List of Publications and Talks

David Chillag (1946–2012)

Theses

M.Sc. Thesis, summa cum laude, Tel Aviv University, 1972, title: *Problems in group theory.*

Ph.D. Thesis, University of Illinois at Urbana-Champaign, 1975, title: *On Permutation groups of* degree $5q+1$.

Published papers

1. D. Chillag, *On a class of transitive permutation groups of prime degree $p = 4n+1$*, Israel J. Math. **15** (1973), no. 1, 78–91.

2. D. Chillag, *Note on transitive permutation groups of prime degree*, Israel J. Math. **21** (1975), no. 1, 50–53.

3. D. Chillag, *On a problem of Wielandt concerning permutation groups of prime degree*, J. Algebra **46** (1977), no. 1, 290–291.

4. D. Chillag, *On a class of doubly transitive permutation groups of degree $pq+1$*, Illinois J. Math. **21** (1977), no. 2, 413–419.

5. D. Chillag, *On doubly transitive permutation groups of degree prime square plus one*, J. Austral. Math. Soc. Ser. A **23** (1977), no. 2, 202–206.

6. Z. Arad and D. Chillag, *On finite groups containing a CC-subgroup*, Arch. Math. (Basel) **29** (1977), no. 3, 222–235.

7. D. Chillag, *On transitive permutation groups with an imprimitivity block of prime length*, Houston J. Math. **3** (1977), no. 3, 329–337.

8. Z. Arad and D. Chillag, *On finite groups with conditions on the centralizers of p-elements*, J. Algebra **51** (1978), no. 1, 164–172.

9. Z. Arad and D. Chillag, *On a theorem of N. Ito on factorizable groups*, Arch. Math. (Basel) **30** (1978), no. 3, 236–239.

10. D. Chillag, *Doubly transitive permutation groups which are not doubly primitive*, J. Algebra **55** (1978), no.1, 84–93.

11. Z. Arad and D. Chillag, *Injectors of finite solvable groups*, Comm. Algebra **7** (1979), no. 2, 115–138.

12. D. Chillag and M. Herzog, *Defect groups, trivial intersections and character tables*, J. Algebra **61** (1979), no. 1, 152–160.

13. Z. Arad and D. Chillag, *Finite groups with conditions on the centralizers of π-elements*, Comm. Algebra **7** (1979), no. 14, 1447–1468.

14. Z. Arad and D. Chillag, *On centralizers of elements of odd order in finite groups*, J. Algebra **61** (1979), no. 1, 269–280.

15. Z. Arad and D. Chillag, *π-solvability and nilpotent Hall subgroups*, in: *The Santa Cruz Conference on Finite Groups*, pp. 197–199, Proc. Sympos. Pure Math. **37**, Amer. Math. Soc., Providence, R.I., 1980.

16. Z. Arad and D. Chillag, *On a property like Sylow's of some finite groups*, Arch. Math. (Basel) **35** (1980), no. 5, 401–405.

17. Z. Arad and D. Chillag, *Finite groups containing a nilpotent Hall subgroup of even order*, Houston J. Math. **7** (1981), no. 1, 23–32.

18. D. Chillag and J. Sonn, *Sylow-Metacyclic groups and Q-admissibility*, Israel J. Math. **40** (1981), nos. 3–4, 307–323.

19. Z. Arad, D. Chillag, and M. Herzog, *Classifications of finite groups by a maximal subgroup*, J. Algebra **71** (1981), no. 1, 235–244.

20. Z. Arad, D. Chillag, and M. Herzog, *On a problem of Frobenius*, J. Algebra **74** (1982), no. 2, 516–523.

21. Z. Arad and D. Chillag, *A criterion for existence of normal π-complements in finite groups*, J. Algebra **87** (1984), no. 2, 472–482.

22. D. Chillag and I. D. Macdonald, *Generalized Frobenius groups*, Israel J. Math. **47** (1984), nos 2–3, 111–122.

23. Z. Arad, D. Chillag, and G. Moran, *Groups with small covering number*, in *Products of Conjugacy Classes of Groups* (Z. Arad and M. Herzog, eds.), Springer-Verlag, Lecture Notes in Mathematics, Vol. **1112** (1985), New York, 222–244.

24. G. Amit and D. Chillag, *Character values, conjugacy classes and a problem of Feit*, Houston J. Math. **12** (1986), no. 1, 1–9.

