THE APRIL MEETING IN DURHAM

The three hundred fifty-eighth meeting of the Society was held at Duke University, Durham, North Carolina, on Friday and Saturday, April 7–8, 1939. The attendance included the following one hundred forty-seven members of the Society:

C. R. Adams, R. B. Adams, Leon Alaoglu, Warren Ambrose, W. L. Ayres, C. L. Bacon, Reinhold Baer, R. H. Bardell, G. D. Birkhoff, Richard Brauer, E. T. Browne, Herbert Busemann, A. V. Bushkovitch, W. D. Cairns, E. A. Cameron, A. D. Campbell, C. E. Carey, Leonard Carlitz, C. L. Carroll, C. R. Cassity, J. W. Cell, C. E. Clark, J. M. Clarkson, A. B. Coble, L. W. Cohen, Nancy Cole, M. J. Cox, H. B. Curry, D. C. Dearborn, B. F. Dostal, Arnold Dresden, F. G. Dressel, L. A. Dye, J. J. Eachus, W. W. Elliott, Paul Erdös, F. A. Ficken, K. W. Folley, Orrin Frink, A. S. Galbraith, C. F. F. Garis, L. L. Garner, T. S. George, J. J. Gergen, P. W. Gilbert, A. O. Gray, J. A. Greenwood, T. N. E. Greville, B. L. Hagen, D. W. Hall, Marshall Hall, J. E. Hart, Philip Hartman, A. O. Hickson, R. C. Hildner, Einar Hille, M. P. Hollcroft, T. R. Hollcroft, V. A. Hoyle, Witold Hurewicz, Nathan Jacobson, R. F. Johnson, B. W. Jones, H. A. Jordan, Mark Kac, E. R. van Kampen, J. L. Kelley, J. R. F. Kent, W. W. Landis, A. E. Landry, J. W. Lasley, Solomon Lefschetz, Jack Levine, J. B. Linker, W. R. Longley, E. L. Mackie, H. M. MacNeille, Dorothy Manning, A. V. Martin, W. T. Martin, E. J. McShane, E. R. C. Miles, Max Morris, W. L. Morris, R. C. Morrow, D. S. Morse, H. T. Muhly, C. G. Mumford, D. C. Murdoch, H. M. Nahikian, A. L. Nelson, I. M. Niven, Rufus Oldenburger, L. F. Ollmann, J. M. H. Olmsted, F. W. Owens, H. B. Owens, H. V. Park, A. M. Pegram, B. J. Pettis, C. S. Pettis, C. G. Phipps, M. H. Plass, W. T. Puckett, E. S. Quade, W. C. Randels, J. F. Randolph, B. P. Reinsch, R. G. D. Richardson, J. H. Roberts, G. de B. Robinson, Samuel Saslaw, C. H. W. Sedgewick, R. W. Sedgewick, D. M. Seward, J. A. Shohat, R. G. Simond, Abraham Sinkov, R. E. Smith, V. E. Spencer, O. H. Stecker, R. W. Stokes, J. D. Tamarkin, J. H. Taylor, M. E. Taylor, J. M. Thomas, E. W. Titt, C. B. Tompkins, C. C. Torrance, M. M. Torrey, W. J. Trjitzinsky, A. W. Tucker, J. W. Tukey, Oswald Veblen, L. I. Wade, R. J. Walker, A. D. Wallace, Henry Wallman, W. G. Warnock, C. W. Watkeys, Albert Wertheimer, Hermann Weyl, G. T. Whyburn, A. L. Whiteman, Norbert Wiener, Oscar Zariski, H. S. Zuckerman.

This meeting was held in connection with the celebration of the centennial of the origins of Duke University. At the invitation of a special committee acting jointly for the Society and Duke University, the following three addresses were given on Friday morning, Friday afternoon, and Saturday morning, respectively: *Configurations defined by theta functions*, Professor A. B. Coble; *Invariants*, Professor Hermann Weyl; *The ergodic theorem*, Professor Norbert Wiener. The presiding officers at these three sessions were Professor J. M. Thomas, Dean G. D. Birkhoff, and Vice President C. R. Adams, respectively. General sessions for short papers with Professors Orrin Frink and Arnold Dresden presiding followed the addresses on Friday morning

and afternoon. On Saturday morning after the invited address there was a brief business session followed by sections for papers in Topology and in Analysis with Professors W. L. Ayres and H. M. MacNeille presiding.

All sessions were held in the Chemistry Building and in the Physics Building.

