

THE FEBRUARY MEETING IN NEW YORK

The three hundred forty-eighth meeting of the American Mathematical Society was held at Columbia University on Saturday, February 26, 1938. The attendance included the following one hundred ninety-nine members of the Society:

C. R. Adams, R. L. Anderson, R. G. Archibald, J. J. Barron, E. M. Beesley, A. C. Berry, E. E. Betz, Garrett Birkhoff, J. H. Blau, R. P. Boas, Salomon Bochner, H. F. Bohnenblust, Samuel Borofsky, Joseph Bowden, C. B. Boyer, H. W. Brinkmann, A. A. F. Brown, A. B. Brown, B. L. Brown, J. H. Bushey, J. Hughes Bushey, S. S. Cairns, J. W. Calkin, A. D. Campbell, G. A. Campbell, P. A. Caris, J. A. Clarkson, T. F. Cope, Richard Courant, J. H. Curtiss, Norman Davidowitz, J. J. DeCicco, Vincent Dillon, Arnold Dresden, Melvin Dresher, Nelson Dunford, J. E. Eaton, L. P. Eisenhart, H. T. Engstrom, J. M. Feld, Aaron Fialkow, W. B. Fite, Tomlinson Fort, R. M. Foster, J. S. Frame, Kurt Friedrichs, A. S. Galbraith, G. N. Garrison, B. H. Gere, B. P. Gill, R. L. Gilman, J. W. Givens, A. M. C. Grant, M. B. Greenebaum, F. L. Griffin, C. C. Grove, Israel Halperin, G. A. Hedlund, Max Herzberger, Fritz Herzog, Einar Hille, Banesh Hoffmann, Lulu Hofmann, T. R. Hollcroft, Harold Hotelling, S. E. Hotelling, W. N. Huff, E. M. Hull, Witold Hurewicz, W. H. Ingram, M. M. Johnson, R. A. Johnson, H. A. Jordan, I. N. Kagno, E. S. Kennedy, L. S. Kennison, P. W. Ketchum, L. A. Knowler, T. L. Koehler, E. R. Kolchin, B. O. Koopman, Jack Laderman, M. E. Ladue, A. W. Landers, M. K. Landers, Solomon Lefschetz, C. H. Lehmann, D. H. Lehmer, B. A. Lengyel, Howard Levi, Madeline Levin, W. R. Longley, E. R. Lorch, L. A. Lorch, N. H. McCoy, E. J. McShane, L. A. MacColl, C. C. MacDuffee, H. M. MacNeille, Sr. Marie G. McNeil, W. T. Martin, A. E. Meder, E. C. Molina, Deane Montgomery, L. T. Moore, T. W. Moore, C. B. Morrey, A. P. Morse, Z. I. Mosesson, D. C. Murdoch, F. J. Murray, Tadasi Nakayama, D. S. Nathan, C. A. Nelson, C. J. Nesbitt, D. L. Netzorg, John von Neumann, C. O. Oakley, Rufus Oldenburger, J. C. Oxtoby, E. K. Paxton, B. J. Pettis, H. B. Phillips, M. H. Plass, E. L. Post, Walter Prenowitz, J. F. Randolph, Robert Rawhouser, G. E. Raynor, H. W. Reddick, M. S. Rees, C. F. Rehberg, R. W. Rempfer, Moses Richardson, R. G. D. Richardson, W. G. Riley, J. F. Ritt, J. H. Roberts, H. P. Robertson, M. S. Robertson, S. L. Robinson, Benjamin Rosenbaum, B. M. Rubin, O. K. Sagen, Arthur Sard, O. F. G. Schilling, Hyman Serbin, Stefan Serghiesco, L. W. Sheridan, Seymour Sherman, Max Shiffman, L. P. Sicheloff, L. L. Silverman, James Singer, L. L. Smail, M. F. Smiley, P. A. Smith, Frank Smithies, Virgil Snyder, E. P. Starke, J. J. Stoker, M. H. Stone, W. C. Strodt, M. M. Sullivan, J. D. Tamarkin, A. E. Taylor, W. C. Taylor, C. B. Tompkins, A. W. Tucker, J. W. Tukey, Annita Tuller, S. M. Ulam, J. L. Vanderslice, G. B. Van Schaack, Oswald Veblen, R. J. Walker, Harry Wallman, S. E. Warschawski, J. V. Wehausen, Louis Weisner, M. J. Weiss, M. E. Wells, A. P. Wheeler, O. L. Wheeler, H. S. White, A. L. Whiteman, Hassler Whitney, D. V. Widder, Norbert Wiener, E. P. Wiggin, L. R. Wilcox, A. H. Wilson, Aurel Wintner, H. P. Wirth, D. W. Woodard, H. N. Wright, Oscar Zariski, Leo Zippin, H. S. Zuckerman.

