

References

Prerequisites on smooth manifolds

- [1] M. Spivak, *Differential Geometry, volume 1*, Publish or perish, 1970.

Classification of surfaces

- [2] F. Apéry, *Models of the real projective plane*, Vieweg, Braunschweig, 1987.
- [3] A. Gramain, *Topologie des surfaces*, Presses Universitaires de France, Paris, 1971.
- [4] H. B. Griffiths, *Surfaces*, Cambridge University Press, Cambridge, 1976.
- [5] W. H. Massey, *Algebraic topology, an introduction*, Graduate texts in mathematics, Springer, 1967.

Generalities on smooth Lie group actions

- [6] G. E. Bredon, *Introduction to compact transformation groups*, Academic Press, 1972.
- [7] K. Jänich, *Differenzierbare G -Mannigfaltigkeiten*, Lecture Notes in Mathematics 59, Springer, 1968.

Basis of symplectic geometry

- [8] В. И. Арнольд, *Математические методы классической механики*, Наука, Москва, 1974.
V. I. Arnold, *Mathematical methods of classical mechanics*, Graduate Texts in Math., Springer, 1978.
- [9] J. J. Duistermaat, *Fourier Integral Operators*, Courant Institute of Mathematical Sciences, 1973.
- [10] А. А. Кириллов, *Элементы теории представлений*, Наука, Москва, 1971.
A. A. Kirillov, *Elements of the theory of representations*, Grundlehren der math. Wissenschaften, Springer, 1976.

- [11] P. Libermann, C.-M. Marle, *Géométrie symplectique, bases théoriques de la mécanique*, Publications mathématiques de l'Université Paris VII, 1986.
Symplectic geometry and analytic mechanics, Math. and its Appl. 35, Reidel, Boston, 1987.

- [12] J.-M. Souriau, *Structure des systèmes dynamiques*, Dunod, Paris, 1969.

- [13] A. Weinstein, *Lectures on symplectic manifolds*, Regional conference series in mathematics **29** (1977).

Morse theory

- [14] J. Milnor, *Morse theory*, Princeton University Press, Princeton, 1963.

Algebraic topology

- [15] D. Husemoller, *Fibre bundles*, McGraw Hill, New York, 1966.

- [16] J. Milnor, J. Stasheff, *Characteristic classes*, Princeton University Press, Princeton, 1974.

More specialised books and papers

- [17] K. Ahara, A. Hattori, *4-dimensional symplectic S^1 -manifolds admitting moment map*, Preprint, Tokyo, 1990.

- [18] M. Atiyah, *Convexity and commuting hamiltonians*, Bull. London Math. Soc. **23** (1982), 1–15.

- [19] M. Atiyah, *Angular momentum, convex polyhedra and algebraic geometry*, Proceedings Edinburgh Math. Soc. **26** (1983), 121–138.

- [20] M. Atiyah, R. Bott, *The moment map and equivariant cohomology*, Topology **23** (1984), 1–28.

- [21] M. Audin, *Hamiltoniens périodiques sur les variétés symplectiques compactes de dimension 4*, *Géométrie symplectique et mécanique*, Proceedings 1988, C. Albert ed., Springer Lecture Notes in Math. **1416** (1990),

- [22] N. Berline, M. Vergne, *Zéros d'un champ de vecteurs et classes caractéristiques équivariantes*, Duke Math. J. **50** (1983), 539–549.

- [23] F. Bonahon, L. Siebenmann, *The classification of Seifert fibred 3-orbifolds*, *Low dimensional topology*, R. Fenn, London Math. Soc. Lecture Notes Series, Cambridge University Press, (1985), 19–83.

- [24] N. Bourbaki, *Groupes et algèbres de Lie, chapitre 9*, Masson, Paris, 1982.

- [25] A. Bouyakoub, *Sur les fibrés principaux de dimension 4 en tores, munis de structures symplectiques invariantes et leurs structures complexes*, C. R. Acad. Sc. Paris **306** (1988), 417–420.

- [26] M. Brion, *Points entiers dans les polyèdres convexes*, Ann. Scient. Éc. Norm. Sup. **21** (1988), 653–663.
- [27] M. Brion, C. Procesi, *Action d'un tore dans une variété projective*, to appear, 1989.
- [28] J.L. Brylinski, *Éventails et variétés toriques*, Séminaire sur les singularités des surfaces, Springer Lect. Notes in Math. **777** (1980), 248–288.
- [29] M. Condevaux, P. Dazord, P. Molino, *Géométrie du moment (Séminaire Sud-Rhodanien)*, Publications du département de mathématiques, Université Claude Bernard-Lyon I, 1988.
- [30] В. И. Данилов, *Геометрия торических многообразий*, Успехи Мат. Наук **33** (1978), 85–134.
V. I. Danilov, *The geometry of toric varieties*, Russian Math. Surveys **33** (1978), 97–154.
- [31] T. Delzant, *Hamiltoniens périodiques et image convexe de l'application moment*, Bull. Soc. Math. France **116** (1988), 315–339.
- [32] A. Dold, *Partitions of unity in the theory of fibrations*, Ann. Math. **78** (1963), 223–255.
- [33] M. Duflo, M. Vergne, *Une propriété de la représentation coadjointe d'une algèbre de Lie*, C. R. Acad. Sc. Paris **268** (1969), 583–585.
- [34] J. J. Duistermaat, G. J. Heckman, *On the variation in the cohomology of the symplectic form of the reduced phase space and Addendum*, Invent. Math. **69** (1982), 259–269 and **72** (1983), 153–158.
- [35] R. Fintushel, *Classification of circle actions on 4-manifolds*, Trans. Amer. Math. Soc. **242** (1978), 377–390.
- [36] T. Frankel, *Fixed points on Kähler manifolds*, Ann. of Math. **70** (1959), 1–8.
- [37] В. А. Гинзбург, *Эквивариантные когомологии и кэлерова геометрия*, Функ. анализ и его прил. **21** (1987) вып. 4, 19–34.
V. A. Ginsburg, *Equivariant cohomologies and Kähler's geometry*, Funkts. Anal. Priloj. **21** (1987), 271–283.
- [38] V. Guillemin, S. Sternberg, *Convexity properties of the moment mapping, I and II*, Invent. Math. **67** (1982), 491–513 and **77** (1984), 533–546.
- [39] V. Guillemin, S. Sternberg, *Birational equivalence in the symplectic category*, Invent. Math. **97** (1989), 485–522.
- [40] G. H. Hardy, E. M. Wright, *An introduction to the theory of numbers*, 4th edition, Clarendon Press, Oxford, 1960.

