7. Walter Leighton and W. J. Thron: *On value regions of continued fractions.* (Abstract 48-3-113-*t*.)

8. R. A. Beaumont: *Projections of the prime-power abelian group of order p^m and type $(m-1, 1)$.* (Abstract 48-3-103-*t*.)

9. W. A. Mersman: *Heat conduction in a finite composite solid.* (Abstract 48-5-204-*t*.)

10. Knox Millsaps: *Abstract polynomials in non-abelian groups.* (Abstract 48-5-158-*t*.)

11. S. P. Avann: *A numerical condition for modularity of a finite lattice.* (Abstract 48-5-144-*t*.)

12. E. J. Pinney: *Calculus of variations in abstract spaces and related topics.* I. (Abstract 48-5-180-*t*.)

13. E. J. Pinney: *Calculus of variations in abstract spaces and related topics.* II. (Abstract 48-5-181-*t*.)

14. A. D. Michal: *A theory of fluctuations in Riemannian spaces.* Preliminary report. (Abstract 48-5-209-*t*.)

A. D. MICHAL,
Acting Associate Secretary

THE APRIL MEETING IN CHICAGO

The three hundred eighty-eighth meeting of the American Mathematical Society was held at the University of Chicago, Chicago, Illinois, on Friday and Saturday, April 17–18, 1942.

The attendance was one hundred eighty-three including the following one hundred sixty-one members of the Society:

A. A. Albert, J. V. Atanasoff, W. L. Ayres, Reinhold Baer, R. M. Ballard, R. H. Bardell, Walter Bartky, E. F. Beckenbach, J. C. Bell, D. L. Bernstein, S. F. Bibb, E. E. Blanche, G. A. Bliss, Henry Blumberg, L. M. Blumenthal, R. W. Brink, E. L. Buell, H. E. Burns, I. W. Burr, L. E. Bush, Herbert Busemann, Albert Cahn, W. C. Carter, E. W. Chittenden, L. W. Cohen, B. H. Colvin, J. J. Corliss, L. L. Cronvich, A. R. Craw, E. L. Crow, D. R. Curtiss, W. M. Davis, M. M. Day, L. E. Dickson, J. M. Dobbie, Roy Dubisch, W. D. Duthie, Phillip Eddy, Samuel Eilenberg, R. S. Embree, W. S. Erickson, E. B. Escott, H. P. Evans, H. S. Everett, G. M. Ewing, J. V. Finch, L. R. Ford, R. H. Fox, Bernard Friedman, H. L. Garabedian, B. H. Gere, H. A. Giddings, B. E. Gillam, J. W. Givens, E. L. Godfrey, R. A. Good, G. D. Gore, L. M. Graves, L. W. Griffiths, V. G. Grove, G. J. Haltiner, R. W. Hamming, O. G. Harrold, W. L. Hart, M. L. Hartung, G. E. Hay, C. T. Hazard, A. E. Heins, E. D. Hellinger, M. R. Hestenes, J. F. Heyda, T. H. Hildebrandt, A. S. Householder, H. K. Hughes, D. H. Hyers, M. H. Ingraham, Dunham Jackson, R. D. James, R. N. Johanson, Fritz John, R. E. Johnson, G. K. Kalisch, Samuel Kaplan, Wilfred Kaplan, William Karush, D. E. Kibbey, Lois Kiefer, J. R. Kline, W. C. Krathwohl, H. N. Laden, J. C. Lapsley, R. A. Leibler, A. L. Lewis, D. R. Lintvedt, N. M. Livesay, M. I. Logs-

don, A. T. Lonseth, Morris Marden, C. W. Mendel, Karl Menger, A. N. Milgram, W. L. Mitchell, M. G. Moore, C. W. Moran, Marston Morse, E. J. Moulton, S. B. Myers, Ivan Niven, E. N. Oberg, J. W. Odle, Rufus Oldenburger, C. D. Olds, Isaac Opatowski, G. H. Peebles, P. M. Pepper, I. E. Perlin, Samuel Perlis, G. B. Price, Tibor Radó, P. V. Reichelderfer, W. T. Reid, Haim Reingold, C. V. Robinson, M. D. P. Rochford, W. H. Roever, A. E. Ross, R. G. Sanger, R. D. Schafer, Peter Scherk, O. F. G. Schilling, K. C. Schraut, G. E. Schweigert, H. A. Simmons, A. H. Smith, W. S. Snyder, N. E. Steenrod, R. C. Stephens, B. M. Stewart, E. B. Stouffer, H. P. Thielman, C. J. Thorne, C. B. Tompkins, P. L. Trump, A. W. Tucker, A. E. Turner, S. M. Ulam, V. J. Varineau, Bernard Vinograde, R. W. Wagner, H. S. Wall, K. W. Wegner, J. V. Wehausen, G. W. Whitehead, L. R. Wilcox, J. E. Wilkins, František Wolf, R. S. Wolfe, Ruth Wolkow, Y. K. Wong, J. W. T. Youngs, Antoni Zygmund.

