

NOTICES

OF THE

AMERICAN MATHEMATICAL SOCIETY

EDITED BY

W. T. MARTIN

G. B. PRICE

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Items for Notes should be sent to Notices of the American Mathematical Society, 80 Waterman Street, Providence 6, R.I.

The Notices of the American Mathematical Society is published seven times a year, in February, April, June, August, October, November, and December. Inquiries should be addressed to the American Mathematical Society, 450 Ahnaip Street, Menasha, Wis., or 80 Waterman Street, Providence 6, R.I.

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CALENDAR OF MEETINGS

Meeting No.	Dates in 1954	Place	Deadline for Abstracts
501	April 23-24	New York, N. Y.	March 10
502	April 30-May 1	Chicago, Ill.	March 10
503	May 1	Yosemite, Calif.	March 10
504	June 19	Portland, Ore.	May 6
505	August 31-September 3 (59th Summer Meeting)	Laramie, Wyo.	July 19
506	October 30	Cambridge, Mass.	Sept. 16
507	November 26-27	University, Ala.	Oct. 13*
508	November 26-27	Iowa City, Iowa	Oct. 13*
509	(Date not set)	Far Western (Not set)	
510	December 27-29 (61st Annual Meeting)	Pittsburgh, Pa.	Nov. 13

* Provisional

To present a paper before a meeting of the Society, it is necessary to submit an abstract. The abstract should be addressed to the American Mathematical Society, 80 Waterman Street, Providence 6, Rhode Island.

For inclusion in the program of a particular meeting, the abstract must be received in the Providence Office not later than the deadline for abstracts, as listed above.

No individual may present more than one paper in person at any meeting of the Society. The number of papers which may be presented by title is not restricted. The presentation of a paper in person is limited to ten minutes.

Anyone who is not a member of the Society must be introduced by a member in order to present a paper either in person or by title.

Papers may not be presented if published in full prior to the Society meeting or if previously presented before any learned society except the National Academy of Sciences or the Royal Society of Canada.

NOTICES OF THE AMERICAN MATHEMATICAL SOCIETY

The Council of the Society, on October 24, 1953, voted to establish a new periodical called *Notices of the American Mathematical Society*, of which this is the first issue. This periodical will appear seven times a year, in February, April, June, August, October, November, and December and will contain the following material:

- A. Notes previously appearing in the *Bulletin*, except for the list of doctorates.
- B. Lists of New Publications previously appearing in the *Bulletin*.
- C. Programs of meetings
- D. Special notices to the members of the Society.

The new journal is under the editorial supervision of the Editors of the *Bulletin* and will be sent regularly to all members of the Society as part of their membership privileges.

In establishing the *Notices*, the Council have sought to include only material of temporary interest, which would in general be discarded quickly, although it can be preserved by those who wish to.

RESEARCH PROBLEMS

A department of *Research Problems* has been established in the *Bulletin* which will publish the statements of problems whose solution would make a significant contribution to mathematical research. Problems which are suitable for publication in the problem department of the American Mathematical Monthly will not be accepted for publication in *Research Problems*. Only problems whose solutions are unknown to the author should be submitted. Furthermore, the problems desired are those for which the solution will take the form of a research paper to be accepted on its merits and published in a research journal.

The readers of the *Notices* are invited to contribute problems. Each problem should carry the name of the author and a brief title and should be written in a single paragraph in a form similar to an abstract, and in nontechnical language if possible. Relevant references should be included. All problems intended for publication should be sent to G. B. Price, University of Kansas, Lawrence, Kansas.

FIVE HUNDREDTH MEETING

New York, New York

February 27, 1954

PROGRAM

The five hundredth meeting of the American Mathematical Society will be held at Hunter College in New York City on Saturday, February 27, 1954.

Dr. Armand Borel of the Institute for Advanced Study will deliver an address on the *Topology of Lie groups and characteristic classes* in Room 300 at 2:00 P.M. by invitation of the Committee to Select Hour Speakers for Eastern Sectional Meetings.

Sessions for contributed papers will be held at 10:00 A.M. and at 3:15 P.M. in Room 300.

Hunter College is on Park Avenue between 68th and 69th Streets. It can be reached most readily by means of the Lexington Avenue subway. Guests arriving on Saturday are asked to use the 69th Street entrance. A registration desk will be found near the meeting room.

PROGRAM OF THE SESSIONS

(Time limit for each contributed paper, 10 minutes)

SATURDAY, 10:00A.M.

