

BIBLIOGRAPHY

Abramenko, B., "On Dimensionality and Continuity of Physical Space and Time," The British Journal for the Philosophy of Science, IX, No.34, August, 1958, pp.89-109.

Band, W., "Flint's Five-Dimensional Theory of the Electron," Philosophical Magazine, XXIX, June, 1940, pp.548-552.

Bargmann, Valentine, "Relativity," Review of Modern Physics, XXIX, No 2, April, 1957, pp.169-174.

Bennett, G.J., R.L. Brown and M.W. Thring, "The Unified Field Theory in a Curvature Free Five-Dimensional Manifold," Royal Society. Proceedings, CXCVIII, 1949, pp.39-61.

Bergmann, Peter G., An Introduction to the Theory of Relativity. New York: Dover Press, 1976.

Bergmann, P.G., "Unified Field Theory with Fifteen Variables," Annals of Mathematics, XLIX, No.1, January, 1948, pp.255-264.

Bergmann, P.G., "Topics in the General Theory of Relativity," notes taken by Nicholas J. Wheeler. Summer Institute of Theoretical Physics. Waltham, Massachusetts: Brandeis University, 1957, pp.41-42.

Bergmann, Peter G., "Physics and Geometry," Logic, Methodology and the Philosophy of Science. Proceedings of the 1964 International Congress, ed. Yehoushua Bar- Hillel. Amsterdam: North Holland Publishing, 1965, pp.343-346.

Bergmann, P.G., "Comments on the Scalar-Tensor Theory," International Journal of Theoretical Physics, I, No.1, 1968, pp.25-36.

Bergmann, P.G., "Summary of the Colloque International De Royamont," Les Theories Relativistes de La Gravitation. Paris: Centre National de La Recherche Scientifique, 1962, pp.463-467.

Brill, B.R., "Review of Jordan's Extended Theory of Gravitation," Evidence for Gravitational Theories, Course XX, Proceedings of the International School of Physics <<Enrico Fermi>>. New York: Academic Press, 1962. pp.44-68.

Callinon, J., "Les Espaces Géométrique," Revue Philosophique XXVII, 1889, pp.588-595.

Capek, Milic, The Philosophical Impact of Contemporary Physics. Princeton: Von Nostrand, 1961.

Carrelli, A., "Relativity in Five-Dimensions," Accad. Lincii. Atti., VII, April 1, 1928, pp.566-567.

Cartan, Eli, "Sur Les Variétés à Connexion Affine et La Théorie de La Relativité Générale," Ann. Ec. Norm. Sup., XL (1923).

Corben, H.C., "A Classical Theory of Electromagnetism and Gravitation," Nature, CLVI, No.3961, September 29, 1945, pp.388-389.

Corben, H.C., "A Classical Theory of Electromagnetism and Gravitation. I. Special Relativity," Physical Review, LXIX, No's. 5 and 6, March 1 and March 16, 1946, pp.225-234;

Corben, H.C., "A Generalization of the Special Relativity Theory," Nature, CLVII, No.3990, April 20, 1946, p.516.

Corben, H.C., "Special Relativistic Field Theories in Five-Dimensions," Physical Review, LXX, Nos. 12 and 13, December 1 and December 15, 1946, pp.947-953.

Corben, H.C., "A Unified Field Theory with Varying Charge and Rest Mass," Nuovo Cimento, IX, March, 1952, pp.235-252.

Clifford, William Kingdon, "On the Space-Theory of Matter," read 21 February 1870, Transactions of the Cambridge Philosophical Society, 2, 1866/1876, pp.157-158; Reprinted in Mathematical Papers, pp.21-22.

Clifford, William Kingdon, "The Philosophy of the Pure Sciences," delivered as part of the afternoon lecture series at the Royal Institution on 1, 8, and 15 March in 1873. Subsequently printed in Contemporary Review, 24, October 1874, pp.712-727; Reprinted in Lectures and Essays, 1, pp.254-294; "Part II. The Postulates of the Science of Space," Contemporary Review, 25, 1875, pp.360-376; Reprinted in Lectures and Essays, 1, pp.295-323; "Part III," Nineteenth Century, 5, March 1879, pp.513-522; Reprinted in Lectures and Essays, Volume 1, pp.324-340.

Clifford, William Kingdon, Elements of Dynamic: An Introduction to the Study of Motion and Rest in Solid and Fluid Bodies. Part I: Kinematics. London: Macmillan, 1878.

Clifford, William Kingdon, Lectures and Essays. eds. Leslie Stephen and Frederick Pollock, London: Macmillan, 1879.

Clifford, William Kingdon, The Common Sense of the Exact Sciences. ed. Karl Pearson, newly ed. James R. Newman, New York: Dover, 1955; Originally published, London: Macmillan, 1885; First American edition, New York: D. Appleton, 1885.

Clifford, William Kingdon, Elements of Dynamic, Book IV and Appendix. ed., Robert Tucker, London: Macmillan, 1887.

Darrieus, G., "Remarkable Form of the Maxwell-Lorentz Equations in a Five-Dimensional Universe," Le Journal de Physique et Le Radium, VIII, November, 1927, pp.444-446.

