Pohjanpelto, P. J.
1. *Symmetries of Maxwell's Equations*, Ph.D. Thesis, University of Minnesota, 1989.
2. First order generalized symmetries of Maxwell's equations, *Phys. Lett. A* **129** (1988), 148–150.

Poincaré, H.
1. *Les Méthodes Nouvelles de la Mécanique Céleste*, vol. 3, Gauthiers-Villars, Paris, 1892.

Pommaret, J. F.
1. *Systems of Partial Differential Equations and Lie Pseudogroups*, Gordon & Breach, New York, 1978.
2. *Differential Galois Theory*, Gordon & Breach, New York, 1983.

Pontryagin, L. S.
1. *Toplogical Groups*, 2nd ed., Gordon & Breach, New York, 1966.

Posluszny, J. and Rubel, L. A.
1. The motions of an ordinary differential equation, *J. Diff. Eq.* **34** (1979), 291–302.

Pucci, P. and Serrin, J.
1. A general variational identity, *Indiana Univ. Math. J.* **35** (1986), 681–703.

Ramakrishnan, V. and Schaettler, H.
1. Controlled invariant distributions and group invariance, *J. Math. Syst. Est. Control* **1** (1991), 263–278.

Riquier, Ch.
1. Sur une question fondamentale du calcul integrale, *Acta Math.* **23** (1900), 203–332.

Ritt, J. F.
1. *Differential Algebra*, Colloq. Publ., vol. 33, Amer. Math. Soc., Providence, R.I., 1950.

Rosen, G.
1. Nonlinear heat conduction in solid H_2, *Phys. Rev. B* **19** (1979), 2398–2399.
2. Restricted invariance of the Navier–Stokes equation, *Phys. Rev. A* **22** (1980), 313–314.

Rosenau, P.
1. A note on the integration of the Emden–Fowler equation, *Int. J. Nonlinear Mech.* **19** (1984), 303–308.

Rosenau, P. and Schwarzmeier, J. L.
1. Similarity solutions of systems of partial differential equations using MACSYMA, Courant Inst. of Math. Sci., Magneto-Fluid Dynamics Division, Report No. COO-3077-160 MF-94, 1979.

Rosencrans, S. I.
1. Conservation laws generated by pairs of non-Hamiltonian symmetries, *J. Diff. Eq.* **43** (1982), 305–322.
2. Computation of higher order symmetries using MACSYMA, *Comp. Physics Commun.* **38** (1985), 347–356.

Rubel, L. A.
1. The motions of a partial differential equation, *J. Diff. Eq.* **48** (1983), 177–188.

Santini, P. and Fokas, A. S.
1. Recursion operators and biHamiltonian structures in multi-dimensions. I, *Commun. Math. Phys.* **115** (1988), 375–419.

Sattinger, D. H.
1. *Group-Theoretic Methods in Bifurcation Theory*, Lecture Notes in Math., No. 762, Springer-Verlag, New York, 1979.

Schouten, J. A. and Struik, D. J.
1. *Einführung in die Neueren Methoden der Differentialgeometrie*, vol. 1, P. Noordhoff N.V., Groningen-Batavia, 1935.

Schreier, O.
1. Abstrakte kontinuerliche Gruppen, *Abh. Math. Seminar Hamburg Univ.* **4** (1926), 15–32.

Schütz, J. R.
1. Prinzip der absoluten Erhaltung der Energie, *Nachr. König. Gesell. Wissen. Göttingen, Math.-Phys. Kl.* (1897), 110–123.

Schwarz, F.
1. Automatically determining symmetries of partial differential equations, *Computing* **34** (1985), 91–106.

Sedov, L. I.
1. *Similarity and Dimensional Methods in Mechanics*, Academic Press, New York, 1959.

Semenov–Tian–Shanskii, M. A.
1. What is a classical R-matrix?, *Func. Anal. Appl.* **17** (1983), 259–272.

Serre, D.
1. Invariants et dégénérescence symplectique de l'équation d'Euler des fluids parfaits incompressibles, *C. R. Acad. Sci. Paris* **298** (1984), 349–352.

Seshadri, R. and Na, T. Y.
1. *Group Invariance in Engineering Boundary Value Problems*, Springer-Verlag, New York, 1985.

Shakiban, C.
1. A resolution of the Euler operator II, *Math. Proc. Camb. Phil. Soc.* **89** (1981) 501–510.

Shapovalov, A. V. and Shirokov, I. V.
1. Symmetry algebras of linear differential equations, *Theor. Math. Phys.* **92** (1992), 697–705.

