JEROME P. LEVINE

Professor of Mathematics
Brandeis University

Birthdate: May 4, 1937

Education

1958   B.S. Massachusetts Institute of Technology
1961   Ph.D. Princeton University

Career

1961-63	Instructor, M.I.T.
1963-64	NSF Postdoctoral Fellow, Cambridge, England
1964-65	Assistant Professor, University of California, Berkeley
1965-66	Associate Professor University of California, Berkeley
1966-69	Associate Professor, Brandeis University
1969- present	Professor, Brandeis University
1966	Sloan Research Fellowship
1970	Invited address, International Congress of Mathematicians, Nice, France
1972-73	Visiting Scholar, Oxford University, Oxford, England
1974-76	Chairman, Department of Mathematics, Brandeis University
1977	Visiting Professor (Spring), University of Geneva, Switzerland
1988	Humboldt Senior U.S. Scientist Award
1988-90	Chairman, Department of Mathematics, Brandeis University
1964-Present	NSF Research Grants
1990-1993, 1995-present	US-Israel Binational Science Foundation Grants

Publications

1. *Imbedding and immersion of real projective spaces,* Proc. AMS 14 (1963), 801-3.
2. *Spaces with involution and bundles over P^n,* Amer. J. Math. 88 (1963), 516-40.
3. *On obstructions in sphere bundles and immersions of manifolds,* Trans. AMS (1963)
4. *On differential imbeddings of simply connected manifolds,* Bull. AMS 69 (1963), 806-9.

5. *On the normal bundle of a homotopy sphere embedded in Euclidean space* (with W. C. Hsiang, R. Szczarba), Topology 3 (1965), 173-81.

6. *A classification of differentiable knots,* Annals of Math. 82 (1963), 15-50.

7. *Unknotting spheres in codimension two,* Topology 4 (1965), 9-16.

8. *A characterization of knot polynomials,* Topology 4 (1965), 135-41.

9. *Finding a boundary for an open manifold* (with G. Livesay and W. Browder), Amer. J. Math. 87 (1965), 1017- 28.

10. *Fibering manifolds over a circle* (with W. Browder), Comm. Math. Helv. 40 (1966), 153-60.

11. *Imbedding and isotopy of spheres in manifolds,* Proc. Camb. Phil. Soc., 60 (1964), 433-7.

12. *Polynomial invariants of knots of codimension two,* Annals of Math., Vol. 84 (1966), 537-54.

13. *A method of generating link polynomials,* Amer. J. Math., Vol. 89 (1967), 69-84.

14. *Inertia groups of manifolds and diffeomorphisms of spheres,* Amer. J. Math. 92 (1970), 243-258.

15. *Self equivalences of $S^n \times S^k$,* Transactions of the AMS 143 (1969), 939- 976.

16. *Knot cobordism groups of codimension two,* Comm. Math. Helv. 44, (1969), 229-44.

17. *Invariants of knot cobordism,* Inventiones Math 8 (1969), 98-110.

18. *Algebraic classification of some simple knots,* TOPOLOGY OF MANIFOLDS: PROC. U. OF GEORGIA INSTITUTE, 1969 (ed. J.C. Cantrell and C.H. Edwards) p. 428-30.

19. *Algebraic classification of some knots of codimension two,* Comm. Math Helv. 45 (1970), 185-198.

20. *The role of the Seifert matrix in knot theory,* PROC. I.C.M., NICE, Sept. 1970.

21. *Semi-free circle actions on spheres,* Inventiones Math. 11 (1973), 161-186

22. *Knot modules,* KNOTS, GROUPS AND 3-MANIFOLDS, Ed./L. Neuwirth, Annals of Math. Study 84, Princeton U. Press, 25-34.

23. *Finite procedures in knot theory,* Mimeo-notes.

24. *Finiteness of symplectic class number with application to knot theory,* mimeo-notes.

25. *Knot modules I,* Trans. AMS 229 (1977), 1-50.

26. *Some results on higher dimensional knot groups,* PROCEEDINGS OF KNOT THEORY CONFERENCE, PLANS-SUR-BEX; ed. J.C. Haussmann; Springer Lecture Notes in Mathematics Vol. 685 (1978).

27. ALGEBRAIC STRUCTURE OF KNOT MODULES, Springer Lecture Notes in Mathematics, Vol. 772 (1980).

28. *Modules of a 2-component link,* Comm. Math. Helv. 57 (1982) p.337-399.

29. *Localization of link modules,* LOW-DIMENSIONAL TOPOLOGY Contemporary Math., Vol. 20: , AMS (1983).

30. *Doubly sliced knots and doubled disk knots,* Michigan Math. J. 30 (1983), p. 249-256.

31. *Lectures on groups of homotopy spheres,* ALGEBRAIC AND GEOMETRIC TOPOLOGY: Lecture Notes in Mathematics No. 1126, Springer Verlag, N.Y. 1985.