DeBroglie, Louis, "L'Univers A Cinq Dimensions et la Mécanique Ondulatoire," Le Journal de Physique et Le Radium, Serie 6, Tome VIII, February, 1927, pp.65-73.

DeBroglie, Louis, "Réponse a La Note de M.O. Klein," Le Journal de Physique et Le Radium, Serie 6, Tome VIII, April, 1927, p.244.

Dicke, Robert H., "Gravitational Theory and Observation," Physics Today, January, 1967, pp.55-70.

Dirac, P.A.M., Royal Society, Proceedings, CLXV, 1938, p.199.

Droz-Vincent, M., "Quantification de La Théorie de Jordan-Thiry," Les Théories Relativistes de La Gravitation. Paris: Centre National de La Recherche Scientifique, 1962.

Dugas, René, A History of Mechanics. trans. J.R. Maddox, Neuchatel, Switzerland: Editions du Griffons, New York: Central Books Company, 1955, pp.532-534.

Eddington, Arthur S, Fundamental Theory. Ed. E.T. Whittaker, Cambridge: at the University Press, 1946.

Eddington, Arthur Stanley, "Einstein's Theory of Gravitation," The Observatory, 40, February 1917, pp.93-95.

Eddington, Arthur Stanley, "Electrical Theories of Matter and their Astronomical Consequences with special reference to the Principle of Relativity," Philosophical Magazine, 35, 1918, pp.481-487.

Eddington, Arthur Stanley, "Gravitation and the Theory of Relativity," delivered at the Royal Institution on 1 February, Nature, 101, 7 March 1918, pp.15-17; And 14 March 1918, pp.34-36.

Eddington, Arthur Stanley, Report on the Relativity Theory of Gravitation. London: Fleetway Press, 1918.

Eddington, Arthur Stanley, "Einstein's Theory of Space and Time," Contemporary Review, 116, July-December 1919, pp.639-643.

Eddington, Arthur Stanley, Space, Time and Gravitation. Cambridge: Cambridge University Press, 1920.

Eddington, Arthur Stanley, "A Generalisation of Weyl's Theory of the Electromagnetic Gravitational Fields," Proceedings of the Royal Society of London, A99, April-September 1921, pp.104-122.

Eddington, Arthur Stanley, The Theory of Relativity and its Influence on Scientific Thought. The Romanes Lecture delivered in the Sheldon Theatre, 22 May 1922, Oxford: At the Clarendon Press, 1922.

Eddington, Arthur Stanley, The Nature of the Physical World. Cambridge: Cambridge University Press, 1928.

Eddington, Arthur S., The Mathematical Theory of Relativity. New York; Chelsea publishing, 1975.

Ehlers, Jurgen, "The Nature and Structure of Space-Time," The Physicist's Conception of Nature, ed. Jagdish Mehra. Dordrecht-Holland: D. Reidel, 1973, pp.71-91.

Ehrenfest, P. and G.E. Uhlenbeck., "Graphical Representation of the DeBroglie Phase Waves in the Five-Dimensional Universe of O. Klein," Zeitschrift für Physik, XXXIX, 7-8, 1926, pp.495-498.

Einstein, Albert and A.D. Fokker, "Die Nordströmsche Gravitationstheorie von Standpunkt Absoluten Differentialkalküls," Annalen der Physics, XLIV, 1914, pp.321-328.

Einstein, A., "Kaluza's Theorie des Zusammenhanger von Gravitation und Electricität (I)," Sitzungsberichte der Preussischen Akademie der Wissenschaften, VI, 1927, pp.23-25.

Einstein, A., "Kaluza's Theorie des Zusammenhanger von Gravitation und Electricität (II)," Sitzungsberichte der Preussischen Akademie der Wissenschaften, VI, 1927, pp.26-30.

Einstein, A. and W. Mayer, "Einheitliche Theorie von Gravitation und Electricität (I)," Sitzungsberichte der Preussischen Akademie der Wissenschaften, XXV, 1931, pp.541-577.

Einstein, A. and W. Mayer, "Einheitliche Theorie von Gravitation und Electricität (II)," Sitzungsberichte der Preussischen Akademie der Wissenschaften, XI-XII, 1932, pp.130-137.

Einstein, A. and Peter G. Bergmann, "On a Generalization of Kaluza's Theory of Electricity," Annals of Mathematics, XXXIX, No.3, July, 1938, pp.683-701.

Einstein, A, Peter G. Bergmann and Valentine Bargmann, "On the Five-Dimensional Representation of Gravitation and Electricity," Theodor von Karman Anniversary Volume. Pasadena: California Institute of Technology, 1941, pp.212-225.

Einstein, A., The Meaning of Relativity. 6th ed. Princeton: Princeton University Press, 1956.

Einstein, A., Ideas and Opinions. ed. Carl Seelig and Trans. Sonja Bergmann. New York: Dell, 1978.

Fisher, J.W., "The Wave Equation in Five-Dimensions," Proceedings of the Royal Society, CXXIII, April 6, 1929, pp.489-493.

Flint, H.T. and J.W. Fisher, "A Contribution to Modern Ideas on the Quantum Theory," Proceedings of the Royal Society, CXV, 1927, pp.208-214.