The meeting opened Friday morning with two sections, analysis with Professor L. M. Graves presiding, and geometry and the theory of numbers with Professor V. G. Grove presiding. Saturday morning there were three sections, analysis with Professor J. V. Atanasoff presiding, algebra, Professor Reinhold Baer presiding, and geometry and topology, Professor N. E. Steenrod presiding. All sectional sessions were held in Eckhart Hall.

On Friday afternoon the Symposium Lecture was given by Professor L. M. Blumenthal with the title *Some imbedding theorems and characterization problems of distance geometry*. Professor Karl Menger presided at this lecture which was given in Rosenwald Hall.

On Friday afternoon following the Symposium Lecture, a tea was given by the ladies of the Department of Mathematics of the University of Chicago.

The attendance at the dinner on Friday evening at the Quadrangle Club was one hundred two. Professor Dunham Jackson served as toastmaster and introduced President Marston Morse who spoke on the present status of deferments for teachers of mathematics and stressed the danger of a serious shortage of qualified teachers at the college level. Following this talk Professor L. W. Cohen and Dean Walter Bartky gave short talks.

At the various sectional meetings on Saturday morning there was read a telegram from a group of Russian mathematicians addressed to all American mathematicians, expressing feelings of scientific unity and a belief in the triumph of our common cause.

There were two meetings of the Council, one being a joint session with the Board of Governors of the Mathematical Association of America. The joint session was held at 12:15 P.M. in the Quadrangle Club and the regular meeting of the Council at 8:45 P.M. in the Common Room of Eckhart Hall at the University of Chicago on April 17, 1942.

At the joint meeting of the Council and Board of Governors President Marston Morse reported on the steps which had been taken concerning the deferment of mathematicians and the procedures recommended to secure proper classification of competent teachers and graduate students by Selective Service Boards. The question of the use of all mathematicians who are inducted into the armed forces was also discussed and President Morse was authorized to make further investigations concerning this problem.

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

Mr. Blair Miller Bennett, College of the City of New York;
Dr. Ferdinand Charles Biesele, University of Utah;
Professor Conrad B. Bilgery, Regis College, Denver, Colo.;
Professor Warren Hill Brothers, Jr., Talladega College, Talladega, Ala.;
Mr. Hugh Daniel Brunk, The Rice Institute;
Dr. Arthur Walter Burks, University of Pennsylvania;
Sister Mary Roberdette Burns, Clarke College, Dubuque, Iowa;
Mr. Albert Cahn, Jr., University of Chicago;
Dr. Walter Francis Cassidy, St. John's University, Brooklyn, N. Y.;
Mr. A. John Coleman, University of Toronto;
Miss Clara Marie Cooper, St. Vincent's College, Shreveport, La.;
Miss Jane E. Crawford, American Mathematical Society, New York, N. Y.;
Mr. Anthony B. Crawley, West Virginia State College, Institute, W. Va.;
Professor Ray Harbaugh Dotterer, Pennsylvania State College;
Dr. Ralph Waldo Erickson, Hibbing Junior College, Hibbing, Minn.;
Mr. Edward Allen Fay, University of Rochester;
Mr. Edwin Howard Feather, Valley Forge Military Academy, Wayne, Pa.;
Dr. Hans Fried, Sproul Observatory, Swarthmore College;
Professor Israel Everette Glover, Fayetteville State Teachers College, Fayetteville
    N. C.;
Professor John M. González, Spring Hill College, Spring Hill, Ala.;
Sister Agnes Ann Green, Immaculate Heart College, Los Angeles, Calif.;
Dr. Frederick William Green, St. Louis Southwestern Railway Lines, St. Louis, Mo.;
Professor William V. Houston, California Institute of Technology;
Mr. Oscar Branche Jackson, Shell Oil Company, Tulsa, Okla.;
Dr. Haym Jaffe, Penn Treaty Junior High School, Philadelphia, Pa.;
Mr. William Katz, New York, N. Y.;
Dr. David Milton Krabill, Potomac State School of West Virginia University, Keyser,
    W. Va.;
Sister Mary Pachomia Lackay, St. Teresa's College, Kansas City, Mo.;
Miss Jane Marie Lawler, Kansas City, Mo.;
Mr. Herbert R. Leifer, United States Department of Labor, Philadelphia, Pa.;
Mr. Harold Wilbert Linscheid, Bluffton College, Bluffton, Ohio;
Mr. Robert Lorenzen, New York, N. Y.;
Professor John Joseph Lynch, Fordham University, New York, N. Y.;
Dr. Henry Berthold Mann, Columbia University;
Mr. Ernest Percy Miles, Jr., Naval Station, New Orleans, La.;
Professor Carman Edgar Miller, University of New Brunswick;