32. *Surgery on links and the $\bar{\mu}$-invariants,* Topology, 26 (1987), 45-61.

33. *Links with Alexander polynomial zero,* Indiana J. of Math. 36 (1987), p.91- 108.

34. *Estimating bridge number,* (preprint).

35. *Symmetric presentation of link modules,* Topology and its applications 30 (1988), 183-98.

36. *An approach to homotopy classification of classical links,* Trans. A.M.S., 306 (1988), 361-87.

37. *The $\bar{\mu}$-invariants of based links,* Differential Topology, Proceedings, Siegen, 1987 (ed. U. Koschorke), Lecture Notes No. 1350, Springer-Verlag, New York.

38. *Link concordance,* Proc. KIT Mathematics Workshop; Algebra and Topology 1988 (ed. M.H. Kim, K.M. Ko), Korea Institute of Technology, Taejon, Korea.

39. *Metabolic and hyperbolic forms from knot theory,* Journal of Pure and Applied Algebra 58 (1989), p. 251- 60.

40. *Link concordance and algebraic closure of groups:* Comm. Math. Helv. 64 (1989) , p. 236-55.

41. *Link concordance and algebraic closure of groups, II.* Inventiones Math. 96 (1989) , p. 571-92.

42. *Algebraic closure of groups,* Combinatorial Group Theory, Contemporary Math. 109 (1990), AMS, P. 99- 106.

43. *Homology boundary links and the Andrews-Curtis conjecture* (with T.Cochran), Topology, 30 1991), p. 231-9.

44. *Links with vanishing homotopy invariant* (with W. Mio, K. Orr), Comm. Pure and Applied Math., 1993.

45. *Finitely-presented groups with long lower central series,* Israel J. Math. 73 (1991), p. 57-64.

46. *Signature Invariants of homology bordism with applications to links,* KNOTS 90, Proc. Int. Conf. on knot theory, Osaka, 1990.

47. *Link invariants via the eta-invariant,* Comment. Math. Helveticii 69 (1994), p.82-119.

48. *Topological interpretation of the Atiyah- Patodi-Singer eta invariant* (with M. Farber), Proceedings of the Topology Conference, Univ. of Haifa, 1992

49. *Jumps of the Atiyah-Patodi-Singer eta invariant* (with M. Farber), Mathematische Zeitschrift. 223 (1996), 197-246.

50. *Finite-type invariants of 3- manifolds.II* (with S. Garoufalidis), Mathematische Annalen 306 (1996), 691-718.

51. *Finite-type invariants of 3- manifolds, IV* (with S. Garoufalidis), Proc. Cambridge Phil. Society 122 Pt.2 (1997), 291-300.

52. *Deformations of representations and cohomology* (preprint)

53. *The free abelian case* (preprint)

54. *Finite-type invariants, blinks and the mapping class group,* (with S. Garoufalidis), J. Diff. Geom. 47(1997), 257-320.

55. *Morse theory of harmonic forms* (with M. Farber and G. Katz), Topology 37(1998), 469-483

56. *Finite-type 3-manifold invariants and the structure of the Torelli group,* (with S. Garoufalidis), Inventiones Math. 131(3) (1998), 541–594

57. *The Conway polynomial of an algebraically split link,* Proceedings of KNOTS 96 , Ed. S. Suzuki, World Scientific, New Jersey (1997), 23–29.

58. *A factorization of the Conway polynomial,* Comment. Math. Helveticii 74 (1999), 1–27

59. *A survey of applications of surgery to knot and link theory* (with K. Orr), Surveys on surgery theory, vol. 1, ed. S. Cappell, A. Ranicki, J. Rosenberg, Annals of Math. Studies 145, Princeton U. Press (2000), 345–364.

60. *Pure braids, a new subgroup of the mapping class group and finite-type invariants,* Tel Aviv Topology Conference: Rothenberg Festschrift, ed.M. Farber, W. Luck, S. Weinberger, Contemporary Mathematics 231 (1999), 137–157.

61. *Tree-level invariants of three-manifolds* (with S. Garoufalidis), Proceedings of Sullivan Conference (to appear).

62. *Homology surgery and invariants of 3-manifolds* (with S. Garoufalidis), Geometry and Topology 5 (2001), 551–578.

63. *Homology cylinders: an enlargement of the mapping class group,* Algebraic and Geometric Topology 1 (2001), 243–270.

64. *Concordance and 1-loop clovers* (with S. Garoufalidis), Algebraic and Geometric Topology 1 (2001), 687–697.

65. *Analytic invariants of boundary links* (with S. Garoufalidis), Journal of Knot Theory and its Ramifications 11 (2002), 283–294.

66. *Addendum and correction to Homology cylinders: an enlargement of the mapping class group*, Algebraic and Geometric Topology 2 (2002), 1197-1204.

67. *Concordance invariants of boundary links*, `math.GT/0306315`, (submitted for publication).