Flint, H.T. and J.W. Fisher, "The Fundamental Equation of Wave Mechanics and Metrics of Space," CXVII, February 1, 1928, pp.625- 629.

Flint, H.T. and J.W. Fisher, "The Equations of the Quantum Theory," Proceedings of the Royal Society, CXXVI, March 3, 1930, pp.644-653.

Flint, H.T., "Relativity and the Quantum Theory," Proceedings of the Royal Society, CXVII, February, 1928, pp.630-637.

Flint, H.T., "The First and Second Order Equations of the Quantum Theory," Proceedings of the Royal Society, CXXIV, 1929, pp.143-150.

Flint, H.T., "First and Second Order Equations of the Quantum Theory," Proceedings of the Royal Society, CXXIV, May 2, 1929, pp.143-150.

Flint, H.T., "The Masses of the Proton and Electron," Proceedings of the Royal Society, XLII, April 15, 1930, pp.239-242.

Flint, H.T., "A Metrical Theory in Relation to Electron and Proton," Proceedings of the Royal Society, CXXXI, April, 1931, pp.170-177.

Flint, H.T., "The Uncertainty Principle in Modern Physics," Nature, CXXIX, No.3264, May 21, 1932, pp.746-747.

Flint, H.T., "A Relativistic Basis of the Quantum Theory," Proceedings of the Royal Society, CXLIV, March 29, 1934, p.413-424.

Flint, H.T., "A Relativistic Basis of the Quantum Theory (II)," Proceedings of the Royal Society, CXLV, July 2, 1934, p.645-656.

Flint, H.T., "A Relativistic Basis of the Quantum Theory (III)," Proceedings of the Royal Society, CL, June 1, 1935, p.421-441.

Flint, H.T., "Ultimate Measurements of Space and Time," Proceedings of the Royal Society, CLIX, March 2, 1937, pp.45-56.

Flint, H.T., "Ratio of Masses of Fundamental Particles," Physical Society, Proceedings, L, January 1, 1938, pp.90-95.

- Flint, H.T., "Difficulties and Developments in Quantum theory," Physical Society, Reports, V, 1938, pp.407-421.
- Flint, H.T., "Beginnings of the New Quantum Theory," Physical Society, Reports, IV, 1938, pp.134-172.
- Flint, H.T., "The Fundamental Equation of Quantum Mechanics," Philosophical Magazine, XXXIV, July, 1943, pp.496-502.
- Flint, H.T., "On the Development of the Quantum Theory and a Possible Limit to its Application," Physical Society, Proceedings, XLVIII, May 1, 1946, pp.433- 443.
- Flint, H.T., "The Fundamental Unit of Electric Charge," Physical Society, Proceedings, L, May 2, 1938, pp.340-344.
- Flint, H.T., "The Analogy between the Photon and Electron and the Derivation of the Quantum Equation," Physical Society, Proceedings, November 1, 1938, pp.899- 909.
- Flint, H.T., "The Theory of the Electric Charge and the Quantum Theory, Part I," Philosophical Magazine, XXIX, April, 1940, pp.330-343.
- Flint, H.T., "The Theory of the Electric Charge and the Quantum Theory, Part II," Philosophical Magazine, XXIX, May, 1940, pp.417-433.
- Flint, H.T., "The Theory of the Electric Charge and the Quantum Theory, Part III," Philosophical Magazine, XXXIII, May, 1942, pp.369-383.
- Flint, H.T., "Quantum Equations and Nuclear Field Theories," Philosophical Magazine, Series 7, XXXVI, September, 1945, PP.635-643.
- Flint, H.T., "A Study of the Nature of the Field Theories of Electron and Positron and of the Meson," Proceedings of the Royal Society, CLXXXV, January 10, 1946, pp.14-34.
- Flint, H.T., "Energy in the Nuclear Field," Philosophical Magazine, XXXVIII, January, 1947, pp.22-32.
- Flint, H.T., "The Quantization of Space and Time," Physical Review, LXXIV, No.2, July 15, 1948, pp.209-210.
- Flint, H.T., "Coordinate Operators in Quantum Mechanics," Nature, CLXIII, January 22, 1949, pp.131-132.
- Flint, H.T., "Foundations of a Linear Field Theory," Zeitschrift fur Physik, CXLVII, No. 4, 1955, pp.401-405.
- Flint, H.T., "A New Uncertainty Relation," Nature CLXXVIII, No.4534, September 22, 1956, p.651.
- Flint, H.T. and N. Symonds., "The Conservation of Energy, Momentum and Charge in the Nuclear Field," Philosophical Magazine, XXXIX, June, 1948, pp.413-419.
- Flint, H.T. and E.M. Williamson., "The Quantum Mechanics of the Electron," Proceedings of the Royal Society, CCVII, July 6, 1951, pp.380-388.
- Flint, H.T. and E.M. Williamson., "Coordinate Operators and Fundamental Lengths," Physical Review, XC, April 15, 1953, p.318.

