

# The Essence of Special Relativity and Its Influence on Science-Philosophy and Society

Li Zifeng Li Tianjiang Wang Changjin Tian Xinmin Wang Zhaoyun  
( Yanshan University, Hebei , Qinhuangdao 066004,China )

**Abstract:** This paper introduces nowadays status of special relativity in science and philosophy as well as society, reasons of special relativity becoming famous, three viewpoints on special relativity in academe, four attitudes of public on special relativity, comments of famous scientists on special relativity, periodicals and scientific meetings as well as networks studying questions on special relativity. This paper sums up argument focus on special relativity, analyzes the logic mistakes of special relativity, investigates the authenticities of validation and application of special relativity, and concludes that the essence of special relativity is a wrong logical inference embarking from the idealist standpoint, analyzes special relativity's harms on science and philosophy as well as society. This paper advocates the materialism style of seeking truth from facts and the publication policy of a hundred flowers blossom and a hundred schools of thought contend, in order to liberate scientific research from imprisonment of special relativity. The views of space-time and mass-energy of idealistic special relativity should be abandoned and the views of space-time and mass-energy of materialism should be restored and developed.

**Key words:** special relativity; essence; philosophy; science; society; influence; space-time view; mass-quality view

As one of the two important physics rationales contemporary, the special relativity<sup>1-2</sup> (SR) come into being for an entire century. The common people have known the special relativity and its author, Einstein. It is a compulsory curriculum in the university and college. However, its rationality of foundation process and accuracy of deduction are continuously suspected<sup>3-44</sup>. There exist two viewpoints poles apart for the special relativity from first to last. One is "the giant" theory, which think highly of SR; the other is "the disaster", which think poorly of SR. Therefore, it is vital important to investigate its essence and the influence on science, philosophy and society, which will make unprecedented sense to the development of science, technology and philosophy.

## 1. The nowadays status of special relativity in science, philosophy and society

The special relativity has been in a jewelry status since 1905. Today, it occupies absolutely the dominant status in science, philosophy and society. It is taken for one of the contemporary theory base of physics. Any assume and scientific research achievement conflicting with the special relativity, which is sentenced wrong. The undergraduates must study the special relativity and there are Einstein's statues, figures and photos everywhere, who being famous for the special relativity, in the university and the middle school campus. It is summoned to learn from Einstein. The United Nation decides 2005 being the international physical year and world-wide celebrating for SR published the 100<sup>th</sup> anniversary.

## 2. Reasons for the special relativity being famous

For the public: one, the special relativity has become university physics compulsory content; two, they have received all kinds of views of experts in a long time; three, because of lacking

enough understanding and pondering; many people think that it is right, but they don't know the reason.

The Time Weekly (America) and BBC (English) launched a little vortex of "the genius theory": They support the special relativity being the top of ten great scientific achievements in 20<sup>th</sup> century, respect Einstein as second of the millennium great thinker, and cry up Einstein's cerebrum vagarious etc.

Domestic media also isn't will to drop behind. "The time travel" and "the Big Bang" become especially front-page in a short time. Some people suppress and attack dissimilar learned view teeth and nail, inhibit all learned achievements of criticizing special relativity. Even though, they durn criticizing special relativity is "propagandizing pseudoscience".

For media exaggerates SR and pressures others' critical opinions, the special relativity almost become scientific religion, and Einstein is held for the hierarch.

### 3. Three appraisals to the special relativity in academe

(1) It is right, and is one of the two greatest basic physical discoveries in 20<sup>th</sup> century.

(2) It is a combination of right and falsehood.

(3) It is absurd.

### 4. Four kinds of moods to the special relativity

There are four kinds of moods to the special relativity: support, amendment, opposition and looker-on.

(1) Supporter. They allege SR is correct and opposing SR means anti-science. Their occupations are almost teaching or researching special relativity. Except a few of them who don't know there is something wrong in the special relativity, the most understand it is wrong. But they don't admit it's wrong for the reason of polity, economy as well as fame.

(2) Corrector. They think it is almost correct, but there are some wrongs. Where it is used, where there is wrong and it would be amended, due to the foundation of the special relativity is wrong. Therefore, they can make "the paradox" forever, and amend it interminably. They can publish many papers, but it is a fool for one's pains.

