rest action, and there is no difference between a faster and a slower hit made by the photon's actions. This solution cannot be true—the action sent faster must have more energy (because the faster motion makes the wavelengths of space wave longer according to spacematter theory).

The second solution is: the fast light has a different rest action, that is, the rest action exists. In this case we may suppose that non-photon fast waves work the same way. The speed of the fast wave depends on the Space_{act}. In different spaces it travels with different velocities.

9. HOW DO BRAINS CREATE THOUGH FORCES?

Our brains use spaces as a perfect "rest action amplifier" in the case of thought force. How can our brains create thought force with the smallest energy? Using Eq. (11)—that is, creating fast waves. Our brains create thought force with less than h action (energy). That is, our brains don't have to send out micro waves with big energy, where the "rest action" of the photons must be h and the velocity is c. It is

enough to send out fast waves, where the rest action is $h > h_{fw \, rest}$. The velocity of these fast waves depends on their Space_{act}, the whole energy of the thought force is always E_{fw} . Creating $h_{fw \, rest}$ needs less energy than creating h, since $h > h_{fw \, rest}$.

Our brains create a fast wave with $h_{fw \, rest}$. This wave will have an h action, because of $v_{fw} > c$. If this fast wave changes its $\operatorname{Space}_{\operatorname{act}}$, the $h_{fw \, rest}$ will be changed as well, since its velocity changes. Note this is not about creating energy from the "nothing". The whole h action and the whole E_{fw} energy remain unchanged.

$$E_1 | h_{rest 1} = \varphi(v_1) | v_i = \varphi(space_1) | = E_2 | h_{rest 2} = \varphi(v_2) | v_2 = \varphi(space_2) |,$$
 (12)

where E_i is the whole energy of the given wave in space_i. Eq. (12) shows that the same wave has different h_{rest} depending on its velocities, and its velocities depend on spaces. Using different spaces, we have more possibilities to create the same amount of energy E_i , or in other words, the same amount of energy can be created with different $h_{rest i}$.

If $h_{rest\,i} = h$, then this wave is a "normal" electromagnetic wave. If $h_{rest\,i} < h$, then we're talking about the fast wave that appears in many cases as a new fundamental interaction.

Here we can give a special action (energy) conversion efficiency:

$$\eta_h = h_{rest \, 1} / h_{rest \, 2} \,, \tag{13}$$

where η_h is unique: it can be $\eta_h \le 1$ or $\eta_h > 1$, while

$$\eta_E = E_1 / E_2 = 1. \tag{14}$$

What does thought force teach us? Two important things:

- It is possible to create fast waves with "normal" matter in our Space.
- It is possible to create the same output energy with different input actions.

10. IT IS POSSIBLE TO CREATE FAST WAVES IN SPACE

Our brains create thought forces. Thought force appears as a fast wave; it is a new fundamental interaction. So, our brains are able to create fast waves. That means mass is able to create fast waves, if Space_{act}= Space (Figure 1.).

The tunneling shows the same phenomenon from a different viewpoint. Inside the barrier, where Space_{act} \neq Space the wave exists as a fast wave, outside the barrier, where Space_{act}=Space exists as a "normal" wave, where $v \le c$. As I said above, the changing of Space_{act} causes the changes in velocities and actions. The barrier is made out of matter that we don't call space but matter. Using the space-matter theory, we understand the rule: space is a "relationship". Space depends on the matter, and doesn't depend on what it's made of. Space is what the matter uses as space. Without the space-matter theory (Lajtner, 2016 d), we cannot understand what changing spaces means. Space—as non-matter—exists independently from the given Space_{act}, and matter always changes the wavelengths of Space.

11. IT IS POSSIBLE TO CREATE ADDITIONAL ENERGY FOR FREE

If we create a fast wave with $h > h_{fw \, rest}$, it is possible to turn its rest energy into $h = h_{fw \, rest}$. It doesn't need additional energy, it needs a new Space_{act}. The process is simple. We create a fast wave in Space_{act}= space_A, where $v_{fw} > c$, and we lead it into Space_{act}= space_B, where its velocity will be $v_{fw} \le c$. If $v_{fw} = c$, the wave will be light, a pure electromagnetic wave with h action. Use the light as an example: we do not need to give its speed in Space. The speed of light comes into being "automatically", i.e. by converting fast wave into light, we created an electromagnetic wave with less than h action input. To put it another way, if we changes spaces well—that is, we use well the energy amplifier by nature—from our viewpoint Eq. (15) will be true, because the higher speed of fast wave will be given "for free":

$$\eta_{E(O/I)} = E_{Output} / E_{Input} > 1. \tag{15}$$

This is not just a pure theory—this is how our thought forces work. This is why thought force is able to move real objects.

References

- [1] Lajtner, T. Thought force is a new fundamental interaction Physics Essays, V 29.
- <u>N2</u>. DOI: 10.4006/0836-1398-29.2.239. (2016)
- [2] Lajtner, T. Without thought force the Milky Way wouldn't be the same—Thought force in practice European Scientific Journal (ESJ) Vol 12, No 27.