- Flint, H.T. and E.M. Williamson., "The Relation of Quantum Theory to the Theory of Gravitation and Electromagnetism and an Application to the Theory of the Electron," Zeitschrift für Physik, CXXXV, No.3, 1953, pp.260-269.
- Flint, H.T. and E.M. Williamson., "A Theory of the Electron," Nuovo Cimento, XI, February, 1954, pp.188-189.
- Flint, H.T. and E.M. Williamson., "A Theory of the Electron," Nuovo Cimento, XI, May, 1954, pp.568-569.
- Flint, H.T. and E.M. Williamson., "A Note on Relativistic Cut-off," Physical Society, Proceedings, LXVIII, Part 4, April, 1955, pp.354-355.
- Flint, H.T. and E.M. Williamson., "A Relativistic Theory of Charged Particles in an Electromagnetic and Gravitational Field," Nuovo Cimento, Series 10, III, No. 3, March, 1956, pp.551-565.
- Flint, H.T. and E.M. Williamson., "A New Uncertainty Relation," Nature, CLXXVIII, September 22, 1956, p.651.
- Flint H.T. and E.M. Williamson, "The Theory of Relativity, the Electromagnetic Theory and the Quantum Theory," Il Nuovo Cimento, VIII, No.5, June 1, 1958, pp.680-699.
- Fock, V., "Über die invariante Forme den Wellen - und der Bewegungs - gleichungen für einen geladenen Massenpunkt," Zeitschrift für Physik, 1926.
- Forsythe, A.R., Geometry of Four Dimensions. Cambridge: At the University Press, 1930.
- Freeman, Ira, "Why is Space Three-Dimensional?," American Journal of Physics, XXXVII, No.12, December, 1969, pp.1222-1224; Adapted from W. Büchel: "Warum hat der Raum drei Dimensionen?," Physikalische Blätter, XIX, 12, December, 1963, pp.547-549.
- Good, I.J., "Winding Space," The Scientist Speculates. ed. I.J. Good, New York: Capricorn Books, 1965, pp.330-336.
- Gonseth, F. and G. Juvet, "The Equations of Electromagnetism," Comptes Rendus, CLXXXV, August 1, 1927, pp.341-343.
- Gonseth, F. and G. Juvet, "Space Metric of Five-Dimensions of Electromagnetism and Gravitation," Comptes Rendus, CLXXXV, August 17, 1927, pp.412-413.
- Gonseth, F. and G. Juvet, "Schrödinger's Equation and the Equations of Electromagnetism in the Five-Dimensional Universe," Comptes Rendus, CLXXXV, September 5, 1927, pp.535-538.
- Graves, John C., The Conceptual Foundations of Contemporary Relativity Theory. Cambridge: MIT Press, 1971.
- Gregory, Christopher, "Equations of Motion in Five-Space," Nature, CXCII, No.4809, December 30, 1961, p.1320.
- Gregory, Christopher, "Einstein, Infeld and Hoffman Problem of Motion in Five Space," Physical Review, CXXV, No. 6, March 15, 1962, pp.2136-2139.

- Gregory, Christopher, "Anomalous Velocities in Quasar 3C273," Nature, XXV, May 15, 1965, p.702.
- Gregory, Christopher, "Extra-Dimensionality in Relativity and Spaceons," Abstracts on the Fifth International Conference on Gravitation and the Theory of Relativity. Tbilisi: Publishing House of Tbilisi, 1968. pp.245-247.
- Halsted, George Bruce, "Bibliography of Hyper-Space and Non-Euclidean Geometry," Annals of Mathematics, I, pp.261-276, 384-385.
- Halsted, G.B., Addenda to a Bibliography of Hyper-Space and Non-Euclidean Geometry," Annals of Mathematics, II, 1872, pp.65-70.
- Herman, Robert, Yang-Mills Kaluza-Klein and the Einstein Program. Brookline, Massachusetts: Math Sci Press, 1978.
- Hesse, Mary, "Action at a Distance and Field Theory," The Encyclopedia of Philosophy, 1967, I, pp.9-14.
- Hoffman, B., "Projective Relativity and the Einstein-Mayer Unified Field Theory," Physical Review, XLIII, April 15, 1933, pp.615-619.
- Hoffman, B., The Quarterly Journal of Mathematics, VII, 1936, p.20.
- Hoffman, B., "The Vector Meson Field and Projective Relativity," Physical Review, LXXII, 1947, p.458.
- Hoffman, B., "The Gravitational, Electromagnetic and Vector Meson Fields and the Similarity Geometry," Physical Review, LXXIII, 1948, p.30.
- Hoffman, Banesh, Einstein: Creator and Rebel. New York: Viking Press, 1974.
- Ingarden, R.S., "Equations of Motion and Field Equations in Five-Dimensional Unified Relativity Theory," Dokl. Akad. Nauk. SSSR, LXXXVIII, No. 5, 1953, pp.773-776.
- Jammer, Max, Concepts of Space. Cambridge, Massachusetts: Harvard University Press, 1969.
- Jonsson, Carl Victor, "Dirac's Wave Equation in Five-Dimensional Relativity Theory," Arkiv för Matematik, Astronomi och Fysik, XXVIII B, No. 17, 1942, pp.1-7.
- Jonsson, C.V., "Studies of Five-Dimensional Relativity Theory," Arkiv för Fysik, III, No. 8, 1951, pp.87-129.
- Jordan, P. and C. Müller., "Field Equations with a Variable 'Constant' of Gravitation," Zeitschrift für Physik, IIA, 1-2, January, 1947.
- Jordan, Pasqual, "Erweiterung der projektiven Relativitätstheorie," Annalen der Physik, VI, No.1, 1947, pp.219-228.
- Jordan, Pasqual, "Fünfdimensionale Kosmologie," Astron.Nachr., CCLXXVI, No's.5 and 6, 1948, p.193.
- Jordan, P., "Formation of the Stars and Development of the Universe," Nature, CLXIV, No. 4172, October 15, 1949, pp.637-640.

