THE APRIL MEETING IN CHARLOTTESVILLE

The three hundred fifty-first meeting of the American Mathematical Society was held at the University of Virginia on Friday and Saturday, April 15–16, 1938. The attendance included the following one hundred seventy-two members of the Society:

Beatrice Aitchison, H. F. Archibald, W. L. Ayres, Reinhold Baer, M. F. Becker, G. D. Birkhoff, Garrett Birkhoff, Archie Blake, R. P. Boas, H. F. Bohnenblust, Richard Brauer, B. L. Brown, E. T. Browne, R. S. Burington, Herbert Busemann, J. H. Bushey, J. Hughes Bushey, J. W. Calkin, Leonard Carlitz, A. F. Carpenter, H. C. Carter, C. E. Clark, J. A. Clarkson, A. H. Clifford, Nancy Cole, T. F. Cope, M. J. Cox, H. S. M. Coxeter, H. B. Curry, J. H. Curtiss, D. B. DeLury, Douglas Derry, T. L. Downs, Arnold Dresden, F. G. Dressel, D. M. Dribin, E. J. Finan, I. G. Foster, C. W. Franklin, Philip Franklin, A. H. Frink, Orrin Frink, T. C. Fry, A. J. Garland, T. S. George, J. J. Gergen, J. W. Givens, B. D. Grant, Margaret Gurney, B. L. Hagen, Marshall Hall, P. R. Halmos, Harris Hancock, Philip Hartman, Erich Hecke, E. H. C. Hildebrandt, Einar Hille, M. P. Hollcroft, T. R. Hollcroft, Witold Hurewicz, M. H. Ingraham, Nathan Jacobson, Walter Jennings, Fritz John, F. E. Johnston, B. W. Jones, H. A. Jordan, E. R. van Kampen, B. C. Keeler, J. L. Kelley, J. R. F. Kent, J. R. Kline, M. S. Knebelman, H. L. Krall, O. E. Lancaster, E. P. Lane, G. A. Larew, J. W. Lasley, Solomon Lefschetz, A. M. M. Lehr, B. Z. Linfield, Marie Litzinger, E. R. Lorch, W. V. Lovitt, J. J. Luck, R. S. McKee, E. J. McShane, E. L. Mackie, H. M. MacNeille, P. T. Maker, M. H. Martin, Walther Mayer, F. M. Mears, Karl Menger, A. K. Mitchell, W. C. Mitchell, Virginia Modesitt, C. N. Moore, E. M. Morenus, C. B. Morrey, Marston Morse, D. C. Murdoch, F. D. Murnaghan, Tadasi Nakayama, C. J. Nesbitt, D. L. Netzorg, John von Neumann, E. J. Oglesby, Oystein Ore, J. C. Oxtoby, F. W. Owens, H. B. Owens, B. J. Pettis, C. S. Pettis, R. S. Phillips, W. T. Puckett, H. A. Rademacher, W. C. Randels, S. E. Rasor, F. W. Reed, M. S. Rees, C. N. Reynolds, Moses Richardson, R. G. D. Richardson, E. K. Ritter, J. H. Roberts, G. de B. Robinson, O. F. G. Schilling, E. R. Schneckenburger, I. J. Schoenberg, G. E. Schweigert, Wladimir Seidel, R. G. Simond, Abraham Sinkov, Frank Smithies, Virgil Snyder, C. M. Sparrow, J. M. Stetson, R. W. Stokes, M. H. Stone, E. C. Strayhorn, J. L. Synge, J. D. Tamarkin, J. H. Taylor, M. E. Taylor, J. M. Thomas, Arthur Tilley, E. W. Titt, C. B. Tompkins, M. M. Torrey, W. J. Trjitzinsky, A. W. Tucker, J. W. Tukey, G. B. Van Schaack, Oswald Veblen, R. J. Walker, A. D. Wallace, Henry Wallman, S. E. Warschawski, C. W. Watkeys, Albert Wertheimer, Hermann Weyl, A. H. Wheeler, A. P. Wheeler, C. H. Wheeler, G. T. Whyburn, Norbert Wiener, C. W. Williams, John Williamson, Audrey Wishard, Oscar Zariski, H. S. Zuckerman.

The meeting opened Friday morning in two sections, Topology, Professors J. H. Roberts and M. S. Knebelman presiding; and Analysis, Professor E. T. Browne presiding.

Friday afternoon was devoted to a symposium on *Lattice theory* at which the following addresses were given: *The known applications of lattices*, by Mr. Garrett Birkhoff; *Structures and algebraic applications*,

by Professor Oystein Ore; *Representations of Boolean algebras*, by Professor M. H. Stone. The discussion was led by Professor Reinhold Baer, Dr. H. M. MacNeille, Professor Karl Menger, and Professor John von Neumann. Professor Marston Morse presided at this meeting.