General Session, Room 300

- (1) Solution of differentiable equations in infinite series
Mr. V. J. Doberly (Dobroliuboff), New Rochelle, New York
- (2) Bounds for harmonic and biharmonic functions
Professor L. E. Payne and Professor H. F. Weinberger, University of Maryland
- (3) Density unbiased point estimates
Professor R. P. Peterson, University of California, Riverside
- (4) The general solution for a class of composite equations
Professor Alexander Weinstein, University of Maryland

- (15) Six-parameter O'Riordan vectors
Mr. H. W. Becker, Station WOW
- (16) Equiareal rational triangles and their Euler transforms
Mr. H. W. Becker, Station WOW
- (17) Eight-parameter conjugates of rational cuboids
Mr. H. W. Becker, Station WOW
- (18) Eight-parameter O'Riordan vectors
Mr. H. W. Becker, Station WOW
- (19) On a differential inequality
Dr. W. W. Bledsoe, Dr. M. J. Norris, and Dr. G. F. Rose,
Sandia Corporation
- (20) Dedekind sums and Lambert series
Professor Leonard Carlitz, Duke University
- (21) A note on Euler numbers and polynomials
Professor Leonard Carlitz, Duke University
- (22) A note on generalized Dedekind sums
Professor Leonard Carlitz, Duke University
- (23) An addition theorem for Lebesgue area
Professor Herbert Federer, Brown University
- (24) On the general linear group of infinite factors
Professor R. V. Kadison, Columbia University
- (25) On the forms of the predicates in the theory of constructive ordinals. II
Professor S. C. Kleene, University of Wisconsin
- (26) On the radial limits of analytic functions. I
Professor A. J. Lohwater, University of Michigan
- (27) On certain extensions of the notion of volume
Professor E. R. Lorch, Columbia University and University
of Rome
- (28) A remark on stability
Professor K. S. Miller, New York University
- (29) Groups of positivity preserving operators. Preliminary report
Professor R. S. Phillips, Yale University and University of
Southern California
- (30) A note on the abstract Cauchy problem
Professor R. S. Phillips, Yale University and University of
Southern California

- (5) A lemma on rearrangements and its application to certain delay differential equations
Professor F. H. Brownell, Institute for Advanced Study and University of Washington
- (6) On three-dimensional flows which do not possess rotational symmetry
Professor L. E. Payne, University of Maryland

SATURDAY, 2:00 P.M.

General Session, Room 300

- Topology of Lie groups and characteristic classes (One hour)
Dr. Armand Borel, Institute for Advanced Study

SATURDAY, 3:15 P.M.

General Session, Room 300

- (7) Some details concerning function rings
Mr. J. R. Isbell, Princeton University
- (8) Lie algebras of locally compact groups
Mr. R. K. Lashof, Columbia University
- (9) On derivations and differentiations in algebraic function fields of prime number characteristic
Professor Arno Jaeger, University of Cincinnati
- (10) On the embedding of surfaces of negative curvature in three-dimensional Euclidean space
Professor J. J. Stoker, New York University
- (11) Complementary surfaces for a vector field
Professor T. K. Pan, University of Oklahoma
- (12) Recursive sets of real numbers
Mr. Norman Shapiro, Princeton University
(Introduced by Professor Alonzo Church)
- (13) Lie algebra extensions and enlargements of modules. I
Dr. S. I. Goldberg, Lehigh University

SUPPLEMENTARY PROGRAM

(To be presented by title)

- (14) Some unsolvable problems about cancellation semigroups
Mr. J. W. Addison, Jr., University of Wisconsin

- (31) Logarithmic capacity of sets and double trigonometric series
Dr. V. L. Shapiro, Rutgers University and Institute for Advanced Study
- (32) m -divisible n -point connexes
Professor P. M. Swingle, University of Miami
- (33) Haar measure and the semigroup of measures on a compact group
Professor J. G. Wendel, Louisiana State University
- (34) On topologising the field $C(t)$
Dr. J. H. Williamson, Queen's University, Belfast
(Introduced by Dr. I. T. A. C. Adamson)
- (35) A class of primitive rings
Dr. K. G. Wolfson, Rutgers University
-

Titles and abstracts of papers intended for presentation before the Society should be addressed to the American Mathematical Society, 80 Waterman Street, Providence 6, Rhode Island. The deadline for inclusion in the program of any meeting and other details will be found under Official Communications on the back cover of current numbers of the *Bulletin*. Instructions for the preparation of abstracts are given on the abstract blanks which will be furnished to members on application to the Providence Office or one of the Secretaries.

In so far as correct information is available, the institution listed as the address of an author is that with which he is connected during the academic year, September 1, 1953 to July 1, 1954.