Kaluza, Theodor, "Zur Unitätsproblem der Physik," Sitzungsberichte der Preussischen Akademie der Wissenschaften, LIV, 1921, pp.966-972.

Kaluza, Theodor, "Zur Relativitätstheorie," Physikalische Zeitschrift XXV, 1924, pp.604-606.

Kaluza, Theodor, "Über den Energieinhalt der Atomkerne," Physikalische Zeitschrift, XXIII, 1922, pp.474-476.

Kasner, Edward, "Einstein's Cosmological Equations," Science, LIV, No.1396, September 30, 1921, pp.304-305.

Kasner, Edward, "The Einstein Solar Field and Space of Six Dimension," Science, LIII, No.1367, March 29, 1921, pp.238-239.

Kasner, Edward, "Note on Einstein's Theory of Gravitation and Light," Science, LII, No.1348, October 29, 1920, pp.413-414

Kasner, Edward, "Einstein's Theory of Gravitation: Determination of the Field by Light Signals," American Journal of Mathematics, XLVIII, January, 1921, pp.20- 28

Kasner, Edward, "The Impossibility of Einstein's Fields Immersed in A Flat Space of Five Dimensions," American Journal of Mathematics, XLVIII, April, 1921, pp.126-129

Kasner, Edward, "Finite Representations of the Solar Gravitational Field in Flat Space of Six Dimensions," American Journal of Mathematics, XLVIII, April, 1921, pp.130-134.

Kasner, Edward, "Geometrical Theorems on Einstein's Cosmological Equation," American Journal of Mathematics, XLVIII, June, 1921, pp.217-221.

Klein, Oskar, "Quantentheorie und fünfdimensionale Relativitätstheorie," Zeitschrift für Physik, XXXVII, 12, 1926, pp.895-906

Klein, Oskar, "The Atomicity of Electricity as a Quantum Theory Law," Nature, CXVIII, No.2971, October 9, 1926, p.516.

Klein, Oskar, "Zur fünfdimensionale Darstellung der Relativitätstheories," Zeitschrift für Physik, XLVI, 3-4, 1927, pp.188-208.

Klein, Oskar, "Sur L'Article de M.L. DeBroglie <<L'Univers A Cinq Dimensions et la Mécanique Ondulatoire>>," Le Journal de Physique et le Radium, Serie 6, Tome VIII, Avril, 1927, pp.242-243.

Klein, Oskar, "On the Theory of Charged Fields," New Theories in Physics. Paris: International Institute of Intellectual Cooperation, 1939.

Klein, Oskar, "Meson Fields and Nuclear Interaction," Arkiv för Matematik, Astronomi och Fysik, XXXIV A, No.1, 1947, pp.1-19.

Klein, Oskar, "Generalizations of Einstein's Theory of Gravitation Considered from the Point of View of Quantum Field theory," Helvetica Physica Acta, Supplement IV, 1956, pp.58-71.

Kock, W.E., "Unified Field Theories," Current Science, VI, No.11, May, 1938, pp.546-548.