On Saturday morning, there were again two sections, Analysis and Geometry, and Algebra. The presiding officers were Professors Philip Franklin and Oystein Ore.

All sessions were held in Monroe Hall, University of Virginia.

On Friday afternoon, a tea for visiting ladies was given at the home of Dean and Mrs. J. S. Wilson. The buffet dinner Friday evening at the Farmington Country Club was attended by two hundred seven members and guests. Many small parties visited Monticello and Ash Lawn at various times.

The Society adopted a resolution, presented by Professor Philip Franklin, expressing its appreciation and thanks to the President of the University of Virginia and the members of the Department of Mathematics for their competent arrangements and cordial hospitality.

Meetings of various committees of the International Congress of Mathematicians were held, and important decisions concerning the program of the Congress were made.

The Council met on Saturday, April 16, at 12:30 P.M. in the Club Room of the Monticello Hotel. The report of this meeting follows.

The Secretary announced the election of the following seventy-one persons to membership in the Society:

Mr. Frank Albert Alfieri, Metropolitan Life Insurance Company, New York, N. Y.;
Mr. DeWitt Dukes Barlow, Atlantic, Gulf and Pacific Company, New York, N. Y.;
Mr. Stanley Urner Benscoter, U. S. Engineers Office, Kansas City, Mo.;
Mr. Robert Martin Besancon, Chicago, Ill.;
Mr. Peter B. Boyer, Oregon Institute of Technology;
Mr. Arthur Albert Francis Brown, Princeton University;
Dr. Frederick Winfield Brown, University of Kansas City;
Miss Helen Elizabeth Clarkson, Jacksonville College, Jacksonville, Tex.;
Mr. William Christopher Coombs, Colonial Radio Corporation, Buffalo, N. Y.;
Professor William Alonzo Cordrey, Lambuth College, Jackson, Tenn.;
Mr. Lester L. Cronvich, Tulane University;
Mr. Maurice Rolland Demers, Brown University;
Professor Paul Arnold De Vore, Central Missouri State Teachers College;
Mr. Philip DiSalvatore, Princeton University;
Mr. James Francis Downey, Charles E. Bedaux Company of New York, New York, N. Y.;
Mr. Clayburn Combes Elder, Metropolitan Water District of Southern California, Los Angeles, Calif.;

Mr. Dean Burritt Ellis, Arkansas State College;
Miss Mary Louise Elveback, University of Minnesota;
Dr. Charles Stever Fazel, The Solvay Process Company, Hopewell, Va.;
Mr. Frederick Arthur Ficken, Lafayette College;
Mr. George Fisanick, Metropolitan Life Insurance Company, New York, N. Y.;
Professor Harry T. Fleddermann, Loyola University, New Orleans, La.;
Miss Helen Gilchrist Fudge, Holmes Junior High School, Philadelphia, Pa.;
Dean Godofredo García, University of San Marcos, Lima, Peru;
Professor Frank C. Gentry, University of Oklahoma;
Mr. Robert Ellsworth Glover, U. S. Bureau of Reclamation, Denver, Colo.;
Miss Lilah Genevieve Godfrey, Walla Walla College;
Miss Bernice Duncan Grant, Alderson Broaddus College, Philippi, W. Va.;
Professor Edward L. Hill, University of Minnesota;
Mr. Louis Ricketts Hodell, Carter Oil Company, Tulsa, Okla.;
Dr. Stanley Bartlett Jackson, University of Wisconsin;
Sister James Stanislaus, St. Teresa Junior College, Kansas City, Mo.;
Lieutenant Maximiano S. Janairo, U. S. Army, Philippine Department, Manila, P. I ;
Mr. Walter Jennings, Ohio State University;
Professor Howard Kenneth Justice, University of Cincinnati;
Professor Benjamin C. Keeler, Webb Institute, New York, N. Y.;
Professor Robert Hilton Knox, Virginia Military Institute;
Dr. Joseph F. Kubis, Fordham University;
Dr. Ruth Onetta Lane, University High School, Iowa City, Iowa;
Mr. Coe E. Leach, Green Camp, Ohio;
Mr. Talmage Hoyle Lee, University of Wisconsin;
Brother Leo (Daniel H. Quinn), St. Francis College, Brooklyn, N. Y.;
Mr. William John Martyn, Otago Boys' High School, Dunedin, New Zealand;
Sister M. St. Alphonsus, Immaculata College, Immaculata, Pa.;
Sister Mary Amator, University of Pennsylvania;
Professor John Neville Meighan, Storer College, Harper's Ferry, W. Va.;
Mr. Julius Sumner Miller, Dillard University, New Orleans, La.;
Professor Carey Gardner Mumford, North Carolina State College;
Professor Carl Wallace Munshower, Colgate University;
Miss Irene Kathryn Murray, Chicago, Ill.;
Mr. Howard M. Nahikian, North Carolina State College;
Professor John Lester Nickerson, Mount Allison University, Sackville, N. B.;
Mr. John M. H. Olmstead, Princeton University;
Mr. Edson Ruther Peck, Evanston, Ill.;
Dr. Irwin Earl Perlin, Armour Institute of Technology;
Mr. Harry Polachek, Haaren High School, New York, N. Y.;
Reverend Joseph G. Précourt, Providence College;
Miss Adrienne Sophie Rayl, E. D. White High School, New Orleans, La.;
Mr. John Karlem Riess, Alcee Fortier High School, New Orleans, La.;
Professor David Anton Frederic Robinson, University of Toronto;
Professor Emily Lee Ross, University of Nevada;
Professor John Edward Sandt, Marietta College;
Professor Edward S. Smith, University of Cincinnati;
Professor Claude Newton Stokes, Temple University;
Mr. Paul Chandler Sweetland, Garden City Junior College, Garden City, Kan.;
Mr. Emil O. Tolonen, Highland Park, Mich.;