The meeting opened Saturday morning in two sections, Algebra and Number Theory, Professor Hassler Whitney presiding, and

Analysis, at which Professor H. B. Phillips presided. In the afternoon general session, at which Vice President J. F. Ritt presided, Professor P. A. Smith gave an address entitled *The topology of groups of transformations*. Two sectional sessions followed, for Geometry and Topology, and for Analysis. Professors A. W. Tucker and Joseph Bowden presided at these sessions.

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 9, Algebra and Number Theory; papers 10 to 18, Analysis (morning); papers 19 to 25, Geometry and Topology; papers 26 to 32, Analysis (afternoon). Papers 33 to 53, whose abstract numbers are followed by the letter *t*, were read by title. Paper 3 was read by Dr. Dresher, paper 8 by Dr. Walker, paper 12 by Dr. Boas, and paper 15 by Dr. Martin.

1. *Cayley parametrization and spin representation of orthogonal matrices*, by J. W. Givens. (Abstract 44-3-105.)

2. *A characterization of the values assumed by polynomials*, by Howard Levi. (Abstract 44-3-113.)

3. *On the theory of multigroups*, by Melvin Dresher and Oystein Ore. (Abstract 44-3-101.)

4. *A note on the elementary divisor theory in non-commutative domains*, by Tadasi Nakayama. (Abstract 44-3-118.)

5. *Concerning matrices with elements in a commutative ring*, by N. H. McCoy. (Abstract 44-3-115.)

6. *A quasi-canonical form in the ring of integers*, by O. K. Sagen. (Abstract 44-3-123.)

7. *A factorization theorem applied to tests for primality*, by D. H. Lehmer. (Abstract 44-3-112.)

8. *The algebraic theory of diabolic magic squares*, by J. B. Rosser and R. J. Walker. (Abstract 44-3-122.)

9. *A formula for the coefficients of the cyclotomic polynomial*, by J. E. Eaton. (Abstract 44-3-102.)

10. *On a calculus of operators in reflexive vector spaces*, by E. R. Lorch. (Abstract 44-1-85.)

11. *Abstract self-adjoint boundary conditions*, by J. W. Calkin. (Abstract 44-3-96.)

12. *Closure theorems for translations*, by R. P. Boas (National Research Fellow) and Salomon Bochner. (Abstract 44-3-95.)

13. *Linear equations in an infinite number of unknowns* (preliminary report), by J. F. Randolph. (This paper is chiefly the work of the late Professor D. C. Gillespie of Cornell University.) (Abstract 44-3-120.)