- Kron, G., "Invariant Form of the Maxwell-Lorentz Field Equations for Accelerated Systems," Journal of Applied Physics, IX, March, 1938, pp.196-208.
- Lichnerowitz, André, Théories Relativiste de La Gravitation et de L'Électromagnétisme. Paris: Masson, 1954. pp.180-214.
- Mach, Ernst, The Science of Mechanics. trans. Thomas J. McCormack, LaSalle, Illinois: Open Court, 1960.
- Mandel, Heinrich, "Zur Axiomatik der fünfdimensionalen Relativitätstheorie," Zeitschrift für Physik, LIV, 7-8, 1929, pp.564-566.
- Mandel, H., "Zur tensoriellen Form der wellenmechanischen Gleichungen des Elektrons," Zeitschrift für Physik, LIV, 7-8, 1929, pp.567-570.
- Mandel, H., "Zur Herleitung der Feldgleichungen in der allgemeinen Relativitätstheorie," Zeitschrift für Physik, LII, 1927, pp.285-306.
- Mandel, H., "Connection Between Einstein's Theory of Distant Parallelism and Five-Dimensional Field Theory," Zeitschrift für Physik, LVI, 11-12, 1929, pp.838-844.
- M [McVittie], G.C., Abstract No. 2309, Science Abstracts: Section A, Physics, (1932), XXXV, p.585.
- Mehra, Jagdish, ed., The Physicist's Conception of Nature. Dordrecht-Holland: D. Reidel, 1973.
- Mehra, Jagdish, Einstein, Hilbert and the Theory of Gravitation. Boston: D. Reidel, 1974.
- Meksyn, D., "Unified Field Theory, Part I: Electromagnetic Field," Philosophical Magazine, XVII, 1934, pp.99-112
- Meksyn, D., "A Unified Field Theory. Part II: Gravitation," Philosophical Magazine, XVII, February, 1934, pp.476-482.
- Meksyn, D., "Neutrons," Nature, CXXXI, p.366.
- Michal, A.D. and J.L. Botsford., "Extension of the New Einstein Geometry," National Academy of Sciences, Proceedings, XVIII, August, 1932, pp.554-562.
- Morinaga, K., "Geometrical Interpretations of Wave Geometry," Hiroshima Journal of Science, VII, March, 1937, pp.173-177.
- Morinaga, K., "General Parallel Displacement which makes $ds = 0$ Invariant," Hiroshima Journal of Science, VII, March, 1937, pp.169-172.
- Nordström, Gunnar, "Über die Möglichkeit, das elektromagnetische Feld und das Gravitationsfeld zu vereinigen," Physikalische Zeitschrift, XV. May 15, 1914, pp.504-506.
- Novobatzky, K., "Universal Field Theory," Zeitschrift für Physik, LXXXIX, 5-6, June 2, 1934, pp.373-387.
- Pacotte, J., "Potential Vector in a Field of Five Dimensions," Comptes Rendus, CLXXXVI, February 6, 1928, pp.362-364.

Pais, A., "The Energy-Momentum Tensor in Projective Relativity," Physica, 's Grav., VIII, December, 1941, pp.1137-1160.

Pauli, Wolfgang., "Über die Formulierung der Naturgesetze mit fünf homogenen Koordinäten," Annalen der Physik, XVIII, October, 1933, pp.305-366.

Pauli, Wolfgang, The Theory of Relativity. New York: Pergamon Press, 1958.

Pauli, W. and S. Kusaka, Physical Review, LXIII, 1943, p.400.

Pauli, W. and J. Solomon, "Dirac's Equations and the Unitary Theory of Einstein and Mayer," Journal de Physique et Le Radium, III, October, 1932, pp.452-463.

Pauli, W. and J. Solomon, "Unitary Field Theory and Dirac's Equations," Journal de Physique et Le Radium, III, December, 1932, pp.582-589.

Podolanski, J., "Unified Field Theory in Six Dimensions," Proceedings of the Royal Society, CCI, March 22, 1950, pp.234-260.

Raman, Varadaraje, "Kaluza, Theodor Franz Eduard," Dictionary of Scientific Biography, 1974, VII, pp.211-212.

Reichenbach, Hans, The Philosophy of Space and Time. New York: Dover, 1956.

Reichenbach, Hans, "The Philosophical Significance of the Theory of Relativity," Einstein: Philosopher and Scientist. ed. Paul Arthur Schlipp, LaSalle, Illinois: Open Court, 1949, pp.287-311.

Reichenbacher, E., "Electromagnetism and the Fifth World Dimension," Physikalische Zeitschrift, XXIX, December 1, 1928, pp.908-911.

Riemann, Bernhard, "On The Hypotheses Which Lie at the Basis of Geometry," trans. William K. Clifford, Nature, VIII, May 1, 1873, pp.14-17, 36-37.

Robertson, H.P., "Geometry as a Branch of Physics," Problems of Space and Time. ed. J.J.C. Smart, New York: MacMillan, 1964. pp.231-247; Also in Einstein: Philosopher and Scientist, ed. P.A. Schlipp. LaSalle: Open Court, 1949. pp.313- 330.

Rosen, Nathan and Itzhak Goldman, "A Universe Embedded in a Five-Dimensional Flat Space," General Relativity and Gravitation, II, 1971, p.367-384.

Rosen, Nathan and Elhanan Leibowitz, "Five-Dimensional Relativity Theory," General Relativity and Gravitation, IV, No. 6, 1973, pp.449-474.

Rosen, Nathan and Elhanan Leibowitz, "Periodic Fields in Five-Dimensional Relativity," General Relativity and Gravitation, V, No. 4, 1974, pp.409-427.

Rosenfeld, L., "L'Univers a cinq dimensions et la Mecanique Ondulatoire," Acad. Roy. Belgique, XIII, 1927, pp.304-325, 326-328, 447-458, 573-580, 661-682.

Salmon, Wesley C., "The Curvature of Physical Space," Foundations of Space-Time Theories. Vol. VIII, Minnesota Studies in the Philosophy of Science, eds. John Earman, Clark Glymour and John Stackel, Minneapolis: University of Minnesota Press, 1975. pp.281-302.