(3) Objector. They think it should be abolished for its essence absurd. They can get little benefit but one paper maybe.

(4) Spectator. They think it is wrong or not, which is none busyness of themselves. Actually, they don't engage in work about the special relativity, but social influence also would involve them at last. It is only degree different.

## 5. Famous scientists' views to special relativity domestic and abroad

Many scientists think SR is correct; the most scientists hear about it is correct; and some think it is wrong. Medias have propagandized enough from the point of view of admiration. Some anti-viewpoints have been introduced as follows:

(1) The Nobel prize committee refused award Einstein prize for the special relativity.

(2) Famous scientists Lorentz, Poincare and Rutherford etc. all disagree it, who are contemporary with Einstein.

(3) Most experimental physical scientists don't admit it, example Rahilly, H. Ives, F. Soddy, P. Graneau, N. Graneau, S. Marinov, P. Ppapas and so on.

(4) Michelson, the main founder of Michelson-molen's experiment, pained all his lifetime because his own experiment educing the monster of special relativity.

(5) Dr. L. Essen said:" Physicists' attitude toward special relativity is not to understand it almost; but which is reckoned is right for being recognized, it must be admitted. I was thinking so in the past." Who was the director of time

frequency department of national laboratory in English.

(6) Dingle, the former supporter of special relativity, did bear away resolutely after finding its bumble, and called on teeth and nail "science being in the crossroad".

(7) Alfven, who was international famous scientist and winner of Nobel Prize, denounced special relativity "an only bibelot" and "it blurs the borderline between the science and pseudoscience".

(8) Bernes, emeritus physics professor in the Texas University, called that it is "a disaster" and "it is time to change worshipping blindly special relativity!"

(9) Lu Hefu, academician, famous theoretical physicist, broke through unnumbered big blocks in his octogenarian and sent out a paper "Challenging to Einstein". At last, he wrote the last words-"The common editorial department has no courage to publish the paper because they worship blindly Einstein and they are afraid of being considered ignorant of physics".

(10) Zheng Quan, professor of Science research institute of dynamics of Chinese Academy has objected to special relativity since 1961 and has published many monographs against special relativity.

(11) Song Jian, who is former state councilor, director of national Science and Technology Commission, vice-president of CPPCC and the president of Chinese academy of Engineering, oppugns boldly Einstein and calls on young scientists daring to innovation:" The entire 100 years ago, Einstein had an ana: 'It is impossible for anything moving faster than light speed' in his special relativity paper making world science inconceivability. It has been called as "light barrier" nowadays. However, it has not been proved by any direct experiment. Due to space flight technology development recently, it makes scientists analyses and self-reflection: Why the speed of spacecraft can't exceed velocity of light?"<sup>41</sup>

(12) Pro. Jemery Dunning-Davies from British Hull University and Prof. Stein E Johansen from

Norwegian University of Science and Technology point out that nowadays physical scientists keep to run-of-mill theory of special relativity. For the science disagreements with argument enough, they do not inhibit them with scientific argument but inhibit them using the more and more religious means for worshipping dogmatically Einstein<sup>43</sup>.

## 6. Meetings, learned publications and websites for researching special relativity problems

In North America, the symposiums or seminars of "challenging contemporary physics and cosmography" would be held every year by natural philosophy alliance of international academic structure. The international meeting of critical special relativity has been held continuously more than 6 times and it is grander and grander, which is sponsored by Muscovite academy of sciences. Just as Pro. Beckmann, American famous late editor in chief of "Energy" and "Galileo Electrodynamics", summarized: "special relativity still suffers so extensive resistance after unprecedented successful nearly 90 years, form Canada to South Africa, from Europe to Australia, from St. Petersburg to Beijing etc." The magnificent scale and long time lasting are rare in history.

On July 29~30, 2000, an academic meeting of the Einstein's special relativity question was held in Beijing of China. In 2003, three seminars aiming to negate or exceed Einstein's special relativity was held in China. They are respectively: "the first annual meeting of Beijing special relativity research sodality" was held on Aug 15-17 in Beijing; "the second national academic meeting of Einstein's special relativity questions" was held on Aug 23-24 in Beijing; "the international academic meeting of special relativity and contemporaneity physics innovation" was held on Oct 11-13 in Xi'an (China). There have held several academic

meetings about opposing special relativity since 2004 in China.