Mr. Arthur George Montgomery, University of Minnesota;
Dr. Elliott Waters Montroll, Cornell University;
Mr. Joseph Baxter Nelson, University of Southern California;
Sister Mary Cyprian Nightwine, Xavier University, New Orleans, La.;
Mr. Henry Mortimer Nodelman, College of Pharmacy, University of Connecticut;
Dr. Nilan Norris, Hunter College;
Mr. Kenneth Alva Norton, Federal Communications Commission, Washington, D. C.;
Sister Anna Concilio O'Neill, College of Saint Elizabeth, Convent, N. J.;
Mr. Milton Oliver Peach, Carnegie Institute of Technology;
Dean Henry William Pietenpol, Central College, Pella, Iowa;
Mr. George Piranian, The Rice Institute;
Mrs. Marie Helen Polanyi, Bennington College, Bennington, Vt.;
Professor Joseph William Porter, Bluefield State Teachers College, Bluefield, W. Va.;
Miss Ruth Ellen Porter, Albany Senior High School, Albany, Ore.;
Professor Francis McConnell Pulliam, Lambuth College, Jackson, Tenn.;
Mr. Lawrence Lee Rauch, Princeton University;
Dr. Helene Reschovsky, Baldwin School, Bryn Mawr, Pa.;
Professor Charles Kendall Robbins, Purdue University;
Mr. Ira Rosenbaum, Camp Croft, S. C.;
Mr. Joshua Heshel Rosenbloom, Federal Government Service, Philadelphia, Pa.;
Professor Samuel Thomas Sanders, Jr., Southwestern Louisiana Institute, Lafayette,
    La.;
Mr. William Leete Sandidge, Lynchburg, Va.;
Mr. Milner Baily Schaefer, University of Washington;
Mr. Charles W. Seekins, North Carolina State College;
Mr. Samuel Shulits, United States Engineer Office, Charleston, S. C.;
Mr. Daniel Harold Simmons, University of California at Los Angeles;
Dr. Rolland George Sturm, Aluminum Research Laboratories, New Kensington, Pa.;
Mr. Leonard W. Swanson, University of Minnesota;
Professor Alejandro Terracini, Universidad di Tucuman, Tucuman, Argentina;
Professor Louis F. Tolle, St. John's University, Brooklyn, N. Y.;
Dr. Lewis Fletcher Walton, San Diego State College;
Mr. Alan Wayne, Rhodes School, New York, N. Y.;
Professor Ernst Weber, Polytechnic Institute of Brooklyn;
Mr. Donald Ward Western, Brown University;
Mr. Robert L. White, University of California at Los Angeles;
Mr. Donald Ransom Whitney, Mary Washington College, Fredericksburg, Va.;
Mr. Lloyd Bayard Williams, Georgia School of Technology;
Miss Ruth Wolkow, Barret Junior High School, Louisville, Ky.;
Professor Cecil Benjamin Wright, East Texas State Teachers College, Commerce,
    Tex.;
Dr. Alexander Wundheiler, College of the City of New York.

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

University of California: Mr. Edward William Barankin, Miss Sarah Margaret
    Hallam, Messrs. Alfred Horn and Robert Mann.
California Institute of Technology: Messrs. Sherwin Parker Avann, Gerald Harrison,
    Robert Clarke James, Chia Chiao Lin, Mark Muir Mills, Knox Taylor Millsaps,
    Wolfgang Kurt Herman Panofsky, Edmund Pinney, William Shand, Jr., Stanley

Cooper Snowdon, Clifford Ambrose Truesdale, and Donald Bingham Wheeler, Jr.
Harvard University: Mr. Robert Wayne Byerly.
New York University: Messrs. Imanuel Marx and Wolfgang Richard Wasow.
Pennsylvania State College: Mr. Ralph P. Bentz.
Wayne University: Mr. Gerald S. Heller.
University of Wisconsin: Messrs. Robert Phillip Eddy, Raymond Scott Embree,
    John Vernor Finch, Donald R. Lintvedt, and Theodore Edgar Rodd, Miss Marion
    Dell Wetzel, Mr. Norman Arthur Wiegmann.

