THE OCTOBER MEETING IN NEW YORK

The three hundred eighth meeting of the American Mathematical Society was held at Columbia University, on Saturday, October 28, 1933, extending through the usual morning and afternoon sessions. The attendance included the following one hundred thirty members of the Society:

C. R. Adams, R. B. Adams, R. P. Agnew, A. A. Albert, R. L. Anderson, R. C. Archibald, R. G. Archibald, H. E. Arnold, Max Astrachan, N. H. Ball, M. F. Becker, P. A. Benitz, A. A. Bennett, G. D. Birhoff, L. M. Blumenthal, H. W. Bode, H. F. Bohnenblust, Joseph Bowden, C. B. Boyer, A. D. Bradley, H. W. Brinkmann, A. B. Brown, J. H. Bushey, R. H. Cameron, A. D. Campbell, P. A. Caris, D. J. Colbert, H. R. Cooley, H. B. Curry, F. F. Decker, J. L. Doob, Jesse Douglas, J. K. Dyer, J. M. Feld, T. S. Fiske, W. B. Fite, D. A. Flanders, M. M. Flood, Tomlinson Fort, E. T. Frankel, Orrin Frink, T. C. Fry, C. A. Garabedian, D. C. Gillespie, P. H. Graham, M. C. Graustein, W. C. Graustein, C. H. Graves, M. C. Gray, S. L. Greitzer, C. C. Grove, Laura Guggenbühl, Alan Hazeltine, G. A. Hedlund, Robert Henderson, E. H. C. Hildebrandt, Einar Hille, Lulu Hofmann, G. M. Hopper, Harold Hotelling, J. C. Hughes, Ralph Hull, R. L. Jeffery, S. A. Joffe, R. A. Johnson, Edward Kasner, L. S. Kennison, J. R. Kline, Mark Kormes, K. W. Lamson, Harry Langman, Elihu Lazarus, Solomon Lefschetz, D. H. Lehmer, E. R. Lorch, E. O. McCormick, D. L. McDonough, E. J. McShane, L. A. MacColl, Saunders MacLane, H. F. MacNeish, M. H. Martin, R. S. Martin, A. E. Meder, F. H. Miller, A. K. Mitchell, H. H. Mitchell, E. C. Molina, Morris Monsky, L. T. Moore, G. W. Mullins, C. A. Nelson, Oystein Ore, F. W. Owens, T. S. Peterson, R. S. Pieters, Walter Prenowitz, J. F. Randolph, H. W. Raudenbush, G. E. Raynor, M. S. Rees, R. G. D. Richardson, J. F. Ritt, S. L. Robinson, K. E. Rosinger, Barkley Rosser, M. F. Schmeiser, C. E. Seely, L. G. Simons, Abraham Sinkov, L. L. Smail, W. M. Smith, A. A. Stafford, Otto Szàsz, J. D. Tamarkin, J. M. Thomas, Arthur Tilley, C. C. Torrance, Annita Tuller, J. L. Vanderslice, Oswald Veblen, H. E. Wahlert, R. J. Walker, Louis Weisner, M. E. Wells, Norbert Wiener, R. L. Wilder, W. A. Wilson, D. W. Woodard, Leo Zippin.

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

Professor George Bernard Banks, Niagara University;
Mr. Garrett Birkhoff, Harvard University;
Professor John David Burk, University of Toronto;
Sister Leonarda Burke, Regis College;
Professor Leon Edward Dix, Norwich University;
Mr. Greenville D. Gore, Central Y. M. C. A. College;
Professor Leon B. Linford, Utah State Agricultural College;

Miss Isabel C. McLaughlin, Hunter College;
Dr. Robert S. Martin, National Research Fellow, University of Chicago;
Dr. Deane Montgomery, National Research Fellow, Harvard University;
Miss Sallie Elizabeth Pence, University of Kentucky;
Mr. Carl Adams Richmond, Tyngsboro, Mass.;
Dr. Gilbert de Beauregard Robinson, University of Toronto;
Miss Julia Simpson, Hunter College;
Miss Mary Margaret Taylor, Johnstown Junior College;

As Nominee of the John Hancock Mutual Life Insurance Company:

Mr. A. J. Vatter.

The Secretary announced that the following person had joined the society under the reciprocity agreement with the Deutsche Mathematiker-Vereinigung:

Professor Robert König, University of Jena.

At the meeting of the Council, held at the Faculty Club of Columbia University between the sessions, it was decided to omit the February meeting in New York and to hold a two-day meeting March 30–31. It was decided to omit the Josiah Willard Gibbs lecture in 1933.

The appointment of a Committee on Financial Policy was announced to include the following members: Professors W. C. Graustein (chairman), C. R. Adams, H. E. Buchanan, G. C. Evans, Dr. T. C. Fry, Professors L. M. Graves, E. R. Hedrick, M. H. Ingraham, Dunham Jackson, C. C. MacDuffee, G. W. Mullins, F. D. Murnaghan, H. L. Rietz, D. E. Smith, J. M. Thomas, Oswald Veblen, and W. L. G. Williams.