The publications of surmounting or objecting to special relativity include: "Galilean Electrodynamics", which has published many papers about surmounting or objecting to special relativity, "Apeiron", "Physics Essays", and "Invention and Innovation" etc..

There are several dozens of websites about surmounting or objecting to special relativity. There are more than 20 websites of representatives as the website of Beijing special relativity research society among them.

Recently, there are dozens of monographs on negative special relativity published at home.

## 7. Argument focus of special relativity

The special relativity is right entirely, local right and wrong or wrong entirely?

The experts "mastering" special relativity think it is great scientific theory, foundation of today's physics; it has been proved by experiment and no wrong severe. They think that whoever criticizes it being equal to "propagandizing pseudoscience".

Several scholars think there is something correct in it, but there is wrong severe at the same time, example, deviation fact, self-contradiction, mathematic puzzling, twisting experiment and misleading practice, so it should be exceeded actively.

Some scholars think it is built on the theory system of wrong mathematics foundation and illusion theory. It is really a tale of a tub about getting "experiment confirmation"

## 8. The theory foundation of special relativity

The error of special relativity stems from mistaking the principle of constant light velocity<sup>1-2</sup>.

The principle is: (1) light is always propagated

in empty space with a definite velocity  $c$  which is independent of the state of motion of the emitting body<sup>1</sup>; (2) light velocity measured is same in the vacuum for any of uniform rectilinear motion each other.

There are two understandings to the principle of constant light velocity as follows:

(1) In any inertial reference system, the light velocities relative to the system are the same, which are emitted by the lamp-house fixed to this system.

(2) In any inertial reference system of uniform rectilinear motion each other, the light velocities measured are same, which are emitted by same lamp-house.

The Lorentz coordinate transformation misunderstands the principle of constant light velocity as: for a special light, in all inertial reference systems of uniform rectilinear motion each other, the velocities are the same relative to these inertial reference systems. It ignores the relative motion between different coordinate systems, which results in a series of falsehoods.

The light velocity exists only as velocity of transfer signal in special relativity, which has no using any other special quality of light. Then, if light velocity for transfer signal is replaced by velocity of sound, and changing basic assumption of the principle of constant light velocity into the principle of constant sound velocity: sound velocity measured is same in any inertial reference system with uniform rectilinear motion each other. If sound signal replaces light signal during deducing formula, and light velocity replaced by sound velocity, the result would be gotten, which is the velocity of any object less than sound velocity. It is very absurd clearly, because bullet's motion velocity is faster than sound velocity and plane's velocity can exceed sound velocity also.

In general, people can know and research the world through light with eyes. However, blinds and bats depend on sound wave to know and research the world. If special relativity is right, then the result of anything's velocity less than sound velocity would be gotten for blinds and

bats.

Therefore, the theory foundation of special relativity is wrong.

## 9. The practice foundation of special relativity

(1) At the aspect of space-time view, Einstein own had only assumption experiments in his life.

(2) Through analyzing more 60 first-hand data “proved with experiments” of special relativity, famous physical scientist W. Kantor got a result: they all are based on wrong ways and invalid logic. Professor Huang Zhixun of Communication University of China got the same result.

(3) It can't explain reasonably radial Doppler effect. Doppler Phenomenon is: Optical Doppler Red-shift would emerge when lamp-house leaving observer. Whereas, Optical Doppler Blue-shift emerging. It would more clear more quickly relative speed.

(4) Most supporters of special relativity admit there isn't experiment observing Lorentz contraction heretofore.

(5) The public think it is magnificent proof that A-bomb was detonated successfully. However, Thomson and Kaufmann had done massive fruitful work of experiments and theory research about mass-velocity relation and mass-energy relation with others before special relativity coming out in 1905. Austrian physicist Hasenohrl proved the direct proportion relation between mass increased with radiant energy and got the famous formula:  $E = mc^2$  in 1904.

## 10. Essence of special relativity

(1) “Relativity of simultaneity” is a false proposition. It is gotten through exchanging secretly concept, shifting premise, and confusing feeling and existence, reflection and actuality.