Dr. Andrew Paul Guinand of the Royal Canadian Air Force, Chatham, New Brunswick, Canada, was admitted to the Society in accordance with the reciprocity agreement with the London Mathematical Society and Professor Charles Blanc of the University of Lausanne was admitted to the Society in accordance with the reciprocity agreement with the Swiss Mathematical Society.

The following appointments by President Marston Morse were reported: as representative of the Society at the Celebration of the One Hundredth Anniversary of the Founding of Hollins College (Virginia) on May 17–19, 1942, Dr. Nancy Cole; as auditors of the Society's books for 1942, Professors Samuel Borofsky and A. E. Meder, Jr.; as Committee on Arrangements for the Summer Meeting of 1942 at Vassar College, Professors Mary E. Wells (chairman), W. D. Cairns, T. R. Hollcroft, Gertrude Smith, H. S. White; as Committee on Arrangements for the Annual Meeting of 1942 at New York City, Professors G. W. Mullins (chairman), W. D. Cairns, B. P. Gill, T. R. Hollcroft, E. R. Lorch, Mina Rees, J. F. Ritt.

The Secretary reported that the following had been chosen as the voting representatives on the Council of the editorial committees for the year 1942: Bulletin—Dean Tomlinson Fort; Transactions—Professor Einar Hille; Colloquium—Professor M. H. Stone; American Journal of Mathematics—Professor R. L. Wilder; Mathematical Reviews—Professor Oswald Veblen.

An invitation from Oregon State College to hold a meeting of the Society in Corvallis in June, 1943, in connection with the meetings of the Pacific Division of the American Association for the Advancement of Science, was accepted.

The Secretary reported the receipt of a gift of $100 from Professor R. C. Archibald to be used as deemed most desirable by the Librarian.

It was reported by the Bulletin Editorial Committee that, in the future the Index Number of the Bulletin will include indices of abstracts, meetings and papers, but will omit the Annual List of Published Papers and the index to Notes.

The Secretary reported that Professor E. J. McShane had replaced

Professor J. L. Walsh as chairman of the editorial committee for the series, Mathematical Surveys.

Associate Secretary Ingraham reported that the state of the finances of the Society was good, in spite of the present emergency. He also reported that approximately ten persons had taken advantage of the privilege of the reduction in dues offered to enlisted men in the armed forces of the United States and Canada.

Titles and cross references to the abstracts of papers follow below. The papers were read as follows: Papers 1–8 in the section for analysis on Friday morning; papers 9–16 in the section for geometry and the theory of numbers on Friday morning; papers 17–22 in the section for analysis on Saturday morning; papers 23–29 in the section for algebra on Saturday morning; papers 30–36 in the section for geometry and topology on Saturday morning; and papers 37–47, whose abstract numbers are followed by the letter t, were read by title. Professor Jonah was introduced by Professor H. K. Hughes, Mr. Tomlinson by Dr. J. J. DeCicco, Mr. Rommel by Professor L. W. Cohen, Dr. Begle by Professor R. L. Wilder, Dr. Swain by Professor S. M. Ulam, and Professor Sadowsky by Professor L. R. Ford. Paper 1 was read by Dr. Bernstein, paper 5 by Professor Morse, paper 11 by Dr. Scherk, paper 13 by Professor Pepper, paper 18 by Dr. Hellinger, paper 20 by Professor Miller, paper 21 by Dr. Hyers, and paper 22 by Professor Cohen.

1. Dorothy L. Bernstein and S. M. Ulam: *On the problem of completely additive measure in classes of sets with a general equivalence relation.* (Abstract 48-5-169.)

2. W. S. Snyder: *Non-parametric surfaces of bounded variation.* (Abstract 48-5-192.)

3. P. V. Reichelderfer: *On bounded variation and absolute continuity for parametric representations of continuous surfaces.* (Abstract 48-5-187.)

4. Tibor Radó: *On a problem of Geöcze.* (Abstract 48-5-186.)

5. Marston Morse and G. M. Ewing: *The non-regular case in the variational theory in large.* (Abstract 48-5-178.)

6. Fritz John: *The character of solutions of linear partial differential equations.* (Abstract 48-5-173.)

7. František Wolf: *On the limits of harmonic and analytic functions along radii which form a set of positive measure.* (Abstract 48-5-199.)