- Salvetti, C., "Clifford's Algebra and the Meson," Nuovo Cimento, III, August, 1947, pp.250-282.
- Schidlof, A., "A Construction giving the Mass of a Charged Material Point in the Universe of Five Dimensions," Comptes Rendus, CLXXXV, December 5, 1927, pp.1262-1263.
- Schidlof, A., "Interpretation of Masses of the Electron and Proton in a Universe of Five Dimensions," Comptes Rendus, CLXXXV, October 31, 1927, pp.889-891.
- Schlipp, Paul A., ed., Einstein: Philosopher and Scientist. LaSalle: Open Court, 1949.
- Schouten, J.A., "Unitary Field Theory," Zeitschrift fur Physik, LXXXI, 1-2, March 3, 1933, pp.129-138.
- Schouten, J.A., "Space-Time in the Unitary field theory," Zeitschrift fur Physik, LXXXI, 5-6, March 22, 1933, pp.405-417.
- Schouten, J.A., "Zur Generelien Feldtheorie," Zeitschrift fur Physik, LXXXI (1933), pp.129 and 405.
- Schouten, J.A., "La Théorie projective de la Relativité," Ann. Inst. H. Poincaré V, No.1, 1935, p.51.
- Schouten, J.A. and D. Van Dantzig, "Four-Dimensional Interpretation of the Unified Field Theory," K. Acad. Amsterdam, Proc. XXXIV, 10, 1931, pp.1398-1407.
- Schouten, J.A. and D. Van Dantzig, "Unitary Field Theory and Dirac's Equation," K. Acad. Amsterdam, Proc., XXXV, 6, 1932, pp.843-852.
- Schouten, J.A. and D. Van Dantzig, "Unitary Field Theory," Zeitschrift fur Physik, LXXVIII, 9-10, October 18, 1932, pp.639-667.
- Schouten, J.A. and D. Van Dantzig, "Generelle Feldtheorie," Zeitschrift fur Physik, LXXVIII (1932), p.639.
- Schouten, J.A. and D. Van Dantzig, "On Projective Connections and Their Application to the General field Theory," Annals of Mathematics, XXXIV, 1933, p.271.
- Schouten, J.A. and D. Van Dantzig, Annals of Mathematics, XXXIV, 1939, p.27.
- Schouten, J.A. and J. Haantjes, "Auto-Geodetic Lines and World-Lines," Zeitschrift fur Physik, LXXXIX, 5-6, June 2, 1934, pp.357-369.
- Schrödinger, Erwin, Space-Time Structure. Cambridge, England: At the University Press, 1960.
- Science Abstracts. Section A, Physics Abstracts. London: The Institute of Electrical Engineers, 1910-1959.
- Sen, D.K., Fields and/or Particles. New York: Academic Press, 1968.
- Sen, N.R., "Das Keplerproblem der fünfdimensionale Wellenmechanik und der Einfluss der Gravitation aus die Balmerformel," Zeitschrift fur Physik, LXVI, 9-10, 1930, pp.686-692.
- Sklar, Lawrence, Space, Time and Spacetime. Berkeley: University of California Press, 1974.
- Smart, J.J.C., ed., Problems of Space and Time. New York: MacMillan, 1964.

- Snyder, Hartland S., "Quantized Space-Time," Physical Review, LXXI, No. 1, January 1, 1947, pp.38-41.
- Solomon, J., "Einstein and Mayer's Theory and Dirac's Equation," Comptes Rendus, CXCIV, August 22, 1932, pp.461-462.
- Souriau, Jean-Marie, "Relativité Multidimensionnelle non Stationaire," Les Théories Relativistes de La Gravitation. Paris: Centre National de la Recherche Scientifique, 1962. pp.293-297.
- Sruik, D.J. and N. Weiner, "Relativity Theory of Quanta," Journal of Math and Physics, MIT, VII, September, 1927, pp.1-23.
- Sruik, D.J. and N. Weiner, "The Fifth Dimension in Relativistic Quantum Theory," National Academy of Sciences, Proceedings, XIV, March, 1928, pp.262- 268.
- Takeno, H., "Projective Wave Geometry," Hiroshima Journal of Science, VI, March, 1936, pp.147-172.
- Thirring, W., "Remarks on Five-Dimensional Relativity," The Physicist's Conception of Nature. ed. Jagdish Mehra, Dordrecht-Holland: D. Reidel, 1973, pp.199- 201.
- Thiry, Yves, "Sur La Régularité des Champs Gravitationnel et Électromagnétique dans Les Théories Unitaire," Comptes Rendus, CCXXVI, June 7, 1948, pp.1881-1882.
- Thiry, Yves, "Les Équations de La Théorie Unitaire de Kaluza," Comptes Rendus, CCXXVI, January 19, 1948, pp.216-218.
- Thiry, Yves, Étude Mathématique des Équations d'une Théorie Unitaire à Quinze Variables de Champs, (Thesis). Paris: Gauthier-Villiers, 1951.
- Thiry, Yves, "Sur les Théories Pentadimensionnelles," Les Théories Relativistes de la Gravitation. Paris: Centre National de la Recherche Scientifique, 1962, pp.284-291.
- Tolman, Richard C., Relativity, Thermodynamics and Cosmology. Oxford: At the Clarendon Press, 1934.
- Tonnelat, Marie Antoinette, Les Théories Unitaire de L'Électromagnétisme et de La Gravitation. Paris: Gauthier-Villiers, 1965.
- Tonnelat, M.A., The Principles of Electrodynamics Theory and of Relativity. trans. A.J. Knodel, Dordrecht-Holland: D. Reidel, 1966.
- Tonnelat, M.A., Einstein's Unified Field Theory. trans. Richard Akerib, New York: Gordon and Breach, 1966.
- Trautman, Andrej, "Theory of Gravitation," The Physicist's Conception of Nature. ed. Jagdish Mehra, Dordrecht-Holland: D. Reidel, 1973, pp.179-198.
- Van Dantzig, D., "Zur allgemein projektiven differentialgeometrie," K. Acad. Amsterdam, Proceedings, XXXV, 1932, pp.524,535; XXXVII, 1934, p.150.
- Van Dantzig, D., "Theorie der projektiven Zusammenhangs n-dimensionaler Räume," Math. Ann., CVI, 1932, p.400.
- Veblen, Oswald, Projektive Relativitätstheorie. Berlin: J. Springer, 1933.