(2) The mathematic foundation of special relativity namely Lorentz transformation, is a group of self-contradictory mathematic

equations, they have none science value.

(3) The special relativity has not been proved using any experiment. So-called “experiment confirm”, some is spurious and some is labeled coercively on it.

Special relativity is an absurd theory system setting up on the base of wrong hypothesis and mathematics educating. Therefore, it is a “cancer” in science system, is bottleneck of confining science development and is a kind of religion with science coat.

## 11. The harm of special relativity to the science, the philosophy and the society

At all times, the experts of special relativity let the common can't understand it. However, the common have to believe it as great truth. This is despising and violating the public wisdom. It has become a barrier of science development. From micro-world cognition puzzled to cosmology confusion, it is cause of disaster.

The negative influences of special relativity, relativism and “operativism” positivism have affected all aspects of society. Nowadays, feudalistic activity and pseudoscience are so rampant, which is interrelated with special relativity closely. At present, the vogue paralogisms coming from special relativity and its ramification, example: “the 4<sup>th</sup> space”, “the time tunnel”, “big bang” and “black hole” etc. are false theory. All of them are the representative of ghosts and gods theory, for example, Stephen Hawking said that he can play the cards with Newton and Einstein at the same desk, the beautiful girl can flirt with historical king through time tunnel in science fiction movies. It is no exaggerated that special relativity is regarded as their backer. It is no doubted that special relativity is severe barrier of contemporary science, especially basic theory development.

The argument of special relativity between supporters with objectors, it not only is learned argument but also puts right scientific history.

And it is a battle between mentalism and materialism.

## 12. The fate of special relativity

(1) It is a historical necessity to abandon the special relativity. "It can't be obstructed by hill and conquered is current necessary". The famous theoretical physicist Dr. J. P. Wesley said: "The special relativity era has gone". It can't be controlled by any force that the science is facing a revolution all-time. Science need development and learning need intercourse, therefore, criticism is necessary. No learning argument and criticism, scientific development would be in logjam. The rather that, it is the special relativity with logical error and falsehood countless. The science is developing through self-reflection and abandonment wrong theory or developing the useful and discarding the useless old theories. Today's fetish activity and pseudoscience can't fly lowly if the absurd idea and wrong theory of special relativity has no cleared away. In a word, the resistance of developing spiritual civilization would exist all the same if special relativity is no criticized and barriers of science development have been no forsaken. It is necessary for science continual development and human civilization development to criticize special relativity and to put it right. It is relative closely to scientific future and human fate. Putting the basic theory right is advisable action that its cost is least but gets best and influences important. It is the undertakings with monumental merits that benefit the future and the influence is incogitable for realistic and historical from gaining ground basic scientific knowledge and improving civil diathesis to impulse the development of knowledge economy. Innovation is spirit of nationality development. Chinese students have the duty and ability to seize the top point of the fundamentals sciences for the strategy of "national rejuvenation through science and education" in this scientific revolution and thrust our country into the ranges

of world advanced science and technology nations and do some historical contribution unprecedented. Emancipating the mind, seeking the truth and criticizing special relativity are the necessity for "national rejuvenation through science and education", which can't wait.

(2) There have been following conditions for canceling special relativity: ①Through the education of materialism, seeking truth from facts and scientific development view, a batch of scientists are brought up, who realize the mistake and danger of special relativity as well as daring to challenge to special relativity. ②The policies of letting a hundred flowers blossom, letting a hundred schools of thought contend and reform and opening-up have created a good social environment for challenging special relativity. ③It is discovered that the phenomenon, which was said Newton space-time view "unable to explain" and only can be explained with special relativity by special relativity experts, can be explained with Newton space-time view, and the explanation has no "Paradoxes". ④The development of network technology puts up a wide stage for spreading academic thought.

(3) It needs a long time to overthrow special relativity. For, ①it has caused a profound influence to public through 100 years' drumbeating; ②special relativity supporters dominate academic status, whose occupation is propagandizing it; ③the most people don't understand and concern special relativity. Therefore, overthrowing it needs some time and also needs pay cost out.

