References

1. Adams, J.F.: On the cobar construction. Colloque de Topologie Algebrique. Louvain (1958).
2. Adams, J.F.: On the non-existence of elements of Hopf invariant one. Ann. of Math. **72** (1960) 20-104.
3. Adams, J.F.: Vector fields on spheres. Ann. of Math. **75** (1962) 603-32.
4. Adams, J.F.: Vector fields on spheres. Topology **1**(1962) 63-65.
5. Adams, J.F., and Hilton, P.J.: On the chain algebra of a loop space. Comm. Math. Helv. **30** (1956), 305-30.
6. Alexander, J.W.: Deformations of an n-cell. Proc. Nat. Acad. Sci. U.S.A.. **9** (1923) 406-407.
7. Artin, E.: Theory of Braids. Ann. of Math. **48** (1947) 101-26.
8. Bahri, A., and Rabinowitz, P.H.: Periodic solutions of Hamiltonian systems of 3-body type. Ann. Inst. H. Poincaré, Anal. Nonlin. **8** (1991) 561-49.
9. Birman, J.S.: Braids, links, and mapping class groups. Ann. of Math. Studies **82**. Princeton University Press (1984).
10. Bödigheimer, F.-C., Cohen, F.R., and Milgram, R.J.: Truncated symmetric products and configuration spaces. Math. Z. **214** (1994) 179-216.
11. Bott, R.: Configuration spaces and imbedding invariants. Turk. J. Math. **20** (1996) 1-17.
12. Bott, R., and Samelson, H.: On the Pontryagin product in spaces of paths. Comment. Math. Helv. **27** (1953) 320-37.
13. Bott, R., and Taubes, C.: On the self-linking of knots. J. Math. Phys. **35** (1994) 5247-87.
14. Bourbaki, N.: Groupes et algèbres de Lie, chap. 2-3. Hermann, Paris (1972).
15. Brown, R.F., and White, J.H.: Homology and Morse theory of third configuration spaces. Indiana U. Math. J. **30** (1981) 501-12.
16. Chow, W-L.: On the algebraic braid group. Ann. of Math. **49** (1948), 654-58.
17. Cohen, F.R.: The homology of $\mathcal{C}_{n+1}$-spaces, $n \geq 0$. The homology of iterated loop spaces, LNM **533** 207-351. Springer-Verlag, New York (1976).
18. Cohen, F.R., and Gitler, S.: On loop spaces of configuration spaces. Preliminary report.
19. Cohen, F.R., and Taylor, L.R.: Configuration spaces: applications to Gelfand-Fuks cohomology. Bull. Amer. Math. Soc. **84** (1978) 134-36.
20. Cohen, F.R., and Taylor, L.R.: Computations of Gelfand-Fuks cohomology, the cohomology of function spaces, and the cohomology of configuration spaces. Geometric applications of homotopy theory I, LNM **657** 106-43. Springer-Verlag, New York (1978).
21. Cohen, R.L.: A model for the free loop space of a suspension. LNM **1286** 193-207. Springer-Verlag, New York (1987).
22. Crabb, M.C., and James, I.M.: Fiberwise configuration spaces. Bol. de la Soc. Mat. Mex. **37** (1992) 83-97.

23. Crowell, R.H., and Fox, R.H.: Introduction to knot theory. GTM **57**. Springer-Verlag, New York (1963).
24. Dold, A.: Partitions of unity in the theory of fibrations. Ann. of Math., 2d ser. **78** (1963) 223-55.
25. Dold, A.: Lectures on Algebraic Topology. Springer-Verlag, New York (1972).
26. Dold, A., and Lashof, R.: Principal quasi-fibrations and fibre homotopy equivalence of bundles. Ill. J. Math. **3** (1959) 285-305.
27. Eilenberg, S. and Mac Lane, S.: On the groups $H(\Pi, n)$, I. Ann. of Math. **58** (1953) 55-106.
28. Eilenberg, S., and Moore, J.C.: Homology and fibrations, I. Colagebras, cotensor product and its derived functors. Comm. Math. Helv. **40** (1966) 199-236.
29. Fadell, E.R.: Homotopy groups of configuration spaces and the string problem of Dirac. Duke Math. J. **29** (1962) 119-26.