On Friday afternoon tea was served to the mathematicians and their guests in the Ball Room of the Men's Union. At the dinner in the Men's Union on Friday evening, there were two speakers, President W. P. Few of Duke University and Professor Oswald Veblen. The dinner was attended by one hundred seventy-nine members and guests.

The local committee for this meeting arranged many interesting features which included a carillon recital, a showing of the film *Grand Illusion*, trips to a tobacco factory and a hosiery mill, and a luncheon at Carolina Inn in Chapel Hill. The Society adopted a resolution, presented by Professor A. D. Campbell, expressing its appreciation and thanks to the President of the University and the members of the Mathematics Department for their competent arrangements and cordial hospitality.

The Council met on Friday, April 7, at 8:30 P.M. in the Administration Building.

The Secretary announced the election of the following five persons to membership in the Society:

Mr. Frank Aloysius Becker, St. Mary's University, San Antonio, Texas;
Miss Beatrice Miller Edison, New York University;
Mr. Samuel J. Loring, Chance Vought Aircraft Company, East Hartford, Conn.;
Mr. Manuel Salazar y Arce, National Railways of Mexico, Estacion Colonia, FF.CC. Nacional, Mexico, DF;
Mr. Winston M. Scott, University of Alabama.

It was reported that the following two persons had been elected as nominees on the Institutional Memberships of the following institutions:

Brown University: Professor Otto Neugebauer.
Western and Southern Life Insurance Company: Dr. Jerome G. Lemmer (West Baden College of Loyola University, West Baden Springs, Ind.).

The following appointment by President Evans was reported: as a Committee on the Award of the Cole Prize in Algebra, Professors E. T. Bell (chairman), Emile Artin, and Saunders MacLane.

The 1939 midwestern Thanksgiving Meeting is to be held on December 1–2 at the University of Missouri; the Annual Meeting of 1940 at Louisiana State University.

Titles and cross references to the abstracts of papers read at this meeting follow below. The papers were read in the various sections as follows: papers numbered 1 to 8, General Session, Friday morning; papers 9 to 14, General Session, Friday afternoon; papers 15 to 23, session for Topology, Saturday morning; papers 24 to 31, session for Analysis, Saturday morning; and papers 32 to 56, whose abstract numbers are followed by the letter t, were read by title. Of those presenting papers Mr. Rodabaugh was introduced by Professor W. P. Ott, Professor Barone by Professor L. A. Dye, and Mr. Schwartz by Professor J. A. Shohat. Paper 9 was read by Professor Martin, paper 12 by Dr. Tompkins, paper 13 by Dr. Galbraith, paper 16 by Dr. Youngs, and paper 30 by Dr. Spencer.

1. H. T. Muhly: *Valuations and infinitely near algebraic loci.* Preliminary report. (Abstract 45-5-216.)

2. Marshall Hall: *The position of the radical in an algebra.* (Abstract 45-5-181.)

3. Rufus Oldenburger: *Completely reducible forms.* (Abstract 45-5-218.)

4. Nathan Jacobson: *The fundamental theorem of the Galois theory for quasi-fields.* (Abstract 45-3-139.)

5. Richard Brauer: *On groups whose order is divisible by the first power of a prime.* Preliminary report. (Abstract 45-5-164.)

6. Reinhold Baer: *Duality and commutativity of groups.* (Abstract 45-5-155.)

7. L. A. Dye: *A Cremona transformation associated with the rational normal curve of order n in S_n.* (Abstract 45-5-174.)

8. T. N. E. Greville: *Invariance of the admissibility of variates under certain general types of transformations.* (Abstract 45-5-180.)

9. R. H. Cameron and W. T. Martin: *Reciprocals of Fourier-Stieltjes transforms analytic in a strip.* (Abstract 45-5-165.)

10. J. A. Shohat: *On the Lagrange interpolation formula based on the zeros of orthogonal Tchebycheff polynomials.* (Abstract 45-5-239.)

11. E. J. McShane: *On multipliers for Lagrange problems.* (Abstract 45-5-208.)

12. Marston Morse and C. B. Tompkins: *The existence of minimal surfaces of general critical type.* II. (Abstract 45-5-215.)

13. A. S. Galbraith and S. E. Warschawski: *On the convergence of Sturm-Liouville series.* (Abstract 45-5-177.)

14. Einar Hille: *Contributions to the theory of Hermitian series.* (Abstract 45-5-188.)

15. J. L. Kelley: *A note on the arc-wise connectivity theorem.* (Abstract 45-5-196.)

16. Tibor Radó and J. W. T. Youngs: *On upper semicontinuous collections.* (Abstract 45-5-225.)

17. W. T. Puckett: *The images of 2-dimensional surfaces under 0-regular transformations.* (Abstract 45-5-222.)

18. G. T. Whyburn: *On the existence of certain transformations.* (Abstract 45-5-254.)

19. J. H. Roberts: *A note on topological mappings.* (Abstract 45-5-231.)

20. A. D. Wallace: *Some cyclicly extensible and reducible properties.* (Abstract 45-5-249.)

21. C. R. Cassity: *Two theorems on the rational quartic surface in space of four dimensions.* Preliminary report. (Abstract 45-7-263.)