It was announced that a book entitled *Algebraic Functions*, by Professor G. A. Bliss of the University of Chicago, had been accepted for the Colloquium Series.

The name of Professor T. H. Rawles was substituted for that of M. H. Stone on the Committee on Arrangements for the Summer Meeting of 1934 in New Haven.

The invitation of the University of Michigan for the Summer Meeting of 1935 was accepted with thanks.

The decision to print the four major addresses at the meeting in Chicago in connection with the Century of Progress Exposition in the Bulletin rather than as a separate volume of the Colloquium Series was announced.

The Board of Trustees met at 5 P.M. in the Faculty Club of

Columbia University. The treasurer reported on the condition of the securities and asked for advice in regard to various financial matters. The budget for 1933 was revised to care for new items which had arisen. Professor H. W. Reddick and Mr. J. J. Tanzola were appointed auditors of the accounts for the year 1933.

At the request of the Program Committee, Professor R. L. Jeffery, of Acadia University, delivered at the beginning of the afternoon session an address entitled *Theories of integration.*

Titles and cross-references to the abstracts of the papers read at the regular sessions follow below. Papers whose abstract numbers are followed by the letter *t* were read by title. Professor A. A. Bennett presided at the morning session and Professor H. H. Mitchell in the afternoon. Mr. Ghent was introduced by Professor Albert.

1. *Normal division algebras over algebraic number fields not of finite degree*, by Professor A. A. Albert. (Abstract No. 39-9-239.)

2. *The web of algebraic surfaces with basis points*, by Professor T. R. Hollcroft. (Abstract No. 39–11–266-*t*.)

3. *Note to Kasner's paper on the solar gravitational field*, by Mr. Elihu Lazarus. (Abstract No. 39-11-267.)

4. *A property of cyclic substitutions of even degree*, by Dr. Abraham Sinkov. (Abstract No. 39-11-268.)

5. *A mathematical logic without variables*, by Mr. Barkley Rosser. (Abstract No. 39-11-269.)

6. *Integral solutions of* $(u^4-v^4)(x^4-y^4)=z^4-t^4$, by Professor P. A. Caris. (Abstract No. 39-9-249.)

7. *Algebraic functions of uniformly almost periodic functions* (preliminary report), by Dr. R. H. Cameron (National Research Fellow). (Abstract No. 39-11-270.)

8. *Certain differential ideals having finite basis sets in a new sense*, by Dr. H. W. Raudenbush. (Abstract No. 39-11-271.)

9. *Simply connected sets*, by Dr. R. E. Basye. (Abstract No. 39-11-272-*t*.)

10. *Structure of the Riemann multiple-space for algebroid functions*, by Dr. A. B. Brown and Professor B. O. Koopman. (Abstract No. 39-11-273-*t*.)

11. *An involutorial line transformation*, by Dr. J. M. Clarkson. (Abstract No. 39-9-251-*t*.)

12. *Concerning R. L. Moore's axiom* 5_1 (preliminary report), by Mr. F. B. Jones. (Abstract No. 39-9-254-*t*.)

13. *Concerning normal and completely normal spaces*, by Mr. F. B. Jones. (Abstract No. 39-9-253-*t*.)

14. *Two-dimensional spaces in which there exist contiguous points*, by Dr. E. C. Klipple. (Abstract No. 39-11-274-*t*.)

15. *Concerning compact continua which contain no continuum that separates the plane*, by Professor R. L. Moore. (Abstract No. 39-9-255-*t*.)

16. *Three theorems on frontiers*, by Dr. N. E. Rutt. (Abstract No. 39-11-275-*t*.)

17. *Note on a problem of Fréchet*, by Dr. Rothwell Stephens. (Abstract No. 39-9-245-*t*.)

18. *Spaces in which there exist uncountable convergent sequences of points*, by Dr. C. W. Vickery. (Abstract No. 39-11-276-*t*.)

19. *Concerning maximal sets*, by Dr. G. T. Whyburn. (Abstract No. 39-9-265-*t*.)

20. *Concerning separating points*, by Dr. G. T. Whyburn. (Abstract No. 39-9-264-*t*.)

21. *Exponential numbers*, by Professor E. T. Bell. (Abstract No. 39-9-240-*t*.)

22. *Polynomial diophantine systems*, by Professor E. T. Bell. (Abstract No. 39-9-241-*t*.)

23. *On cubic congruences*, by Professor H. R. Brahana. (Abstract No. 39-9-242-*t*.)

24. *On the isomorphisms of an abelian group of type* 1, 1, by Professor H. R. Brahana. (Abstract No. 39-9-243-*t*.)

25. *On the metabelian groups which contain a given group as a maximal invariant abelian subgroup*, by Professor H. R. Brahana. (Abstract No. 39-9-244-*t*.)