- [41] A. Hattori, *S^1 -actions on unitary manifolds and quasi-ample line bundles*, J. Fac. Sci. Univ. Tokyo **31** (1985), 433–486.
- [42] F. Hirzebruch, W. D. Neumann, S. S. Koh, *Differentiable manifolds and quadratic forms*, Marcel Dekker, Inc., New York, 1971.
- [43] P. Iglesias, *Classification des $SO(3)$ -variétés symplectiques de dimension 4*, Centre de physique théorique, Marseille, 1984.
- [44] J. Jurkiewicz, *Torus embeddings, polyhedra, k^* -actions and homology*, Dissertationes Mathematicae **236** (1985).
- [45] M. V. Karasev, *The Maslov quantization conditions in higher cohomology and analogs of notions developed in Lie theory for canonical fibre bundles on symplectic manifolds I and II*, Selecta Math. Sov. **8** (1989), 213–234 and 235–258, translation of a 1981 preprint.
- [46] F. Kirwan, *Cohomology of quotients in symplectic and algebraic geometry*, Math. Notes 31, Princeton University Press, 1984.
- [47] F. Kirwan, *Convexity properties of the moment mapping III*, Invent. Math. **77** (1984), 547–552.
- [48] B. Kostant, *Quantization and representation theory I : prequantization, Lectures in modern analysis and applications III*, Lecture Notes in Mathematics **170**, Springer, 1970.
- [49] B. Kostant, *On convexity, the Weyl group and the Iwasawa decomposition*, Ann. Sci. Ec. Norm. Sup. **6** (1973), 413–455.
- [50] J. L. Koszul, *Sur certains groupes de transformations de Lie*, Colloque International du Centre National de la Recherche Scientifique, **52** (1953), 137–142.
- [51] A. Г. Кушниренко, *Многогранник Ньютона и число решений системы k уравнений с k неизвестными*, Успехи Мат. Наук **30** (1975) 266–267.
A. G. Kushnirenko, *Newton polygon and the number of solutions of a system of k equations and k unknowns (in russian)*, Uspekhi Math. Nauk **30** (1975), 266–267.
- [52] A. Lichnerowicz, *Les variétés de Poisson et leurs algèbres de Lie associées*, Journal Diff. Geom. **12** (1977), 253–300.
- [53] E. J. N. Looijenga, *Rational surfaces with an anticanonical cycle*, Ann. Math. **114** (1981), 267–322.
- [54] D. McDuff, *Examples of simply-connected symplectic non-kählerian manifolds*, Journal Diff. Geom. **20** (1984), 267–277.
- [55] D. McDuff, *The moment map for circle actions on symplectic manifolds*, Journal of geometry and physics **5** (1988), 149–160.

- [56] J. Milnor, *Construction of universal bundles I and II*, Ann. Math. **63** (1956), 272–284 and 430–436.
- [57] J. Moser, *On the volume elements on a manifold*, Trans. Amer. Math. Soc. **120** (1965), 286–294.
- [58] T. Oda, *Convex Bodies and algebraic geometry*, Ergebnisse der Mathematik, Springer, 1988.
- [59] P. Orlik, *Seifert manifolds*, Lecture Notes in Mathematics, Springer, Berlin, Heidelberg, New York, **291** (1972).
- [60] F. Raymond, *Classification of the actions of the circle on 3-manifolds*, Trans. Amer. Math. Soc. (1968), 51–78.
- [61] I. Satake, *On a generalization of the notion of manifold*, Proc. Nat. Acad. Sc. **42** (1956), 359–363.
- [62] I. Schur, *Über eine Klasse von Mittelbildungen mit Anwendungen auf der Determinantentheorie*, Sitzungsberichte der Berliner Mathematischen Gesellschaft **22** (1923), 9–20.
- [63] H. Seifert, *Topologie dreidimensionaler gefaserner Räume*, Acta Math. **60** (1933), 147–238.
- [64] A. Weinstein, *Symplectic V-manifolds, periodic orbits of hamiltonian systems, and the volume of certain riemannian manifolds*, Comm. Pure Appl. Math. **30** (1977), 265–271.
- [65] A. Weinstein, *The local structure of Poisson manifolds*, Journal Diff. Geom. **18** (1983), 523–557.