

Lorentz-Invariant Gravitation Theory

References

- Akhiezer, A.I. and Berestetskii, W.B. (1965). *Quantum electrodynamics*. Moscow, Interscience publ., New York.
- Alfvén, H. and Arrhenius, G. (1976). Evolution of the Solar System. NASA.
<https://archive.org/stream/evolutionofsolar00alfv#page/n0/mode/2up>
- Alfvén, Hans. (1942). On the cosmogony of the solar system, Part I. Stockholms Observatoriums Annaler, vol. 14, pp.2.1-2.33 (1942); Part II vol. 14, pp.5.1-5.32, (1943); Part III vol. 14, pp.9.1-9.29 (1946)
- Alfvén, H. (1984). Cosmology - Myth or science? *Journal of Astrophysics and Astronomy* (ISSN 0250-6335), vol. 5, March 1984, p. 79-98
- Anthony, Dennis (Bado-Shanai). (2014)/ Ehrenfest's theorem. <http://bado-shanai.net/map%20of%20physics/mopehrenfest.htm>
- Baryshev Yu. V., Labini F. Sylos, Montuori M., Pietronero L. (1995). Facts and ideas in modern cosmology.
<http://arxiv.org/abs/astro-ph/9503074v1>
- Becker R. (1933). *Theorie der Elektrizität*. Band II, Elektronentheorie. Leipzig und Berlin. Teubner Verlag.
- Becker R. (1964, 1982, 2013). *Electromagnetic Fields and Interactions*. Courier Dover Publications, 2013 - 864 pages
- Becker R. (2013). *Electromagnetic Fields and Interactions*. Courier Dover Publications, 864 pages
- Becker, R. (1933). *Elektronentheorie*. Leipzig und Berlin. Verlag und Druck von B.G. Teubner.
- Becker, R. (1933). *Elektronentheorie*. Leipzig und Berlin. Verlag und Druck von B.G. Teubner.
- Becker, R. (1982). *Electromagnetic fields and interactions*, Vol. 1-2. Editor Fritz Sauter. Dover edition, 1982.
- Bell J. S. (1987). *Speakable and Unspeakable in Quantum Mechanics*, Cambridge University Press, 1987
- Beltrami, E. (1869). Sulla teorica generale dei parametri differenziali (Memorie dell' Accademia delle Scienze dell' Istituto di Bologna, Serie 2, t. VIII, p. 549; 1869.)
- Berman, M.S. (2007). Simple derivation of Schwarzschild, Lense-Thirring, Reissner-Nordstrom, Kerr and Kerr-Newman metrics. <http://arxiv.org/abs/physics/0702014v4>
- Bogorodsky, A.F. (1971). *Universal gravitation*. (in Russian). Kiev, Navukova Dumka, 1971. 351 pp.
- Bohm D. (1965). *The Special Theory of Relativity*, W.A. Benjamin Inc, 1965
- Broekaert. (2005). "Lorentz-Poincare"-Type Interpretation. <http://arxiv.org/abs/gr-qc/0510017v1>
- Brogliè, de, L.(1941). *Problems de Propagations Guidées des Ondes. Electromagnetiques*. Paris, 1941.
- Buchholz, N. (1972) *Basic Course of Theoretical Mechanics*, vol 2. (in Russian). Moscow, Nauka. pp. 271-277
- Chashchina, O., Iorio, L. and Silagadze, Z. (2008) Elementary derivation of the Lense-Thirring precession.
<http://arxiv.org/pdf/0808.0397v2.pdf>
- Corry, Leo. (1999). From Mie's electromagnetic theory of matter to Hilbert's Unified Foundation theory. *Studies in History and Philosophy of Modern Physics* 30(2): 159-183 (1999).
<http://www.tau.ac.il/~corry/publications/articles/pdf/mie.pdf>
- Crawford Jr., F.S. (1968) *Waves: Berkeley Physics Course, Vol. 3*. McGraw-Hill Book Co., 1968
- Davidson, W. (1957). General relativity and Mach's principle. *Mon. Not. Roy. Astr. Soc.*, vol 117, pp. 212-224;
http://articles.adsabs.harvard.edu/cgi-bin/nph-article_query?bibcode=1957MNRAS.117..212D&db_key=AST&page_ind=6&plate_select=NO&data_type=GIF&type=SCREEN_GIF&classic=YES
- Davydov, A.S. (1965) *Quantum mechanics*. 2nd ed., Pergamon Press.