## 13. Space-time view and mass energy view of materialisms

In order to restore and develop the materialistic space-time view and mass energy view, it must abandon the idealistic space-time view and mass energy view of special relativity.

(1) Time. Time is one of material existent forms. It is durative and sequence of matter motion process. It is the objective existence no relying on people's consciousness and is eternal. Time is unidirectional, evenly pass, endlessly.

(2) Space. Space is one of material existent forms. It is infinite and boundless. Space is three dimensional and isotropic.

(3) Mass. Mass is one of material essential attributes. It is the quantity of object containing matter. Matter with zero mass is not existent. If only it is a matter, its mass must bigger than zero.

(4) Energy. Energy is the motion state attribute of matter. The material energy has several kinds of existences forms. Under the certain condition, the material energy may transform mutually between the different forms, but the total energy is invariable.

(5) Relation of time and space. Time is time and space is space, they all are the objective. Time is not the function of space and space is not function of time also. They are fundamental elements of describing material world, and can't change no longer after being defined.

(6) Relation of energy and quality. The quality is quality and the energy is energy. They are all fundamental elements of describing matter, and can't transform mutually.

(7) Mathematic space and physical space. In mathematics, the multi-dimensional variable may be called as the multi-dimensional space. In the physics, there are the one-dimensional space (line), the two-dimensional space (surface) and the three-dimensional spaces (body), but no higher dimensional space. Multi-dimensional space of mathematics can't be transplanted directly to the physics. If it is smaller than or equal to three dimension (no including time), which is corresponding in mathematics and physics.

(8) Source of atomic energy and releasing principle. Atomic energy comes from intra energy of atom. The atomic energy released is photon with mass and energy shift together.

The object releasing energy reduces its mass and energy. The object receiving energy increases its energy and mass. The process of emitting atomic energy of object is the same as gun shooting bullet, which with mass and energy shifts together.

## Reference

- 1 A. Einstein. On the Electrodynamics of Moving Bodies. The Principle of Relativity, Methuen and Company Ltd. of London, 1923.
- 2 Cheng Shouzhu, Jiang Zhiyong. General Physics. People's Education Publishing House, Beijing, 1978:231-132.
- 3 Yue Zongwu. Relativity in Philosophy. Studies of Dialectics of Nature, 1956.
- 4 Huang Zhengxin. Comment on Einstein "Velocity of Light Limit Theory". Physics, 1975, 4(1-6).
- 5 Ni Guangjiong. Opinions on Special Relativity. Physics, 1976, (1-6).
- 6 Lan Qun. Study on Relativity Space-Time Concept Limit. Journal of Lanzhou University (Natural Science Edition), 1976, (3-4).
- 7 Xu Liangying. On Some of Einstein's Study Issues. Studies in the History of Natural Sciences, 1982, (1-4).
- 8 Lu Lvhua. Einstein's Prejudice. Science Times, 1982, (4).
- 9 Chen Mingzhao. Challenge Einstein. UFO Exploration, 1982, (6).
- 10 Fan Fengxiang. Einstein is Facing Challenge. Scientific Times, 1983, (4).
- 11 Qu Jingcheng. Einstein and German Anti-Relativity Movement. Journal of Natural Dialectic, 1983, (4).
- 12 Zhang Shijie. Generalized Relativity Being Hackled. Journal of Yunnan University (Natural Science Edition), 1984, (3).
- 13 Gao Yaping. Space-Time Picture can not Deduce SR. Journal of Physics Teaching, 1984, (3).
- 14 Qin Rongxian. New Discussion on Gravity: Relativity Encounters Challenge. Encyclopedic Knowledge, 1984, (4).
- 15 Qu Jingcheng, Xu Liangying. The First Observe and Study on the Animadversion on Einstein as well as His Relativity in Chinese Great Cultural Revolution Period. Journal of Natural Dialectic, 1984, (6).
- 16 Li Xingmin. Does Mach oppose Relativity? Studies of Dialectics of Nature, 1987, (12).
- 17 Dong Guangbi. Why does Mach Refuse Relativity? Studies of Dialectics of Nature, 1988, (1-4).
- 18 Fang Xuanchang. How Far could Relativity Still Go?