26. *Tables of irreducible polynomials for the first four prime moduli*, by Mr. W. R. Church. (Abstract No. 39-9-250-*t*.)

27. *Existence theorems for relative cyclic fields*, by Professor H. T. Engstrom. (Abstract No. 39-11-277-*t*.)

28. *A note on nilpotent algebras in four units*, by Mr. K. S. Ghent. (Abstract No. 39-11-278-*t*.)

29. *Contributions to the theory of higher congruences*, by Professor Oystein Ore. (Abstract No. 39-11-279-*t*.)

30. *On symmetric determinants*, by Professor W. V. Parker. (Abstract No. 39-11-280-*t*.)

31. *A property of self-adjoint elliptic partial differential equations*, by Dr. Max Coral. (Abstract No. 39-11-281-*t*.)

32. *Means and the complete independence of certain of their properties*, by Professor E. L. Dodd. (Abstract No. 39-11-282-*t*.)

33. *The Dirichlet integral and the sweeping-out process* (preliminary report), by Professor G. C. Evans. (Abstract No. 39-11-283-*t*.)

34. *Inferior limit of Newtonian potential at points of mass from points of empty space*, by Professor G. C. Evans. (Abstract No. 39-9-252-*t*.)

35. *On summation of derived series of the conjugate Fourier series*, by Dr. A. F. Moursund. (Abstract No. 39-9-256-*t*.)

36. *Notes on the theory and application of Fourier transforms.* V: *On entire functions*, by Dr. R. E. A. C. Paley and Professor Norbert Wiener. (Abstract No. 39-9-257-*t*.)

37. *Notes on the theory and application of Fourier transforms.* VI: *On two problems of Pólya*, by Dr. R. E. A. C. Paley and Professor Norbert Wiener. (Abstract No. 39-9-258-*t*.)

38. *Notes on the theory and application of Fourier transforms.* VII: *On the Volterra equation*, by Dr. R. E. A. C. Paley and Professor Norbert Wiener. (Abstract No. 39-9-259-*t*.)

39. *Notes on the theory and application of Fourier transforms.* VIII: *On the closure of sets of complex exponential polynomials*, by Dr. R. E. A. C. Paley and Professor Norbert Wiener. (Abstract No. 39-9-260-*t*.)

40. *On the summability of derived conjugate series of the Fourier-Lebesgue type*, by Dr. A. H. Smith. (Abstract No. 39-9-262-*t*.)

41. *A lower limit for the species of a Pfaffian system*, by Professor J. M. Thomas. (Abstract No. 39-11-284-*t*.)

42. *Note on the orthogonality of Tchebycheff polynomials on confocal ellipses*, by Professor J. L. Walsh. (Abstract No. 39-11-285-*t*.)

43. *Differentiable functions defined in closed sets.* I, by Dr. Hassler Whitney (National Research Fellow). (Abstract No. 39-9-263-*t*.)

44. *On the zeros of Hermite and Laguerre polynomials*, by Dr. Clement Winston. (Abstract No. 39-11-286-*t*.)

45. *The analytic nature of surfaces of least area*, by Dr. E. J. McShane. (Abstract No. 39-11-288.)

46. *Non-holonomic geometries*, by Mr. J. L. Vanderslice. (Abstract No. 39-11-289.)

47. *The elements of the group, I, of isomorphisms of the prime power abelian group, $g=(P_1, P_2, \cdots)$, of type $(1, 1, \cdots)$, whose periods are powers of the prime*, by Professor F. F. Decker. (Abstract No. 39-11-287.)

48. *The completely symmetric rational self-dual curve of order nine*, by Dr. D. C. Duncan. (Abstract No. 39-11-290-*t*.)

49. *An existence theorem for double integral problems of the calculus of variations*, by Dr. E. J. McShane. (Abstract No. 39-11-291-*t*.)

50. *Existence theorems for ordinary problems of the calculus of variations*, by Dr. E. J. McShane. (Abstract No. 39-11-292-*t*.)

51. *The DuBois-Reymond relation in the calculus of variations*, by Dr. E. J. McShane. (Abstract No. 39-11-293-*t*.)

52. *A classification of systems of linear differential equations of the first order with constant coefficients in two variables*, by Dr. G. B. Price. (Abstract No. 39-11-294-*t*.)

53. *On equations in mixed differences*. Part V, by Mr. L. B. Robinson. (Abstract No. 39-11-304-*t*.)

54. *Notes on the theory and application of Fourier transforms*. IX: *On non-harmonic Fourier series*, by Dr. R. E. A. C. Paley and Professor Norbert Wiener. (Abstract No. 39-9-261.)

55. *On summability of multiple sequences*, by Professor R. P. Agnew. (Abstract No. 39-9-248.)

56. *Seven postulates for euclidean geometry*, by Professor A. A. Bennett. (Abstract No. 39-11-295.)

57. *Concerning a problem of K. Borsuk*, by Professor R. L. Wilder. (Abstract No. 39-9-246.)

J. R. KLINE,
Associate Secretary