Shokin, Yu. I
1. *The Method of Differential Approximation*, Springer-Verlag, New York, 1983.

Smale, S.
1. Topology and mechanics. I, *Invent. Math.* **10** (1970), 305–331.

Sokolov, V. V.
1. On the symmetries of evolution equations, *Russ. Math. Surveys* **43**:5 (1988), 165–204.

Sokolov, V. V. and Shabat, A. B.
1. Classification of integrable evolution equations, *Math. Phys. Rev.* **4** (1984), 221–280.

Souriau, J.-M.
1. *Structure des Systèmes Dynamiques*, Dunod, Paris, 1970.

Steinberg, S.
1. Symmetry operators, in *Proceedings of the 1979 MACSYMA User's Conference*, V. E. Lewis, ed., Washington, 1979, pp. 408–444.
2. Symmetries of differential equations, Univ. of New Mexico preprint, 1983.

Steinberg, S. and Wolf, K. B.
1. Symmetry, conserved quantities and moments in diffusive equations, *J. Math. Anal. Appl.* **80** (1981), 36–45.

Stephani, H.
1. *Differential Equations: Their Solution Using Symmetries*, Cambridge Univ. Press, New York, 1989.

Steudel, H.
1. Uber die Zuordnung zwischen Invarianzeigenschaften und Erhaltungssätzen, *Zeit. Naturforsch.* **17A** (1962), 129–132.
2. Eine Erweiterung des ersten Noetherschen Satzes, *Zeit. Naturforsch.* **17A** (1962), 133–135.
3. Die Struktur der Invarianzgruppe fur lineare Feldtheorien, *Zeit. Naturforsch.* **21A** (1966), 1826–1828.
4. Noether's theorem and higher conservation laws in ultrashort pulse propagation, *Ann. Physik* **32** (1975), 205–216.
5. Noether's theorem and the conservation laws of the Korteweg–de Vries equation, *Ann. Physik* **32** (1975), 445–455.

Strauss, W. A.
1. Nonlinear invariant wave equations, in *Invariant Wave Equations*, G. Velo and A. S. Wightman, eds., Lecture Notes in Physics, No. 73, Springer-Verlag, New York, 1978, pp. 197–249.

Sudarshan, E. C. G. and Mukunda, N.
1. *Classical Dynamics: A Modern Perspective*, Wiley, New York, 1974.

Sussmann, H. J.
1. Orbits of families of vector fields and integrability of systems with singularities, *Bull. Amer. Math. Soc.* **79** (1973), 197–199.

Svinolupov, S. I. and Sokolov, V. V.
1. Factorization of evolution equations, *Russ. Math. Surveys* **47**:3 (1992), 127–162.

Takens, F.
1. A global version of the inverse problem of the calculus of variations, *J. Diff. Geom.* **14** (1979), 543–562.

Taylor, G. I.
1. The formation of a blast wave by a very intense explosion. I. Theoretical discussion, *Proc. Roy. Soc. London* **201A** (1950), 159–174.
2. The formation of a blast wave by a very intense explosion. II. The atomic explosion of 1945, *Proc. Roy. Soc. London* **201A** (1950), 175–186.

Taylor, M.
1. *Pseudodifferential Operators*, Princeton Univ. Press, Princeton, N.J., 1981.

Thirring, W. E.
1. *A Course in Mathematical Physics*, vol. 1, Springer-Verlag, New York, 1978.

Toda, M.
1. *Theory of Nonlinear Lattices*, Springer-Verlag, New York, 1981.

Tsujishita, T.
1. On variation bicomplexes associated to differential equations, *Osaka J. Math.* **19** (1982), 311–363.
2. Formal geometry of systems of differential equations, *Sugaku Exp.* **3** (1990), 25–73.

Tu, G.-Z.
1. A commutativity theorem of partial differential operators, *Commun. Math. Phys.* **77** (1980), 289–297.

Tulczyjew, W. M.
1. The Lagrange complex, *Bull. Soc. Math. France* **105** (1977), 419–431.
2. The Euler–Lagrange resolution, in *Differential Geometric Methods in Mathematical Physics*, P. L. Garcia, A. Pérez-Rendón, and J.-M. Souriau, eds., Lecture Notes in Math., No. 836, Springer-Verlag, New York, 1980, pp. 22–48.