- Veblen, O. and Banesh Hoffman, "Projective Relativity," Physical Review, XXXVI, September 1, 1930, pp.810-822.
- Veblen, O., "Spinors in Projective Relativity," Nat. Acad. Sci., Proc., XIX, November 1933, pp.979-989.
- Vranceanu, G., "La Théorie Unitaire des Champs et Les Hypersurfaces Non- Holonomes," Comptes Rendus, CC, 1935, pp.2056-2058.
- Vranceanu, G., "Les Espaces Non-Holonomes et Leurs Applications Mécaniques," Mém. Science et Mathematic, LXXVI, 1936.
- Vranceanu, G., "Non-Holonomic Unified Field Theory," Le Journal de Physique et de Le Radium, VII, December, 1936, pp.514-526.
- Wang, K.C. and K.C. Cheng, "A Five-Dimensional Field theory," Physical Review, LXX, Nos. 7 and 8, October 1 and October 15, 1946, pp.516-518.
- Weyl, Herman, Space, Time and Matter. New York: Dover, 1952.
- Wheeler, John A., "Curved Empty Space as the Building Material of the Physical World: An Assessment," Logic, Methodology and the Philosophy of Science. eds. Ernest Nagel, Patrick Suppes and Alfred Tarski, Proceedings of the 1960 International Congress. Stanford: Stanford University Press, 1962. pp.361-374.
- Whitrow, G.J., "Why Space has Three Dimensions," The British Journal for the Philosophy of Science, VI, No.21, May, 1955, pp.13-31.
- Williamson, E.M., "Energy in the Nuclear Field," Nuovo Cimento, X, February, 1953, pp.113-126.
- Wilson, William, "The Quantum Theory and Electromagnetic Phenomena," Proceedings of the Royal Society, CII, 1922, pp.478-483.
- Wilson, W., "Relativity and Wave Mechanics," Proceedings of the Royal Society, CXVIII, April, 1928, pp.441-448.
- Wilson, W. and J. Cattermole, "The Elementary Particle," Philosophical Magazine, XXX, January, 1939, pp.84-93.
- Wilson, W., "Dimensions of Physical Quantities," Philosophical Magazine, XXXIII, January, 1942, pp.26-33.
- Wilson, W., Relativity and Quantum Dynamics, Vol.III, Theoretical Physics. London: Methuen and Company, 1940).
- Yano, Kentano, "Théorie de la Relativité," Comptes Rendus, CCIV, February 1, 1937, pp.332-334.
- Yano, Kentano, "Unitary Non-Holonomic Field Theory. Parts I and II," Physics and Mathematics Society of Japan, Proceedings, XIX, October, 1937, pp.867-896; November, 1937, pp.945-976.
- Yano, K., "Einstein and Bergmann's New Unitary Field Theory," Imperial Academy of Tokyo, Proceedings, XIV, November, 1938, pp.325-332.

Zaycoff, R., "Connection Between Field and Matter," Zeitschrift fur Physik, LXXXII, 3-4, April 29, 1923, pp.267-278.

Zaycoff, R., "Integral Theory of Field and Matter," Zeitschrift fur Physik, LXXXV, 11-12, October 14, 1933, pp.788-794.

Zöllner, Johann Karl Friedrich, "On Space of Four Dimensions," translator and reviewer unnamed, Quarterly Journal of Science, 15, 1878, pp.227-237.

Zöllner, Johann Karl Friedrich, Wissenschaftliche Abhandlungen. Leipzig: L. Staackmann, 1878: Volume 3, Die Transcendentale Physik und die sogenannte Philosophie. Berlin: Verlag von Karl Siegismund, 1878; Transcendental Physics. trans. C.C. Massey, Boston: Colby and Rich, 1881.

[Top of Page](#)

[Chapter 1](#)

[Chapter 2](#)

[Chapter 3](#)

[Chapter 4](#)

[NOTES](#)

[YGGDRASIL Homepage](#)

This article is copyrighted but may be quoted, copied and circulated freely as long as the text is unchanged and the author given proper credit. No one may charge any type of fee for copies of this material without permission of the *Yggdrasil's* publisher.

Last Updated 22 December 1999

E-mail comments and suggestions to Jim Beichler, editor, *YGGDRASIL*, at

jebcolst@aol.com