22. L. D. Rodabaugh: *On the partial differential equation $\partial z/\partial x +f(x, y)\partial z/\partial y = 0$.* (Abstract 45-7-276.)

23. D. W. Hall (National Research Fellow): *On new characterizations of the 2-sphere.* Preliminary report. (Abstract 45-7-268.)

24. H. G. Barone: *Limit points of sequences and their transforms by methods of summability.* (Abstract 45-5-157.)

25. F. G. Dressel: *A class of solutions for the heat equation.* Preliminary report. (Abstract 45-5-172.)

26. Philip Hartman: *On Dirichlet series involving random coefficients.* (Abstract 45-5-183.)

27. I. M. Niven: *On a certain partition function.* (Abstract 45-5-217.)

28. L. W. Cohen: *On the mean ergodic theorem.* (Abstract 45-5-169.)

29. W. C. Randels: *On the absolute summability of Fourier series. II.* (Abstract 45-5-229.)

30. J. A. Shohat and Vivian E. Spencer: *Mechanical quadratures coefficients as functions of the moments.* (Abstract 45-5-240.)

31. D. M. Seward: *Note on an integral equation.* (Abstract 45-5-238.)

32. E. E. Betz: *On accessibility and separation by simple closed curves.* (Abstract 45-7-259-t.)

33. Alonzo Church: *On the concept of a random sequence.* (Abstract 45-3-134-t.)

34. J. M. Feld: *Polygons as fundamental elements in the geometry of plane cubic curves.* (Abstract 45-5-176-t.)

35. P. G. Hoel: *A significance test for minimum rank in factor analysis.* (Abstract 45-5-189-t.)

36. E. V. Huntington: *Stirling's formula with remainder.* (Abstract 45-5-190-t.)

37. Edward Kasner and J. J. DeCicco: *A characterization of the Moebius group of circular transformations.* (Abstract 45-5-195-*t.*)

38. Norman Levinson: *An inequality in function theory.* (Abstract 45-3-141-*t.*)

39. A. N. Lowan: *On some problems in the diffraction of heat.* (Abstract 45-5-203-*t.*)

40. Saunders MacLane: *The universality of formal power series fields.* (Abstract 45-5-204-*t.*)

41. P. T. Maker: *The ergodic theorem for a sequence of functions.* (Abstract 45-5-205-*t.*)

42. E. J. McShane: *The condition of Legendre for double integral problems of the calculus of variations.* (Abstract 45-5-209-*t.*)

43. J. F. Ritt: *On ideals of differential polynomials.* (Abstract 45-3-144-*t.*)

44. M. S. Robertson: *The variation of the sign of v for an analytic function u+iv.* (Abstract 45-5-232-*t.*)

45. O. F. G. Schilling: *Units in p-adic algebras.* (Abstract 45-5-234-*t.*)

46. H. M. Schwartz: *A study of a certain class of continued fractions.* (Abstract 45-5-235-*t.*)

47. W. E. Sewell: *Integral approximation and continuity in the complex domain.* (Abstract 45-3-147-*t.*)

48. W. E. Sewell: *Integral approximation and continuity in the real domain.* (Abstract 45-3-146-*t.*)

49. C. W. Vickery: *Deformations of frequency functions.* (Abstract 45-5-245-*t.*)

50. C. W. Vickery: *Random and biased sampling machines.* (Abstract 45-5-246-*t.*)

51. A. D. Wallace: *On ergodic continua.* (Abstract 45-5-248-*t.*)

52. A. D. Wallace: *An axiomatic treatment of separation.* Preliminary report. (Abstract 45-7-279-*t.*)

53. J. L. Walsh: *On interpolation by functions analytic and bounded in a given region.* (Abstract 45-5-250-*t.*)

54. Morgan Ward: *Finite point lattices.* (Abstract 45-1-102-*t.*)

55. Morgan Ward: *Note on the general rational solution of the equation $ax^2 - by^2 = cz^3$.* (Abstract 45-1-103-*t.*)

56. Morgan Ward: *The algebra of lattice functions.* (Abstract 45-1-105-*t.*)

T. R. HOLLCROFT,
Associate Secretary