25. Z. Arad, D. Chillag, and M. Herzog, *Powers of characters of finite groups*, J. Algebra **103** (1986), no. 1, 241–255.

26. G. Amit and D. Chillag, *On a question of Feit concerning character values of finite solvable groups*, Pacific J. Math. **122** (1986), no. 2, 257–261.

27. D. Chillag, *Character values of finite groups as eigenvalues of nonnegative integer matrices*, Proc. Amer. Math. Soc. **97** (1986), no. 3, 565–567.

28. D. Chillag and H. I. Blau, *On powers of characters and powers of conjugacy classes of a finite group*, Proc. Amer. Math. Soc. **98** (1986), no. 1, 7–10.

29. D. Chillag, *Generalized circulants and class functions of finite groups*, Linear Algebra Appl. **93** (1987), 191–208.

30. D. Chillag, *Characters, nonnegative matrices, and generalized circulants*, in: *The Arcata Conference on Representations of Finite Groups,* pp. 33–40, Proc. Sympos. Pure Math. **47**, Part 2, Amer. Math. Soc., Providence, R.I., 1987.

31. D. Chillag, *Generalized circulants and class functions of finite groups II*, Linear Algebra Appl. **108** (1988), 199–212.

32. D. Chillag, A. Mann, C. M. Scoppola, *Generalized Frobenius groups II*, Israel J. Math. **62** (1988), no. 3, 269–282.

33. D. Chillag and M. Herzog, *On the length of the conjugacy classes of finite groups*, J. of Algebra **131** (1990), no. 1, 110–125.

34. D. Chillag and M. Herzog, *On character degrees quotients*, Arch. Math. (Basel) **55** (1990), no. 1, 25–29.

35. D. Chillag, *Nonnegative matrices, Brauer characters, normal subsets, and powers of representation modules*, Linear Algebra Appl. **157** (1991), 66–99.

36. D. Chillag, A. Mann, and O. Manz, *The co-degrees of irreducible characters*, Israel J. Math. **73** (1991), no.2, 207–223.

37. M. Bianchi, D. Chillag, A. G. B. Mauri, M. Herzog, C. M. Scoppola, *Applications of a graph related to conjugacy classes in finite groups*, Arch. Math.(Basel) **58** (1992), no. 2, 126–132.

38. Y. Berkovich, D. Chillag, and M. Herzog, *Finite groups in which the degrees of the nonlinear irreducible characters are distinct,* Proc. Amer. Math. Soc. **115** (1992), no. 4, 955–959.

39. D. Chillag, M. Herzog, and A. Mann, *On the diameter of a graph related to conjugacy classes of groups*, Bull. London Math. Soc. **25** (1993), no. 3, 255–262.

40. D. Chillag, *Regular representations of semisimple algebras, separable field extensions, group characters, generalized circulants, and generalized cyclic codes*, Linear Algebra Appl. **218** (1995), 147–183.

41. Y. Berkovich, D. Chillag, and E. Zhmud, *Finite groups in which all non-linear irreducible characters have three distinct values*, Houston J. Math. **21** (1995), no. 1, 17–28.

42. D. Chillag, *Semi-simple commutative algebras with positive bases*, in: *Proceedings of the First Jamaican Conference on Group Theory and Its Applications (Kingston, 1996)*, 71–77, Univ. West Indies, Kingston, 1996.

43. D. Chillag and A. Mann, *Nearly odd-order and nearly real finite groups*, Comm. Algebra, **26** (1998), no.7, 2041–2064.

44. D. Chillag, *Semisimple commutative algebras with positive bases*, J. Algebra **210** (1998), no. 1, 242–270.

45. D. Chillag, *On zeroes of characters of finite groups*, Proc. Amer. Math. Soc. **127** (1999), no.4, 977–983.

46. M. Bianchi, D. Chillag, and A. Gillio, *On finite groups in which every irreducible character vanishes on at most two conjugacy classes*, Houston J. Math. **26** (2000), no.3, 451–461.

47. D. Chillag, *Finite groups with restrictions on the zero sets of their irreducible characters*, Algebra Colloq. **11** (2004), no. 3, 387–398.