- Dawson, S. (1999). Introduction to Electroweak Symmetry Breaking. <http://arxiv.org/abs/hep-ph/9901280>
- Droste, J. (1917). The Field of a Single Centre in Einstein's Theory of Gravitation and the Motion of a Particle in that Field, *KNAW Proceedings*, 19, 197-215 (1917).
- Dullemond, C.P., Hennawi, J. and Maccio, A.. (2011). *Cosmology*. Ruprecht-Karls-Universität Heidelberg.
http://www.ita.uni-heidelberg.de/~dullemond/lectures/cosmology_2011/
- Einstein, A. (1911). Ueber den Einfluss der Schwerkraft auf die Ausbreitung des Lichtes. *Ann. D. Phys.*, Bd. 35, S. 898.

- Einstein, A. (1922). How I Constructed the Theory of Relativity,” Translated by Masahiro Morikawa from the text recorded in Japanese by Jun Ishiwara, Association of Asia Pacific Physical Societies (AAPPS) Bulletin, Vol. 15, No. 2, pp. 17-19 (April 2005). Einstein recalls events of 1907 in talk in Japan on 14 December 1922.
- Einstein, A. (1936). Physics and Reality. (Translation by Jean Piccard.) http://www.kostic.niu.edu/physics_and_reality-albert_einstein.pdf
- Einstein, A. (2005). How I Constructed the Theory of Relativity. Translated from the text recorded in Japanese by Jun Ishiwara, Association of Asia Pacific Physical Societies (AAPPS) Bulletin, Vol. 15, No. 2, pp. 17-19 (April 2005). Einstein recalls events of 1907 in talk in Japan on 14 December 1922).
- Eisenhart, L.P. (1909). A treatise on the differential geometry of curves and surfaces. Boston, New York [etc.] : Ginn and Company
- Encyclopedia of mathematics. (2011). Variational principles of classical mechanics.
http://www.encyclopediaofmath.org/index.php/Variational_principles_of_classical_mechanics
- Fadner, W.L. (1988). American Journal of Physics, **56**, pp. 114-122.
- Fermi, E. (1950). Conferenze di fisica atomica. Roma.
- Fermi, E. (1951). Elementary particles. New Haven, Yale University Press.
- Fermi, E. (1952). Lectures on Atomic Physics. (in Russian). For. Lit., Moscow. Pp. 27-28)
- Feynman R., Leighton R., Sands M. (1964a). The Feynman Lectures on Physics, Vol. 2. 28-5 Attempts to modify the Maxwell theory. (Addison-Wesley, Palo Alto, 1964) .
- Feynman, R.P., Leighton, R.B. and Sands, M. (1964). The Feynman Lectures on Physics , Vol. 3. (21-4 The meaning of the wave function). Addison-Wesley, Palo Alto
- Fierz, M, and Pauli, W. (1939). Relativistic Wave Equations for Particles of Arbitrary Spin in an Electromagnetic Field. *Proc. Roy. Soc, Lond.*, A173, 211-232
- Flandern, Van_ (2002). The top 30 problems with the big bang. Apeiron, Vol. 9, No. 2, April 2002,
<http://redshift.vif.com/JournalFiles/V09NO2PDF/V09N2tvf.PDF> (2002).
- Fock, V. (1929). “Geometrisierung der Diracschen Theorie des Electrons”, *Z. Phys.*
- Fock, V. (1964). The theory of space, time and gravitation. Pergamon Press, Oxford.