30. Fadell, E.: Generalized normal bundles for locally-flat imbeddings. Trans. Amer. Soc. **114** (1965) 488-513.
31. Fadell, E.: Lectures on cohomological index theories of G-spaces with applications to critical point theory. Raccolta di Sem. Univ. della Calabria (1985).
32. Fadell, E.R., and Hurewicz, W.: On the structure of higher differential operators in spectral sequences. Ann. of Math., 2d ser. **68** (1958) 314-47.
33. Fadell, E., and Husseini, S.: Relative cohomological index theories. Advances in Math. **64** (1987) 1-31.
34. Fadell, E., and Husseini, S.: An ideal-valued cohomological index theory with applications to Borsuk-Ulam and Bourgin-Yang theorems. Ergod. Th. and Dynam. Sys. **8**, Charles Conley Memorial Issue (1988) 73-85.
35. Fadell, E., and Husseini, S.: A note on the category of the free loop space Proc. Amer. Math. Soc. **107** (1985) 527-36.
36. Fadell, E., and Husseini, S.: Category of loop spaces of open subsets in Euclidean space. J. Nonlin. Anal. **17** (1991) 1153-61.
37. Fadell, E., and Husseini, S.: Infinite cup length in free loop spaces with an application to a problem of N-body type. Ann. Inst. H. Poincaré, Anal. Nonlin. **9** (1992) 305-19.
38. Fadell, E. and Husseini, S.: Relative category, products and coproducts. Rendiconti del Sem. Mat. e Fis. di Milano bf 64 (1994) 99-115.
39. Fadell, E., and Husseini, S.: On the growth properties of the homology of free loop spaces of configuration spaces. Proc. of the First World Congress of Nonlin. Anal., pp. 2127-34. Walter de Gruyter, Berlin and New York (1996).
40. Fadell, E., and Husseini, S.: The space of loops on configuration spaces and the Majer-Terracini index. Toplogical Methods in Nonlinear Analysis, J. of the Schauder Center **11** (1998) 249-71.
41. Fadell, E., and Husseini, S.: When are configuration bundles fiber homotopically trivial? Bull. des Sc. Math. Quebec, **22** (1998) 149-59.
42. Fadell, E., Husseini, S., and Rabinowitz, P.: Borsuk-Ulam Theorems for arbitrary S^1 actions and applications. Trans. Amer. Math. Soc. **274** (1982) 345-60.
43. Fadell, E., and Neuwirth, L.: Configuration spaces. Math. Scand. **10** (1962) 111-18.
44. Fadell, E., and Van Buskirk, J.: The Braid groups of E^2 and S^2. Duke Math. J. **29** (1962) 243-57.
45. Falk, M., and Randell, R. : Lower central series of a fiber-type arrangement. Inventiones Math. **82** (1985) 77-88.
46. Feichtner, E.M., and Ziegler, G.M.: The integral cohomology of ordered configuration spaces of spheres. Preprint (1996).
47. Fournier, G., and Willem, M.: Multiple solutions of the forced pendulum equation. Ann. Inst. H. Poincarè, Anal. Nonlin. **6** suppl. (1989) 259-81.

48. Fulton, W., and MacPherson, R.: A compactification of configuration spaces. Ann. of Math. **139** (1994) 187-229.
49. Gillette, R., and Van Buskirk, J.: The word problem and its consequences for the braid group and mapping class groups of the 2-sphere. Trans. Amer. Math. Soc. **131** (1968) 277-96.
50. Gottlieb, D.H.: A certain subgroup of the fundamental group. Amer. J. Math. **87** (1965) 840-56.
51. Haefliger, A.: Plongements différentiables de variétés dans variétés. Comm. Math. Helv. **36** (1961) 47-82.
52. Haefliger, A.: Plongements différentiables dans le domaine stable. Comm. Math. Helv. **37** (1962) 155-76.
53. Hall, M. Jr.: The Theory of Groups. The Macmillan Company, New York (1959).
54. Hansen, V.L.: Braids and coverings: selected topics. Lond. Math. Soc. Student Texts **18** (1989). Cambridge Univ. Press.