14. *Linear operations which depend analytically on a parameter*, by A. E. Taylor (National Research Fellow). (Abstract 44-3-130.)
15. *Taylor's series of functions of smooth growth in the unit circle*, by W. T. Martin and Norbert Wiener. (Abstract 44-3-116.)
16. *The existence of solutions of certain minimum problems for multiple integrals*, by C. B. Morrey. (Abstract 44-3-117.)
17. *Theorems on the summability of series*, by Tomlinson Fort. (Abstract 44-3-103.)
18. *Sequences of systems of algebraic differential equations*, by W. C. Strodt. (Abstract 44-3-127.)
19. *On certain groups of birational contact transformations*, by J. M. Feld. (Abstract 44-1-81.)
20. *Dimensionality in reducible geometries*, by Israel Halperin. (Abstract 44-3-107.)
21. *Conformal geodesics in Riemann spaces*, by Aaron Fialkow. (Abstract 44-1-82.)
22. *Tensor products of abelian groups*, by Hassler Whitney. (Abstract 44-3-134.)
23. *Fields whose geodesic series can be represented by the turbines of a flat field*, by J. J. DeCicco. (Abstract 44-3-99.)
24. *A symmetric representation of the 27 lines on a cubic surface by lines in a finite geometry*, by J. S. Frame. (Abstract 44-3-104.)
25. *Kirchhoff constraints and linear graphs*, by W. H. Ingram. (Abstract 43-11-434.)
26. *Discontinuous solutions for certain problems in the calculus of variations*, by F. L. Griffin. (Abstract 44-3-106.)
27. *An approach to existence theorems in the calculus of variations (preliminary report)*, by Arnold Dresden. (Abstract 44-3-100.)
28. *Partial differential equations and variation calculus*, by Max Herzberger. (Abstract 44-3-109.)
29. *The existence of minimal surfaces of least area bounded by prescribed manifolds*, by Richard Courant. (Abstract 44-3-97.)
30. *On linear functionals and completely additive set functions*, by B. J. Pettis. (Abstract 44-3-119.)
31. *Set-theoretical invariants of the product operation*, by S. M. Ulam. (Abstract 44-3-132.)
32. *An eigenvalue problem in elasticity with continuous spectrum*, by J. J. Stoker. (Abstract 44-3-125.)
33. *Cores of complex sequences and of their transforms*, by R. P. Agnew. (Abstract 44-3-90-t.)
34. *Non-cyclic algebras with pure maximal sub-fields*, by A. A. Albert. (Abstract 44-3-91-t.)

35. *Generalizations to space of the Cauchy and Morera theorems*, by E. F. Beckenbach and M. Reade. (Abstract 44-3-92-t.)
36. *Dependent probabilities and spaces (L)*, by Garrett Birkhoff. (Abstract 44-3-93-t.)
37. *Partially ordered linear spaces*, by Garrett Birkhoff. (Abstract 44-3-94-t.)
38. *On parameter groups of linear transformations*, by Nelson Dunford. (Abstract 44-3-140-t.)
39. *The representation of the solution of the generalized Dirichlet problem*, by J. W. Green. (Abstract 44-1-83-t.)
40. *On the Fourier transform of a singular function*, by Philip Hartman and R. B. Kershner. (Abstract 44-3-108-t.)
41. *On the absolute convergence of polynomial series*, by Einar Hille. (Abstract 44-3-144-t.)
42. *On semi-groups of transformations in Hilbert space*, by Einar Hille. (Abstract 44-3-143-t.)
43. *The quadric fields in the geometry of the whirl-motion group G_6* , by Edward Kasner and J. J. DeCiccio. (Abstract 44-3-110-t.)
44. *On wave motion for infinite domains*, by A. N. Lowan. (Abstract 44-3-114-t.)
45. *Bilinear transformations in Hilbert space*, by F. J. Murray. (Abstract 44-1-87-t.)
46. *On the analytic prolongation of a singular solution of the equation of Izumi*, by L. B. Robinson. (Abstract 44-3-121-t.)
47. *On the derivatives of functions analytic in the unit circle*, by Wladimir Seidel and J. L. Walsh. (Abstract 44-3-124-t.)
48. *On unbounded convex point sets*, by J. J. Stoker. (Abstract 44-3-126-t.)
49. *On the jump of a function determined by its Fourier series*, by Otto Szász. (Abstract 44-3-128-t.)
50. *Linear differential systems and linear operations analytic in a parameter*, by A. E. Taylor (National Research Fellow). (Abstract 44-3-129-t.)
51. *On bounded transformations of spaces* (preliminary report), by S. M. Ulam. (Abstract 44-3-131-t.)
52. *The law of apparition of primes in a Lucasian sequence*, by Morgan Ward. (Abstract 44-3-133-t.)
53. *On the coefficients of certain modular forms belonging to subgroups of the modular group*, by H. S. Zuckerman (National Research Fellow). (Abstract 44-3-166-t.)

T. R. HOLLCROFT,
Associate Secretary