- Digest of Science and Technology, 2000, (11).
- 19 Xu Shaozhi. The Mathematic Basis of Relativity is Wrong. *Invention and Innovation*, 2001, (1):32-33.
  - 20 Xu Shaozhi. To look at Scientific Platform, New Events Happen in China. *Invention and Innovation*, 2001, (2):34-35.
  - 21 Chen Zongyi. My View on SR. *Invention and Innovation*, 2002, (1).
  - 22 Xu Shaozhi. Misunderstandings on Mass-Energy Relations. *Invention and Innovation*, 2002, (2):32.
  - 23 Xu Shaozhi, Xiang Qun. Generalized Relativity Is So Different From Science. *Invention and Innovation*, 2002, (3):30-31.
  - 24 Xu Runsheng. SR Goes Against Factuality Principles. *Invention and Innovation*, 2002, (10):32.
  - 25 Zhu Jidong. Discussing the Fundament of the Experiment about the Special Relativity. *Journal of Shanghai University of Electric Power*, 2003, 19(3):57-60.
  - 26 Cui Jidong. On China's Own Innovation Way -Impressions of Reading "Rethought on Relativity". *Invention and Innovation*, 2003, (3):34.
  - 27 Lei Yuanxing. Criticizing Voice on Relativity is Worth Analyzing in Two Ways-The First Impression of "Rethought on Relativity". *Invention and Innovation*, 2003, (3):37.
  - 28 Huang Zhixun. Theoretical Development and Experimental Examinations in Special Relativity. *Engineering Science*, 2003, 5(5):8-12.
  - 29 Liu Dayi. A Debate between Relativity and the Concept of Classics' Space-Time & Matter. *Invention and Innovation*, 2003, (9):36.
  - 30 Xiang Qun. Do Away with Superstitious and Read Relativity Cautiously. *Invention and Innovation*, 2003, (10):36.
  - 31 Liu Dayi. Making Zero Divisor Is a Math's Mistake. *Invention and Innovation*, 2003, (10):37.
  - 32 Huang Demin. On the Essence of Physical phenomenon -Matter Effect Study Challenges Relativity. Shanxi Science and Technology Publishing House, 2001.
  - 33 Song Zhenghai, Fan Dajie, Xu Shaozhi, Hao Jianyu. *Rethinking on Relativity*. Earthquake Publishing House, 2001.
  - 34 Qi Ji. *New Physics*. Publishing House of Northeast Forestry University, 2003
  - 35 Qi Xin. *Wiser than Einstein*. [www.eshunet.com](http://www.eshunet.com). (Electronic Books ).
  - 36 <http://www.xdlbj.com>
  - 37 <http://www.dyntm.com>
  - 38 <http://www.physicswd.com>
  - 39 *The First Annual Collection of Beijing Relativity Study Sodality*, Beijing, 2003.
  - 40 *Discussing Corpus on Relativity and Modern Physics Innovation International Conference*, Xi'an, 2003.
  - 41 Kong Xiaoning. Natural Duty-Listen Respectfully Academician Song Jian Words. *China Daily*, 2005-01-12.
  - 42 Fu Yihua. A Brief Introduction on China's Studying and Challenging Relativity at Present. *The Third Annual Conference of Beijing's Relativity Study Sodality*, Beijing, 2005.
  - 43 Chen Yiwen. Attending the 18<sup>th</sup> Hadron Mechanics International Symposium Report with Chinese Mathematician Jiang Chunxuan. *The Third Annual Conference of Beijing's Relativity Study Sodality*, Beijing, 2005.
  - 44 Li Zifeng. Special Relativity Being from Misunderstanding of Principle of Constant Speed of Light. *Finding*, 2005, Supplement: 128-132.

---

### Authors' Biographies



**Li Zifeng** is a professor of Yanshan University, China, SPE member and a member of Petroleum Society of Canada. Before joining Yanshan University, he was first a professor of Daqing Petroleum Institute and then a professor of China University of Geosciences. He has published 70 papers and 4 books on drill string, casing, rod pumping mechanics & well bore stability. He holds a BS degree in drilling engineering and an MS degree in machinery engineering from Daqing Petroleum Institute and a PhD degree in petroleum development engineering from Petroleum University, China.