55. Hilton, P.J.: On the homotopy groups of the union of spheres. J. London Math. Soc. **30** (1955) 154-72.
56. Hopf, H.: Über die Abbildungen von Sphären auf Sphären niedregen Dimension. Fund. Math. **5** (1935) 427-40.
57. Husseini, S.Y.: Constructions of the reduced product type. Toplogy **2** (1963) 213-37.
58. Husseini, S.Y.: Constructions of the reduced product type, II. Topology **3** (1965) 59-79.
59. Husseini, S.Y.: When is a complex fibered by a subcomplex? Trans. Amer. Math. Soc. **124** (1966) 249-91.
60. Husseini, S.Y.: Topology of the classical groups. Gordon and Breach, N.Y. (1969)
61. Husseini, S.Y.: Generalized Lefshetz Numbers. Trans. Amer. Math. Soc. **272** (1982) 247-74.
62. Jambu, M., and Papadima, S.: A generaliztion of fiber-type arrangements and a new deformation method. Topology **37** (1998) 1135-64.
63. James, I.M.: Reduced product spaces. Ann. of Math. **62** (1955) 170-97.
64. James, I.M.: The topology of Stiefel manifolds. London Math. Soc. Lecture Notes **24** (1976). Cambridge University Press.
65. James, I.M., and Whitehead, J.H.C.: On the homotopy theory of sphere-bundles over spheres, I, II. Proc. London Math. Soc., **4**(1954) 196-218, **5** (1955) 148-66.
66. Kallel, S.: Brace products, homology operations and the structure of free loop spaces. (To appear).
67. Kohno, T.: Monodromy representations of braid groups and Yang-Baxter equations. Annales Inst. Fourier, **37** (1987) 139-60.
68. Kohno, T.: Linear representations of braid groups and classical Yang-Baxter equations. Contemp. Math. **78** (1988) 339-63.
69. Kohno, T.: Vassiliev Invariants and the de Rham Complex on the space of knots. Symplectic Geometry and Quantization, Contemp. Math. **179** (1994) 123-38.
70. Loday, J.-L., and Quillen, D.: Cyclic homology and the Lie algebra homology of matrices. Comm. Math. Helv. **59** (1984) 565-91.
71. Lyndon, R.C., and Schupp, P.E.: Combinatorial group theory. Springer-Verlag, New York (1977).
72. Mac Lane, S.: Homology. Springer-Verlag, New York (1963).
73. Magnus, W., Karrass, A., and Solitar, D.: Combinatorial troup theory. Wiley, New York (1966).

74. Majer, P.:Two variational methods on manifolds with boundary. Toplogy **34** (1994), 1-12.
75. Majer, P., and Terracini, S.: Periodic solutions to some problems of n-body type. Arch. Rational Anal. **124** (1993) 381-404.
76. Majer, P., and Terracini, S.: Periodic solutions to some N-body type problems: the fixed energy case. Duke Math. J. **63** (1993) 683-97.
77. Majer, P., and Terracini, S.: Multiple periodic solutions to some n-body type problems via a collision index. Variational Methods in Nonlinear Analyses, Arice, 1992, pp. 245-62. Gordon and Breach, Basel (1995).
78. Majer, P., and Terracini, S.: On the existence of infinitely many periodic solutions to some problems of n-body type. Comm. Pure Appl. Math. **48** (1995) 449-70.
79. Massey, W.S.: The homotopy type of certain configuration spaces. Bol. de la Soc. Mat. Mex. **37** (1992) 355-65.
80. Mathews, H.V.: Cellular twisted products. Ph.D. Thesis, University of Wisconsin-Madison (1993).
81. Mawhin, J., and Willem, M.: Critical Point Theory and Hamiltonian Systems. Applied Mathematical Sciences **74** (1989). Springer-Verlag, New York.
82. Milnor, J.W.: Construction of universal bundles I, II. Ann. of Math. **63** (1956) 272-84, 430-36.
83. Milnor, J.W., and Moore, J.C.: On the structure of Hopf algebras. Ann. of Math. **81** (1965) 211-64.
84. Moore, J.C.: Le Theorème de Freudenthal, la suite exacte de James at l'invariant de Hopf gènèralisè. Exposè 22, Séminaire H. Cartan, E.N.S. (1954/55).