- Fock, V. and Ivanenko, D. (1929). *C.R., Phys. Zs.* 30, 648
- Forrester, A. (2010). Gravito-electromagnetism (GEM). Weak (linearizable) slowly changing gravitation.
http://aforrester.bol.ucla.edu/educate/Articles/Derive_GravitoEM.pdf
- Forward, Robert L. (1961). General Relativity for the Experimentalist. Proceedings of The Institute of Radio Engineers , vol. 49, no. 5, pp. 892-904, 1961. <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4066418>
- Franklin, J. and Baker, P.T. (2007). Linearized Kerr and spinning massive bodies: An electrodynamics analogy. *Am. J. Phys.*, Vol. 75, No. 4, 2007
- Gell-Mann, M. (1985). From Renormalizability to Calculability?//Shelter Island II: Proceedings of the 1983 Shelter Island Conference on Quantum Field Theory and the Fundamental Problems of Physics/. Cambridge, Mass.; London, England: The MIT Press, 1985.—P. 3—23.
- Grøn, Øyvind and Hervik, Sigbjørn. (2007) Einstein's general theory of relativity: with modern applications in cosmology. New York : Springer, 2007
- Hasenoehrl, F. (1904). Zur Theorie der Strahlung in bewegten Koerpern. *Ann. der Phys.* (ser 4), **15**, 344-370, (1904)
- Hasenoehrl, F. (1905). Zur Theorie der Strahlung in bewegten Koerpern. *Ann. der Phys.* (ser 4), **16**, 589-592, (1905)
- Heaviside, O. (1893). A gravitational and electromagnetic analogy, Part I, *The Electrician*, **31**, 281-282 (1893).
<http://serg.fedosin.ru/Heavisid.htm>
- Heaviside, O. (1894). *Electromagnetic Theory*, Vol. 1 (“The Electrician” Printing and Publishing Co., London, 1894), pp. 455-465,
- Heaviside, Oliver. (1983) A gravitational and electromagnetic analogy. Part I, *The Electrician*, 31, 281-282 (1893)]
- Heaviside, Oliver. (1983a). A Gravitational and Electromagnetic Analogy, Part I, *The Electrician*, 31, 281-282 (1893).
- Heaviside, Oliver. (1983b). A Gravitational and Electromagnetic Analogy, Part II, *The Electrician*, 31, 359 (1893).
- Heisenberg, W. and Euler, H. (1936). Consequences of Dirac’s Theory of Positrons. *Z. Phys.* 98 (1936) 714.
- Hertz, H. (1894). Die Prinzipien der Mechanik in neuem Zusammenhange dargestellt. Leipzig, J.A. Barth, 1894

- Hilbert, D. (1917). Die Grundlagen der Physik. (Zweite Mitteilung), Kgl. Ges. de Wiss. zu Göttingen. Math.-phys. Klasse. Nachrichten, 53-76 (1917).
- Iorio, Lorenzo. (2001). An alternative derivation of the Lense-Thirring drag on the orbit of a test body. *Il Nuovo Cimento B*, vol.116, no.7, pp.777-789, 2001 <http://arxiv.org/abs/gr-qc/9908080v4>
- Ivanenko, D.I. and Sokolov, A.(1949). Classical field theory. (in Russian). GITTL, Moscow-Leningrad.
- Jackson, J.D. (1998). Classical electrodynamics. John Wiley & Sons Ltd. 3 edition.
- Katanaev, M.O. (2013). Geometrical methods in mathematical physics. (in Russian) <http://arxiv.org/abs/1311.0733>
- Katanaev, M.O. (2013). Geometrical methods in mathematical physics. (in Russian) <http://arxiv.org/abs/1311.0733>
- Kerr R.P. (1963). Gravitational field of a spinning mass as an example of algebraically special metrics. *Phys. Rev. Letters*, 11,237(1963).
- Korn, G. A. and Korn, T. M. (1968). *Mathematical Handbook for Scientists and Engineers*. New York/San Francisco/Toronto/London/Sydney 1968. McGraw-Hill Book Company.
- Kotkin G.L., Serbo V.G. et all. (2007). Lectures in analytical mechanics. (in Russian). Novosibirsk.
- Kox, A. J. (1992). "[General Relativity in the Netherlands:1915-1920](#)". In Eisenstaedt, J.; Kox, A. J. *Studies in the History of General Relativity*. Birkhäuser. p. 41.