48. D. Chillag, R. Holzman, and I. Yona, *Primitive normal matrices and covering numbers of finite groups*, Linear Algebra Appl. **403** (2005), 165–177.

49. M. Bianchi, D. Chillag, and A. Gillio, *Finite groups with many values in a column or a row of the character table*, Publ. Math. Debrecen **69** (2006), no. 3, 281–290.

50. M. Bianchi, D. Chillag, and E. Pacifici, *A note on finite groups with few values in a column of the character table*, Rend. Sem. Mat Univ. Padova **115** (2006), 161–164.

51. D. Chillag, *Algebras with positive bases, commutators and covering numbers*, in: *Ischia Group Theory 2004*, 133–141, Contemp. Math. **402**, Amer. Math. Soc., Providence, R.I., 2006.

52. M. Bianchi, D. Chillag, M. L. Lewis, and E. Pacifici, *Character degree graphs that are complete graphs*, Proc. Amer. Math. Soc. **135** (2007), no. 3, 671–676.

53. D. Chillag and M. Herzog, Finite groups with extremal conditions on sizes of conjugacy classes and on degrees of irreducible characters, in: Groups St. Andrews 2005, Vol. 1, 269–273, London Math. Soc. Lecture Note Series **339**, Cambridge Univ. Press, Cambridge, 2007.

54. D. Chillag and M. Herzog, *Finite groups with almost distinct character degrees*, J. Algebra **319** (2008), 716–729.

55. M. Bianchi, D. Chillag, and E. Pacifici, *Groups whose nonlinear irreducible characters separate element orders or conjugacy class sizes*, Arch. Math.(Basel) **90** (2008), no. 1, 1–13.

56. D. Chillag, *On Blichfeldt's like congruences and other close characters—conjugacy classes analogs*, in: *Ischia Group Theory 2008*, 42–55, World Sci. Publ., Hackensack, NJ, 2009.

57. D. Chillag, *On a congruence of Blichfeldt concerning the order of finite groups*, Proc. Amer. Math. Soc. **136** (2008), no. 6, 1961–1966.

58. D. Chillag and S. Dolfi, *Semi-Rational solvable groups*, J. Group Theory **13** (2010), no. 4, 535–548.

59. D. Chillag, P. Longobardi, and M. Maj, *Groups with reality and conjugacy conditions*, Int. J. Group Theory, **1** (2012), no.2, 25–38.

Books

1. A. Orenstein, E. Levin, and D. Chillag, A second Course in Linear Algebra (3 volumes, in Hebrew, II אלגברה לינארית), The Open University of Israel, 1982.

2. D. Chillag, Introduction to Group Theory, (in Hebrew, מבוא לתורת החבורות), Technion – Israel Institute of Technology, 2012.

Plenary and Invited Talks

1. Conference on Finite Groups and Permutation Groups, Oberwolfach, Germany, July 1981, title: *Q-admissibility and groups in which all Sylow subgroups are metacyclic.*

2. International Conference on Group Theory, Debrecen, Hungary, September 1985, title: *Nonnegative matrices and products of characters and classes in finite groups.*

3. Second International Conference on Group Theory, Debrecen, Hungary, August 1987, title: *On groups of Frobenius type.*

4. Conference on Solvable Groups, Oberwolfach, Germany, August 1988, title: *Class length in finite groups.*

5. 7th Haifa Matrix Theory Conference, Technion, Israel, June 1991, title: *Applications of nonnegative matrices to finite groups.*

6. Conference on Representation Theory, Oberwolfach, Germany, September 1992, title: *Semi-simple commutative algebras and finite groups.*

7. First Jamaican Conference on Group Theory and Application, Kingston, Jamaica, January 1996, title: *On semi-simple algebras with positive bases.*

8. Conference on Representation Theory, Oberwolfach, Germany, April 1966, title: *Positive bases*.

9. 23rd Psychology of Mathematical Education Conference, Technion, Israel, July 1999.

10. Amitsur Memorial Conference, Ben Gurion University, Beer Sheva, Israel, June 2001.

11. Ischia Group Theory Conference, Ischia. Italy, March 2004.

12. Semi-Groups and Algebras, Bar Ilan University. Ramat Gan, January 2008.

13. Ischia 2008 Group Theory Conference, Ischia, Italy, April 2008.

14. Ischia 2010 Group Theory Conference, Ischia, Italy, April 2010.