85. Moulton, V. L.: Vector braids. J. Pure App. Algebra **131** (1998) 245-96.
86. Orlik, P., and Terao, H.: Arrangements of hyperplanes. Grundlehren **300** (1992), Springer-Verlag, New York.
87. Palais, R. S.: Local triviality of the restriction map for embeddings. Comm. Math. Helv. **34** (1960) 305-12.
88. Palais, R. S.: Homotopy theory of infinite dimensional manifolds. Topology **5** (1966) 1-16.
89. Ramsey, J. R.: Extensions of Lusternik-Schnirelman Category theory to relative, equivariant and invariant Theories. Ph.D. Thesis, University of Wisconsin-Madison (1989).
90. Reeken, M.: Stability of critical points under small perturbations, Part I. Manus. Math. **7** (1972) 387-411.
91. Riahi, H.: Periodic orbits of n-body type problems. Ph.D. Thesis, Rutgers University, New Brunswick, N.J. (1992).
92. Riahi, H.: Periodic orbits of n-body type problems: the fixed period case. Trans. Amer. Math. Soc. **347** (1995) 4663-85.
93. Riahi, H.: Study of the critical points at infinity arising from the failure of the Palais-Smale condition for n-body type problems. Amer. Math. Soc. Memoirs **138**, No. 658 (1999).
94. Roos, J.E.: Homology of free loop spaces, cyclic homology, and non-rational Poicarè series in commutative algebra. LNM **1352** (1988) 173-89. Springer-Verlag, New York.
95. Rothenberg, M., and Steenrod, N.E.: The cohomolgy of classifying spaces of H-spaces. Bull. Amer. Math. Soc. **58** (1965) 872-75.
96. Samelson, H.: A connection between the Whitehead and the Pontryagin product. Amer. J. Math. **75** (1953) 744-52.
97. Serre, J-P.: Homologie singulière des espaces fibré. Applications. Ann. of Math. **54** (1951) 425-505.

98. Serre, J-P.: Lie algebras and Lie groups. 1964 Lectures at Harvard University. 2d ed. LNM **1500** (1992). Springer-Verlag, New York.
99. Shapiro, A.: Obstructions to the imbedding of a complex in a Euclidean space, I. The first obstruction. Ann. of Math. **66** (1957) 256-69.
100. Shnider, S., and Sternberg, S.: Quantum groups. From coalgebra to Drinfel'd algebras. A guided tour. Graduate Texts in Mathematical Physics, II. International Press, Cambridge, MA (1993)
101. Spanier, E. H.: Algebraic Topology. Springer-Verlag, New York (1966).
102. Stallings, J.: Centerless groups–an algebraic approach to Gottlieb's theorem. Topology **4** (1965) 129-34.
103. Steenrod, N.E.: The topology of fibre bundles. Princeton University Press, Princeton, NJ (1951).
104. Steenrod, N.E., and Whitehead, J.H.C.: Vector fields on the n-sphere. Proc. Nat. Acad. Sci. **37** (1951) 58-63.
105. Sullivan, D., and Vigué-Poirrier, M.: The homology theory of the closed geodesic problem. J. Diff. Geom. **11** (1976) 633-44.
106. Szulkin, A: A relative category and applications to critical point theorey for strongly indefinite functionals. J. Nonlin. Anal. **15** 725-39.
107. Thom, R.: La classification des immersions. Séminaire Bourbaki, 10e année: 1957-1958. Textes de Conférences, Exposé **157** (1957).
108. Vasiliev, V.A.: Complements of discriminants of smooth maps: topology and applications. Trans. of Math. Monographs **98**. Rev. ed. Amer. Math. Soc.(1994)
109. Vigué-Poirrier, M.: Homotopie rationnelle et croissance du nombre de géodésiques fermées. Ann. scient. Éc. norm. sup., 4^e série, t. **17** (1984) 413-31.
110. Whitehead, G.W.: Elements of homotopy theory. Springer-Verlag, New York (1978).
111. Wu, W.-T.: Sur les classescaractéristiques des structures fibrés sphériques. Actualités Sci. Indust., **1183** 1-89. Hermann, Paris (1952).
112. Wu, W.-T.: On the imbedding of manifolds in a Euclidean space. Sci. Sinica **13** (1964) 682-83.
113. Xicoténcatl Merino, M. (1997): Orbit configuration spaces, infinitesmal braid relations in homology and equivariant loop spaces. Ph.D. Thesis, University of Rochester, Rochester, NY (1997).

Index