DOI: 10.19044/esj.2016.v12n27p1. (2016)

- [3] Lajtner, T. Thought Force Communication, Space-Matter, Gravity http://vixra.org/abs/1606.0297 . (2016)
- [4] Lajtner, T. Four mysteries solved: double-slit, spooky action, tunneling, and accelerating Universe Int. Res. J. Pure App Phys V 4. I3. (IRJPAP) (2016)
- [5] Buzsaki, Gy. *Rhythms of the Brain* (Oxford University Press 2006) p.33. DOI: 10.1093/acprof:oso/9780195301069.001.0001.
- [6] Planck, M. (1900). Zur Theorie des Gesetzes der Energieverteilung im
 Normalspectrum <u>Verhandlungen der Deutschen Physikalischen Gesellschaft 2</u>, 237.
 DOI: 10.1002/phbl.19480040404. (1900)
- [7] Planck, M (1901) Über das Gesetz der Energieverteilung im Normalspectrum.

 Annalen der Physik 4: 553-563. DOI: 10.1002/andp.19013090310. (1901)
- [8] Encyclopaedia Britannica. https://www.britannica.com/technology/energy-conversion (2016)
- [9] Encyclopaedia Britannica. https://www.britannica.com/science/space-physics-and-metaphysics (2016)
- [10] Lorentz, H. A. Simplified Theory of Electrical and Optical Phenomena in Moving Systems Proceedings of the Royal Netherlands Academy of Arts and Sciences 1: 427-442. DOI: 10.1016/b978-0-08-015674-3.50021-x. (1899)

- [11] Lorentz, H. A. Electromagnetic Phenomena in a System Moving with any Velocity Smaller than that of Light <u>Proceedings of the Royal Netherlands Academy of Arts and Sciences 6: 809-831.</u> DOI:10.1007/978-94-015-3445-1_5. (1904).
- [12] Einstein, A. Zur Elektrodynamik bewegter Körper. <u>Annalen der Physik</u> 17, 891-921. DOI: 10.1002/andp.19053221004. (1905).
- [13] Einstein, A. Relativitätsprinzip und die aus demselben gezogenen Folgerungen Jahrbuch der Radioaktivitaet, 4, 411-462. (1907).
- [14] Einstein, A. Die vom Relativitätsprinzip geforderte Trägheit der Energie <u>Annalen</u> der Physik 23. 371-384. DOI.10.1002/andp.200590018 (1907).
- [15] Einstein, A. Formale Grundlage der allgemeinen Relativitätstheorie. <u>Preussische Akademie der Wissenschaften, Sitzungsberichte, 1030-1085.</u> DOI: 10.1002/3527608958.ch2. (1914).
- [16] Einstein, A. Zur allgemeinen Relativitätstheorie. <u>Preussische Akademie der Wissenschaften, Sitzungsberichte, 778-786, 799-801.</u>

DOI: 10.1002/3527608958.ch3. (1915).

- [17] Einstein, A. Feldgleichungen der Gravitation. <u>Preussische Akademie der</u>
 Wissenschaften, Sitzungsberichte, 844-877. DOI: 10.1002/3527608958.ch5. (1915).
- [18] Einstein, A. Grundlage der allgemeinen Relativitätstheorie. <u>Annalen der Physik.</u>49, 769-822. DOI: 10.1002/andp.200590044. (1916).
- [19] SI Brochure, The International System of Units (SI)

http://www.bipm.org/en/publications/si-brochure/second.html DOI.

10.1201/9780849382994.axc. (2014).

[20] SI Brochure, The International System of Units (SI)

http://www.bipm.org/en/publications/si-brochure/metre.html DOI.

10.1201/9780849382994.axc. (2014).

[21] Heisenberg, W. Über den anschaulichen Inhalt der quantentheoretischen

Kinematik und Mechanik. Zeitschrift für Physik 43 (3) 172-198. DOI:

10.1007/BF01397280. (1927).

[22] Nimtz G, Enders A and Spieker H Photonic tunneling times. J. Phys. I France 4 565-570

http://jp1.journaldephysique.org/articles/jp1/abs/1994/04/jp1v4p565/jp1v4p565.html (1994)

[23] Nimtz G. Tunneling Violates Special Relativity

http://arxiv.org/pdf/1003.3944v1.pdf (2010)

[24] Nimtz G Tunneling: From Milliseconds to Attoseconds

http://arxiv.org/pdf/0903.2582v1.pdf (2013)

[25] Gerlitz T G M, Superluminality and finite potential light-barrier crossing. Int.

Jour. of Res. in Pure and App. Phys. 5(2): 19-24.

http://urpjournals.com/tocjnls/45 15v5i2 1.pdf (2015)

[26] Gauthier, D. J. & Boyd, R. W. Fast light, Slow light and Optical Precursors:

What does it all mean? (2007) http://www.photonics.com/Article.aspx?AID=27833.

[27] Boyd, R. W. Slow Light, Fast Light, and Backwards Light: Fundamentals and

Applications. Integrated Photonics and Nanophotonics Research and Applications /

Slow and Fast Light. https://www.osapublishing.org/abstract.cfm?uri=SL-2007-

SMA2 DOI:10.1364/s1.2007.sma2 (2007)

[28] Andrews, D. L., Boyd, R. W. & Shi, Z. Photonics: Scientific Foundations,

Technology and Applications (John Wiley & Sons, Inc. 2015) Volume 1 - Chapter 12

Slow and Fast light online. DOI: 10.1002/9781119009719.ch12

[29] Salart D, Baas A, Branciard C, Gisin N and Zbinde H (2008) Testing spooky

action at a distance. http://arxiv.org/pdf/0808.3316.pdf

[30] Yin J, Cao Y, Yong H, Ren J, Liang H, Liao S, Zhou F, Liu C, Wu Y, Pan G, Zhang Q, Peng C and Pan J (2013) Bounding the speed of 'spooky action at a distance'. http://arxiv.org/pdf/1303.0614.pdf.