Dr. Robert McDowell Thrall, University of Michigan;
Mr. Ralph Edgar Traber, Princeton University;
Mr. John Byron Tracy, Taunton, Mass.;
Professor Charles Walmsley, Dalhousie University, Halifax, N. S.;
Miss Audrey Wishard, Radcliffe College.

It was reported that the following had been elected as nominees on the Institutional Memberships of the institutions and departments indicated:

Bryn Mawr College: Miss Elizabeth Monroe.
Division of Mathematics, Harvard University: Dean Harald Malcolm Westergaard.
Indiana University: Dr. Frank Kelley Edmondson.
The Johns Hopkins University: Miss Almeda Jane Garland and Dr. David Leon
    Netzorg.
Lehigh University: Mr. Henry Louis Langhaar.
Mathematical Association of America: Professor Juna Lutz Beal.
University of Michigan: Messrs. Herman Edmund Arnold, John Dennis Fitzpatrick,
    Robert Eugene Gaskell, Carl Frederick Kossack, and Elbridge Putnam Vance.
University of Notre Dame: Reverend Frederick Michael Gassensmith.

The following appointments were announced: as representative of the Society at a conference on problems in publication of research held under the auspices of the American Philosophical Society in Philadelphia, February 18–19, 1938, Professor J. D. Tamarkin; as representative at a group of conferences on higher education and the dedication of new buildings at Louisiana State University on April 6–8, 1938, Professor S. T. Sanders; as representative at the celebration of the one hundredth anniversary of the chartering of Greensboro College on May 20–21, 1938, Professor Ruth W. Stokes; and as representative at the dedication of The Franklin Institute of the State of Pennsylvania on May 19–21, 1938, Professor J. R. Kline.

Two changes in the personnel of the Committee on the Award of the Bôcher Prize in Analysis were reported: Professor T. H. Hildebrandt (chairman) and Dean R. D. Carmichael were appointed in the places of Dean G. D. Birkhoff and Professor G. A. Bliss, respectively, who had resigned.

The following dates and places were chosen for future meetings: New York City, February 25, 1939; Durham, North Carolina, April 7–8, 1939, in connection with the Centennial of Trinity College (now Duke University) and the proposed symposium on mathematics; Columbus, Ohio, Annual Meeting of 1939, in connection with the meetings of the American Association for the Advancement of Science.

The following Committee on Arrangements for the meeting at Duke University, April 7–8, 1939, was appointed: Professors J. J. Gergen (chairman), Leonard Carlitz, T. R. Hollcroft, J. H. Roberts,

G. T. Whyburn. Professors J. J. Gergen and J. D. Tamarkin were appointed a committee on symposium for this meeting.

On the recommendation of the Committee on the Gibbs Lecture, the Council voted to omit this lecture in 1938.

The Colloquium Committee reported that the book *Orthogonal Polynomials*, by Professor Gabor Szegö, has been accepted for publication in the Colloquium Series.