8. William Karush: *A sufficiency theorem for an isoperimetric problem in parametric form with general end conditions.* (Abstract 48-7-236.)

9. H. F. S. Jonah: *Congruences connected with the solution of a certain Diophantine equation.* (Abstract 48-5-155.)

10. R. D. James: *On Euler's conjecture.* (Abstract 48-5-153.)

11. Emil Artin and Peter Scherk: *On the sum of two sets of integers.* (Abstract 48-5-143.)

12. Herbert Busemann: *Spaces with convex spheres.* (Abstract 48-5-206.)

13. B. J. Topel and P. M. Pepper: *Imbedding theorems under weakened hypotheses.* (Abstract 48-5-213.)

14. J. E. Wilkins: *A characterization of the quadric of Wilczynski.* (Abstract 48-5-214.)

15. T. W. Tomlinson: *Geometry of linear fractional polygenic functions.* (Abstract 48-5-211.)

16. A. E. Ross: *On a theorem of Kloosterman.* (Abstract 48-7-232.)

17. W. H. Roever: *Comment on the derivation of the law of perfect gases.* (Abstract 48-5-188.)

18. E. D. Hellinger and H. S. Wall: *Contributions to the analytic theory of continued fractions.* (Abstract 48-5-172.)

19. Isaac Opatowski: *Confluent hypergeometric functions and Markoff chains.* (Abstract 48-5-179.)

20. G. T. Miller and H. K. Hughes: *Analytic continuation of functions defined by factorial series.* (Abstract 48-5-177.)

21. S. M. Ulam and D. H. Hyers: *Approximate isometries of the space of continuous functions.* (Abstract 48-5-194.)

22. J. D. Rommel: *On conservative transformations of functions of two variables.* (Abstract 48-7-244.)

23. Bernard Vinograde: *Split rings and their representation theory.* (Abstract 48-5-167.)

24. Rufus Oldenburger: *Expansions of quadratic forms.* (Abstract 48-5-160.)

25. A. A. Albert: *The radical of a non-associative algebra.* (Abstract 48-5-141.)

26. Ivan Niven: *On matric polynomials.* (Abstract 48-5-159.)

27. R. D. Schafer: *Alternative algebras over an arbitrary field.* (Abstract 48-5-164.)

28. R. E. Johnson: *On structures of infinite modules.* (Abstract 48-5-154.)

29. R. W. Wagner: *Expressibility relations for bilinear operations.* Preliminary report. (Abstract 48-5-168.)

30. C. B. Tompkins: *Local imbedding of Riemannian spaces.* (Abstract 48-5-212.)

31. M. M. Day: *Compactness of a space with monotone closure.* (Abstract 48-5-220.)

32. Samuel Kaplan: *Homologies in metric separable spaces.* (Abstract 48-5-222.)

33. J. W. T. Youngs: *On parametric representations of surfaces.* II. (Abstract 48-5-229.)

34. E. G. Begle (National Research Fellow): *Intersections of absolute retracts.* (Abstract 48-5-219.)

35. R. L. Swain: *Proper and reductive transformations.* (Abstract 48-5-225.)

36. A. N. Milgram: *Dimension of the points with at most n rational coordinates.* (Abstract 48-5-223.)

37. M. S. Webster: *A convergence theorem for certain Lagrange interpolation polynomials.* (Abstract 48-5-197-*t*.)

38. M. A. Sadowsky: *Approximation by rational sequences.* (Abstract 48-5-163-*t*.)

39. H. M. Schwartz: *On some general series expansions.* Preliminary report. (Abstract 48-5-189-*t*.)

40. Walter Leighton and W. J. Thron: *On the convergence of continued fractions.* (Abstract 48-3-112-*t*.)

41. A. R. Schweitzer: *On a class of ordered $(n+1)$-ads relevant to the algebra of logic.* I. (Abstract 48-3-134-*t*.)

42. A. R. Schweitzer: *On a class of ordered $(n+1)$-ads relevant to the algebra of logic.* II. (Abstract 48-3-135-*t*.)

43. Reinhold Baer: *Radical ideals.* (Abstract 48-5-146-*t*.)

44. George Pólya: *On the combinatory analysis of classifications and permutations.* (Abstract 48-5-184-*t*.)

45. M. L. Kales: *Tauberian theorems.* (Abstract 48-5-174-*t*.)

46. R. F. Clippinger: *Matrix products of matrix powers.* (Abstract 48-5-149-*t*.)

47. R. M. Thrall: *On the decomposition of modular tensors.* (Abstract 48-5-166-*t*.)

W. L. AYRES,
Associate Secretary