- Kroghdahl, W.S. (2004). Cosmology in Flat Space-Time. <http://lanl.arxiv.org/abs/gr-qc/0402016>
- Kroghdahl, W.S. (2007). A Critique of General Relativity. <http://arxiv.org/pdf/0711.1145.pdf>).
- Kyriakos A.G. (2009) The Nonlinear Quantum Field Theory as a Generalization of Standard Model (Geometrical Approach). AKVYPRESS, Toronto, Canada <http://www.amazon.com/Alexander-G.-Kyriakos/e/B002W40NM2>
- Landau L.D. and Lifshitz E.M. (1971, 1973, 1975). The classical theory of field. Pergamon Press.
- Landsman N.P. (2005). Between classical and quantum. [arXiv:quant-ph/0506082v2](http://arxiv.org/abs/quant-ph/0506082v2)
- Lense, J. and Thirring, H. (1918) Über den Einfluß der Eigenrotation der Zentralkörper auf die Bewegung der Planeten und Monde nach der Einsteinschen Gravitationstheorie. *Physikalische Zeitschrift*, 19 (1918), 156—163.
- Levich, V. G., Myamlin, V A. and Vdovin, Yu.A., (1973). Theoretical physics. Vol. 2. North-Holland Publishing Co, (Amsterdam, London).
- Logunov A. (2002) Relativistic theory of gravitation. <http://arxiv.org/pdf/gr-qc/0210005.pdf>
- Lorentz, H. A. (1900). Considerations on Gravitation. Proceedings of the Royal Netherlands Academy of Arts and Sciences, 1900; 2: 559–574, <http://www.dwc.knaw.nl/DL/publications/PU00014508.pdf>
- Lorentz, H.A. (1900). Considerations on gravitation. Proceedings of the Royal Netherlands Academy of Arts and Sciences, April 25, 1900; 2: 559–574. http://en.wikisource.org/wiki/Considerations_on_Gravitation
- Lorentz, H.A. (1904). Electromagnetic phenomena in a system moving with any velocity smaller than that of light. Proceedings of the Royal Netherlands Academy of Arts and Sciences, 1904, 6: 809–831
- Lorentz, H.A. (1916). The theory of electrons. Second edition. Leipzig: B. G. Teubner
- Mashhoon, Bahram. (2008) Gravitoelectromagnetism: A Brief Review. <http://arxiv.org/abs/gr-qc/0311030v2>
- McCrea, W. H. and Milne, E. A. (1934). *Quart. J. Math. Oxford* 5, 73 (1934). (см. русский перевод по ссылке http://www.timeorigin21.narod.ru/rus_translation/McCrea_Milne_1934.pdf).
- McDonald, K.T. Vector gravity. *Am. J. Phys.* 65, 7 (1997) 591-2.
- Mie, Gustav. (1925). Das Problem der Materie: Öffentl. Antrittsrede. Freiburg in Baden, Speyer & Kaerner, Universitaetbuchhandlung, 1925
- Milne, E. A. (1934). A Newtonian Expanding Universe. *Quart. J. Math. Oxford* 5, 64 (1934), *reprinted in Gen. Relativ. Gravit.* 32 (9), 1939–1948 (2000). (см. русский перевод по ссылке: http://timeorigin21.narod.ru/rus_translation/Milne_1934.pdf).
- Milne, E.A. (1948). Kinematic_ relativity; a sequel to relativity, gravitation and world structure. Oxford University Press, London.
- Milner S. R. (1960a). The Classical Field Theory of Matter and Electricity I. An Approach from First Principles. *Phil. Trans. R. Soc. Lond. A.* 1960 253 1025 185-204 doi:10.1098/rsta.1960.0021 (1960) <http://rsta.royalsocietypublishing.org/content/253/1025.toc>
- Milner S. R. (1960b). The Classical Field Theory of Matter and Electricity II. The Electromagnetic Theory of Particles. *Phil. Trans. R. Soc. Lond. A.* 1960 253 1025 205-226 doi:10.1098/rsta.1960.0022 (1960) <http://rsta.royalsocietypublishing.org/content/253/1025.toc>

- Moeller, C. (1952). *The theory of Relativity*. Oxford University Press, 1952.