Titles and cross references to the abstracts of the papers read at this meeting follow below. The papers were read in the various sections as follows: papers numbered 1 to 8, Topology; papers 9 to 16, Analysis; papers 17 to 28, Analysis and Geometry; papers 29 to 40, Algebra. Papers 41 to 70, whose abstract numbers are followed by the letter *t*, were read by title. Paper 2 was read by Mr. Oxtoby, 4 by Professor Roberts, 10 by Dr. Aline Frink, 12 by Professor Morse, 22 by Professor Hermann Weyl, 25 by Professor Snyder, and 32 by Professor Nakayama.

1. *A metric related to property S*, by J. L. Kelley. (Abstract 44-3-111.)

2. *The existence of metrically transitive transformations* (preliminary report), by J. C. Oxtoby and S. M. Ulam. (Abstract 44-5-248.)

3. *Concerning local connectedness under the inverse of certain continuous transformations*, by W. T. Puckett. (Abstract 44-3-154.)

4. *Monotone transformations on 2-dimensional manifolds*, by J. H. Roberts and N. E. Steenrod. (Abstract 44-5-255.)

5. *On point-wise almost periodic homeomorphisms*, by W. L. Ayres. (Abstract 44-5-172.)

6. *Chain-deformation retracts* (preliminary report), by A. W. Tucker. (Abstract 44-5-272.)

7. *On 0-regular transformations*, by A. D. Wallace. (Abstract 44-3-161.)

8. *Segmental curves and faceted surfaces*, by F. W. Reed. (Abstract 44-5-253.)

9. *On the Stieltjes moment problem* (preliminary report), by R. P. Boas (National Research Fellow). (Abstract 44-5-179.)

10. *Polygonal variations*, by Aline H. Frink and Orrin Frink. (Abstract 44-3-142.)

11. *Maximal real determinants*, by Philip Franklin. (Abstract 44-5-197.)

12. *Symbolic dynamics*, by Marston Morse and G. A. Hedlund. (Abstract 44-5-242.)

13. *An application of Hurwitz's convergence factor theorem to the generalization of Poisson's summation of Fourier series*, by C. N. Moore. (Abstract 44-5-239.)

14. *On the number of abelian groups of a given order*, by D. L. Netzorg. (Abstract 44-5-245.)

15. *On certain differential equations for Tchebycheff polynomials*, by H. L. Krall. (Abstract 44-3-147.)

16. *Some existence theorems in the calculus of variations. II. Isoperimetric problems*, by E. J. McShane. (Abstract 44-5-233.)

17. *Invariants of certain stochastic transformations: the mathematical theory of gambling systems*, by P. R. Halmos. (Abstract 44-5-208.)

18. *The differentiability of functions minimizing certain double integrals*, by C. B. Morrey. (Abstract 44-5-241.)

19. *Conditions on $u(x, y)$ and $v(x, y)$ necessary and sufficient for the regularity of $u+iv$*, by P. T. Maker. (Abstract 44-3-150.)

20. *Metric spaces and completely monotone functions*, by I. J. Schoenberg. (Abstract 44-5-260.)

21. *Notes on linear transformations. II. Analyticity of semi-groups*, by Einar Hille. (Abstract 44-5-214.)

22. *Meromorphic curves*, by Hermann Weyl and F. J. Weyl. (Abstract 44-5-277.)

23. *A plane projection of the polytope 2_{21} whose 27 vertices represent the lines on the general cubic surface*, by H. S. M. Coxeter. (Abstract 44-3-98.)

24. *Groups of inscribed tetrahedra*, by A. H. Wheeler. (Abstract 44-5-278.)

25. *A Cremona involution in S_3 without a surface of invariant points*, by Virgil Snyder and Evelyn Carroll-Rusk. (Abstract 44-5-265.)

26. *Involutory systems of curves on ruled surfaces*, by A. F. Carpenter. (Abstract 44-5-184.)

27. *Contact transformations*, by M. S. Knebelman. (Abstract 44-5-230.)

28. *Plane curve systems associated with singular surfaces*, by T. R. Hollcroft. (Abstract 44-5-216.)

29. *Prüfer ideals in commutative rings*, by D. M. Dribin (National Research Fellow). (Abstract 44-5-191.)

30. *Normal semi-linear transformations*, by Nathan Jacobson. (Abstract 44-5-220.)

31. *On groups of linear transformations*, by Richard Brauer. (Abstract 44-5-180.)

32. *Note on symmetric algebras*, by Tadasi Nakayama and C. J. Nesbitt. (Abstract 44-5-244.)

33. *Quasi-groups which satisfy certain generalized associative laws*, by D. C. Murdoch. (Abstract 44-5-243.)

34. *Identities analogous to Ramanujan's identities involving the par-*

tition function, by H. S. Zuckerman (National Research Fellow). (Abstract 44-5-250.)