Vainberg, M. M.
1. *Variational Methods for the Study of Nonlinear Operators*, Holden-Day, San Francisco, 1964.

van der Schaft, A. J.
1. Symmetries in optimal control, *SIAM J. Control Optimization* **25** (1987), 245–259.

van der Vorst, R.C.A.M.
1. Variational identities and applications to differential systems, *Arch. Rat. Mech. Anal.* **116** (1991), 375–398.

Verdier, J.-L.
1. Groupes quantiques, *Astérisque* **152–153** (1987), 305–319.

Vessiot, E.
1. Sur l'intégration des systèmes différentiels qui admettent des groupes continus de transformations, *Acta. Math.* **28** (1904), 307–349.

Vilenkin, N. J.
1. *Special Functions and the Theory of Group Representations*, Amer. Math. Soc., Providence, R.I., 1968.

Vinogradov, A. M.
1. On the algebra-geometric foundations of Lagrangian field theory, *Sov. Math. Dokl.* **18** (1977), 1200–1204.
2. Hamilton structures in field theory, *Sov. Math. Dokl.* **19** (1978), 790–794.
3. The $\mathscr{C}$-spectral sequence, Lagrangian formalism and conservation laws. I. The linear theory, *J. Math. Anal. Appl.* **100** (1984), 1–40.
4. The $\mathscr{C}$-spectral sequence, Lagrangian formalism and conservation laws. II. The nonlinear theory, *J. Math. Anal. Appl.* **100** (1984), 41–129.
5. Local symmetries and conservation laws, *Acta Appl. Math.* **2** (1984), 21–78.

Vladimorov, V. S. and Volovich, I.V.
1. Conservation laws for non-linear equations, *Usp. Mat. Nauk* **40**:4 (1985), 17–26.
2. Local and nonlocal currents for nonlinear equations, *Theor. Math. Phys.* **62** (1985), 1–20.

Volterra, V.
1. *Leçons sur les Fonctions de Lignes*, Gauthier–Villars, Paris, 1913.

Wahlquist, H. D. and Estabrook, F. B.
1. Prolongation structures of nonlinear evolution equations, *J. Math. Phys.* **16** (1975), 1–7.

Warner, F. W.
1. *Foundations of Differentiable Manifolds and Lie Groups*, Scott, Foresman, Glenview, Ill., 1971.

Weinstein, A.
1. Symplectic manifolds and their Lagrangian submanifolds, *Adv. Math.* **6** (1971), 329–346.
2. Sophus Lie and symplectic geometry, *Expo. Math.* **1** (1983), 95–96.
3. The local structure of Poisson manifolds, *J. Diff. Geom.* **18** (1983), 523–557.
4. Stability of Poisson–Hamilton equilibria, *Contemp. Math.* **28** (1984), 3–13.

Weisner, L.
1. Generating functions for Hermite functions, *Canad. J. Math.* **11** (1959), 141–147.

Weiss, J., Tabor, M. and Carnevale, G.
1. The Painlevé property for partial differential equations, *J. Math. Phys.* **24** (1983), 522–526.

Weyl, H.
1. *Die Idee der Riemannschen Fläche*, B. G. Teubner, Berlin, 1923.

Whitham, G. B.
1. Variational methods and applications to water waves, *Proc. Roy. Soc. London* **299A** (1967), 6–25.
2. *Linear and Nonlinear Waves*, Wiley, New York, 1974.

Whittaker, E. T.
1. *A Treatise on the Analytical Dynamics of Particles and Rigid Bodies*, Cambridge University Press, Cambridge, 1937.

Widder, D. V.
1. *The Heat Equation*, Academic Press, New York, 1975.

Wilczynski, E. J.
1. An application of group theory to hydrodynamics, *Trans. Amer. Math. Soc.* **1** (1900), 339–352.

Wilson, G.
1. Commuting flows and conservation laws for Lax equations, *Math. Proc. Camb. Phil. Soc.* **86** (1979), 131–143.

Wussing, H.
1. *The Genesis of the Abstract Group Concept*, MIT Press, Cambridge, Mass., 1984.

Zakharov, V. E. and Fadeev, L. D.
1. Korteweg–de Vries equation: a completely integrable Hamiltonian system, *Func. Anal. Appl.* **5** (1971), 280–287.

Zakharov, V. E. and Konopelchenko, B. G.
1. On the theory of recursion operator, *Commun. Math. Phys.* **94** (1984), 483–509.

Zharinov, V.
1. *Geometrical Aspects of Partial Differential Equations*, World Scientific, Singapore, 1992.

Symbol Index