- Mossotti, O.F. (1836). Sur les forces qui régissent la constitution intérieure des corps, appercu pour servir à la détermination de la cause et des lois de l'action moléculaire (Турен, 1836 г). (See also: *Memoirs of the Royal Astronomical Society*, Volume 10. London: Published by J. Weale, № 59 HIGH HOLBORN)
- Murayama, Hitoshi. (2007) Notes on Classical Mechanics II <http://hitoshi.berkeley.edu/221A/index.html>
- Newman, Couch, et al. (1965) *Journal of Mathematical Physics*, 6, 918.
- Overduin, James. (2008). Spacetime and Spin <http://einstein.stanford.edu/SPACETIME/spacetime4.html>
- Parshin V. and Zegrya G. (1998). Classical mechanics. (in Russian). Ed. "PNPI of Academician B.P. Konstantinov name", S.-Petersburg. <http://www.mat.net.ua/mat/biblioteka-fizika/Parshin-Zegrya-Fizika.pdf>
- Pauli, W. (1958). *Theory of Relativity*. Pergamon, London.
- Pauli, W. (1981). *Theory of Relativity*. New York: Dover Publications.
- Planck collaboration. (2013a). Planck 2013 results. I. Overview of products and scientific results <http://arxiv.org/abs/1303.5062>
- Planck collaboration. (2013b). Planck 2013 Results Papers <http://planck.caltech.edu/publications2013Results.html>
- Poincaré, A. (1908). La Dynamique de l'électron. *Revue generale des Sciences pures et appliquees*, 1908, **19**, 386-402. De l'Académie des Sciences et de l'Académie française.
- Poincaré, Henri. (1905). On the Dynamics of the Electron. *Rendiconti del Circolo matematico di Palermo* 21: 129-176
- Polak, LS. (1959). Variational principles of mechanics. (in Collection: *Variational principles of mechanics*. Ed. LS Polak). (in Russian) M. GIF-ML, 1959).
- Purcell, E.M. (1985). *Electricity and magnetism*. McGRAW-HILL BOOK COMPANY.
- Quigg, Chris. (2007) Spontaneous symmetry breaking as a basis of particle mass. *Rep. Prog. Phys.* 70 (2007) 1019-1053. (<http://iopscience.iop.org/0034-4885/70/7/R01>)
- Rashevskii, P. K. (1967). *Riemannian geometry and tensor analysis*. (in Russian). Moscow, publ. "Nauka".
- Rashevsky, P.K. (1956). *Course of Differential Geometry*. (in Russian) Gostekhizdat: Moscow
- Ray, S and Shamanna, J. (2004). Orbits in a central force field. <http://arxiv.org/abs/physics/0410149v1>
- Reissner, H. (1916) - *Ann. Phys.* 50, 106.
- Richardson, O.W. (1914). *The electron theory of matter*. Cambridge: at the University Press
- Rohrlich, F. (1960). *Am. J. Phys.*, 28, 639 (1960).
- Ruggiero, Matteo Luca and Tartaglia, Angelo. (2002) Gravitomagnetic Effects, *Nuovo Cim.* 117B (2002) 743-768 <http://arxiv.org/abs/gr-qc/0207065>
- Ryder, L.H. *Quantum field theory*. Cambridge University Press, 1985.
- Schiff, L. (1955). *Quantum mechanics*. NY, Toronto, London, McGRAW-HILL BOOK COMPANY, INC
- Schroeder, Dan. *Purcell Simplified: Magnetism, Radiation, and Relativity*. 1999. http://www.physics.umd.edu/courses/Phys606/spring_2011/purcell_simplified.pdf
- Schrodinger, E. (1918). Die Energiekomponenten des Gravitationsfeldes. *Phys. Ztschr.*, Bd. 19, S. 4-7/
- Schrodinger, E. (1932). Diracsches Elektron im Schwerefeld I. *Sitzungsber. Preuss. Akad. Wiss. Phys. Math. Kl.* 11 105.