35. *Matrices normal with respect to an hermitian matrix*, by John Williamson. (Abstract 44-3-165.)

36. *Related genera of positive ternary quadratic forms*, by B.W. Jones. (Abstract 44-5-225.)

37. *The generalized Clebsch-Gordan series*, by F. D. Murnaghan. (Abstract 44-3-152.)

38. *Uniformization in valuation rings and resolutions of singularities of an algebraic surface*, by Oscar Zariski. (Abstract 44-5-279.)

39. *Sequences defined by non-linear algebraic difference equations*, by O. E. Lancaster. (Abstract 44-3-148.)

40. *Equidistribution of residues in sequences*, by Marshall Hall. (Abstract 44-5-206.)

41. *On oscillations of real sequences and of their transforms by square matrices*, by R. P. Agnew. (Abstract 44-5-167-*t*.)

42. *New properties of lattices*, by Garrett Birkhoff. (Abstract 44-5-178-*t*.)

43. *On the classification of correlations in space*, by E. T. Browne. (Abstract 44-5-182-*t*.)

44. *An accurate method for obtaining the derivative function from observational data*, by J. W. Cell. (Abstract 44-5-185-*t*.)

45. *A continuous group of contact transformations containing the generalized pedal transformation*, by J. M. Feld. (Abstract 44-5-195-*t*.)

46. *A generalization of multiple sequence transformations*, by H. J. Hamilton. (Abstract 44-5-210-*t*.)

47. *Change of dimension in sequence transformations*, by H. J. Hamilton. (Abstract 44-5-209-*t*.)

48. *Concerning collections of continua in a separable space which do not cross*, by O. H. Hamilton. (Abstract 44-5-211-*t*.)

49. *The half-group of cosets belonging to a group*, by Charles Hopkins. (Abstract 44-3-145-*t*.)

50. *Simple Lie algebras over a field of characteristic zero*, by Nathan Jacobson. (Abstract 44-5-221-*t*.)

51. *Perfect subdivision of surfaces*, by I. N. Kagno. (Abstract 44-5-226-*t*.)

52. *The canonical reduction of Hamiltonian systems*, by E. R. van Kampen and Aurel Wintner. (Abstract 44-5-228-*t*.)

53. *Approximation to algebraic numbers by means of periodic sequences of transformations on quadratic forms*, by R. R. McDaniel. (Abstract 44-5-232-*t*.)

54. *The analysis of the representations of the real n-dimensional or-*

thogonal group induced by irreducible, rational, integral representations of the full linear group, by F. D. Murnaghan. (Abstract 44-3-153-*t.*)

55. *Representation and equivalence of forms*, by Rufus Oldenburger. (Abstract 44-5-247-*t.*)

56. *Concerning the 1-dimensional Betti group under interior transformations*, by W. T. Puckett. (Abstract 44-3-155-*t.*)

57. *A new proof of two of Ramanujan's identities*, by H. A. Rademacher and H. S. Zuckerman (National Research Fellow). (Abstract 44-5-249-*t.*)

58. *Systems of differential equations.* I. *Theory of ideals*, by J. F. Ritt. (Abstract 44-5-254-*t.*)

59. *Piecemeal univalency of analytic functions*, by M. S. Robertson. (Abstract 44-3-156-*t.*)

60. *On the integration of Wilczynski's equations by quadratures*, by L. B. Robinson. (Abstract 44-5-256-*t.*)

61. *A generalization of local class field theory*, by O. F. G. Schilling. (Abstract 44-5-259-*t.*)

62. *On the Peano curve of Lebesgue*, by I. J. Schoenberg. (Abstract 44-5-261-*t.*)

63. *On a certain class of continued fractions with applications to Bessel functions and Lommel polynomials*, by H. M. Schwartz. (Abstract 44-5-262-*t.*)

64. *An example in conformal mapping*, by Wladimir Seidel. (Abstract 44-5-263-*t.*)

65. *Degree of approximation by polynomials in z and 1/z*, by W. E. Sewell. (Abstract 44-3-157-*t.*)

66. *Note on the relation between Lipschitz conditions and degree of polynomial approximation*, by W. E. Sewell. (Abstract 44-3-158-*t.*)

67. *On the distribution of the zeros of orthogonal polynomials*, by J. A. Shohat. (Abstract 44-5-264-*t.*)

68. *On local homeomorphisms*, by A. D. Wallace. (Abstract 44-3-160-*t.*)

69. *On regular transformations*, by A. D. Wallace. (Abstract 44-3-162-*t.*)

70. *Interior surface transformations*, by G. T. Whyburn. (Abstract 44-3-164-*t.*)

T. R. HOLLCROFT,
Associate Secretary