- Schrodinger, E. (1982). Quantization as an Eigenvalue Problem (first and second parts) (in the "Collected Papers on Wave Mechanics", English translation) http://avaxhome.ws/ebooks/science_books/physics/Collecte_Paper.html
- Schwarzschild, K.. (1916). Über das Gravitationsfeld eines Massenpunktes nach der Einsteinschen Theorie, *Sitzungsber. Preuss. Akad. Wiss. (Math. Phys.)*, 3, 189-196 (1916).
- Sciama, D.W. (1953). On the origin of inertia. *Mon. Not. Roy. Astr. Soc.*, vol 113, pp. 34-42; January, 1953
- Sedov, L.I. (1993). *Similarity and dimensional methods in mechanics*. 10th edition. CRC Press, London, Tokyo. 1993.
- Sivukhin D.V. (2005). *The general course of physics*. Vol. IV. Optics. (in Russian). Moscow, FISMATLIT, pp. 792
- Sivukhin D.V. (1979). [The international system of physical units](http://iopscience.iop.org/0038-5670/22/10/N07). (in Russian). *Sov. Phys. Usp.* **22** 834-836 <http://iopscience.iop.org/0038-5670/22/10/N07>
- Smeenk, Christopher and Martin, Christopher. (2005). *Mie's Theories of Matter and Gravitation* <http://publish.uwo.ca/~csmeenk2/files/MieFinal.pdf>
- Smythe, W.R. (1950). *Static and dynamic electricity*. McGrawHill Book Co., Inc., New York, N.Y.; 1950
- Sokolov A. and Ivanenko D. (1952). *Quantum Field Theory*. (In Russian). GITTL. Moscow-Leningrad.

- Sommerfeld, A. (1952). *Mechanics*. N.Y., Academic Press Ink., p. 235
- Sommerfeld, Arnold. (1952). *Electrodynamics: Lectures on Theoretical Physics*. Academic Press, (371 pp.)
- The authors. (2005) Edited by Marco Mamone Capria. *Physics before and after Einstein*. IOS press, 2005
- Thirring, H. and Lense, J. (1918) - *Phys. Z.* 19, 156.
- Thomson, J.J. (1881) On the Electric and Magnetic Effects produced by the Motion of Electrified Bodies. *Phil. Mag.* 1981, v.11, pp. 229-249.
- Thomson, J.J. (1907). *The corpuscular theory of matter*. New York, Charles Scribner's sons, 1907
- Tonnelat, Marie Antoinette. (1966). *The principles of electromagnetic theory and of relativity*. Springer, 1966
- Tonnelat, Marie-Antoinette. (1965/1966). *Les verifications experimentales de la relativite generale*. *Rend. Semin. mit Univ. e Politecn. Torino*, 1965/1966, **25**, 5 - 25.
- Vizgin, V.P. (1981) *Relativistic theory of gravity. Sources and formation. 1900 – 1915.* (in Russian). Moscow, publisher “Nauka”
- Vladimirov Yu, Mitskievich, N. and Horsky J. (1987). *Space, time, gravitation*. Moscow, Mir Publishers.
- Wald R.M., *General Relativity*, The University of Chicago Press, Chicago and London, 1984
- Webster, D. L.(1912). On an electromagnetic theory of gravitation. *Proceedings of the American Academy of Arts and Sciences*, Vol. 47, No. 14 (Jan., 1912), pp. 561-581. <http://www.jstor.org/stable/20022758> and <https://archive.org/details/jstor-20022758>
- Weinberg, S. (2000). *The first three minutes*. (Russian translation). Moscow, RChD, 2000, p. 190
- Wilson H. A. (1921). An Electromagnetic Theory of Gravitation *Phys. Rev.* 17, 54, 1921
- Zoellner, F., Weber, W. and Mossotti, O.F. (1882). *Erklaerung der universellen Gravitation aus den statischen Wirkungen der Elektricitaet und die allgemeine Bedeutung des Weber'schen Gesetzes*. Leipzig: Staackmann. (see also J.J. Thomson, *Proc. Camb. Phil. Soc.* XV (1910), c. 65).