L. W. Cohen
Associate Secretary

Washington, D. C.
January 18, 1954

NOTES

Assistant Professor E. A. Davis of the University of Nevada has been awarded a Ford Foundation Fellowship and is on leave of absence at the University of Chicago.

Professor André Weil of the University of Chicago has been elected to a corresponding membership in the Academia Brasileira de Ciencias.

Mr. Brian Abrahamson of the University of Chicago has been appointed a lecturer at the University of Cape Town.

Professor Leopoldo Nachbin of the Institute for Pure and Applied Mathematics, Rio de Janeiro, is on leave of absence at the Institute for Numerical Analysis and the University of California, Los Angeles.

Mr. D. P. Baird of Cornell University has accepted a position as applied science representative with the International Business Machines Corporation, Syracuse, New York.

Dr. Gertrude Blanch of the National Bureau of Standards, Los Angeles, has accepted a position as mathematician with the Consolidated Engineering Corporation, Pasadena, California.

Dr. R. N. Bradt of Stanford University has been appointed to an assistant professorship at the University of Kansas.

Dr. R. E. Fagen of the University of Minnesota has accepted a position as member of the technical staff, Bell Telephone Laboratories, New York, New York.

Assistant Professor S. H. Gould of Purdue University is on leave of absence and has been appointed to a visiting assistant professorship at the University of Kansas.

Dr. Stanley Katz of Hydrocarbon Research, Inc., has accepted a position as senior mathematician with the Consolidated Engineering Corporation, Pasadena, California.

Dr. J. V. Lewis of the Ballistic Research Laboratories has been appointed to an associate professorship at the University of New Mexico.

Dr. C. M. Price of the University of Chicago has accepted a position as senior research engineer with North American Aviation, Inc., Los Angeles, California.

Professor R. W. Rempfet of Antioch College has been appointed to an associate professorship at Fisk University.

Assistant Professor Bertram Yood of Cornell University has been appointed to an assistant professorship at the University of Oregon.

Mr. Herman Zabronsky of the Union Carbide and Carbon Corporation has accepted a position as design engineer with the Ford Instrument Company, Long Island City, New York.

The following promotions are announced:

R. E. Chamberlin, University of Utah, to an associate professorship.

C. Cecilia Krieger, University of Toronto, to an associate professorship.

Paolo Lanzano, St. Louis University, to an assistant professorship.

The following appointments to instructorships are announced: City College, New York City: Dr Miriam A. Lipschutz-Yevick; Dartmouth College: Mr Hazleton Mirkil; University of Florida: Mr R. W. Bagley; University of Massachusetts: Mr August Newlander, Jr; University of Michigan: Dr Edwin Weiss; University of Toronto: Mr. William Moser.

Professor J. R. Abernethy of Arkansas Polytechnic College died in April, 1953 at the age of forty-nine years.

Professor Emeritus William Findlay of McMaster University died on May 7, 1953 at the age of seventy-eight years. He had been a member of the Society for fifty-two years.

Assistant Professor Jan Kalicki of the University of California, Berkeley, died on November 25, 1953 at the age of thirty-one years.

Professor J. C. C. McKinsey of Stanford University died on October 26, 1953 at the age of forty-five years. He had been a member of the Society for eighteen years.

THIRD PRINTING AUTHORIZED

The Trustees of the Society have authorized a third printing of *Fourier Transforms in the Complex Domain* by R. E. A. C. Paley and Norbert Wiener. This book, Number 19 of the Colloquium Publications, originally published in 1934 and reprinted in 1949 has been out of print for a number of months. The third printing should be available in about six weeks. Orders may be placed now. The list price will be \$4.00, postpaid, with 25% discount to members on orders placed directly with the Society.

NEW PUBLICATIONS

- Bateman, H. See Erdélyi, A.
- Bellman, R. *Stability theory of differential equations*. New York, McGraw-Hill, 1953. 13+166 pp. \$5.50.
- Bezuhov, N. I. *Teoriya uprugosti i plastičnosti*. Moscow, Gosudarstvennoe Izdatel'stvo Tehniko-Teoretičeskoj Literatury, 1953. 420 pp. 9.30 rubles.
- Bieberbach, L. *Theorie der gewöhnlichen Differentialgleichungen auf funktionentheoretischer Grundlage dargestellt*. Berlin, Springer, 1953. 9+338 pp. 36.00 DM; bound, 39.60 DM.
- Bilimović, A. See Euclid's Elements.
- Blaschke, W. *Griechische und anschauliche Geometrie*. Munich, Oldenbourg, 1953. 60 pp.
- Borel, A. *Cohomologie des espaces localement compacts, d'après J. Leray*. Zurich, École Polytechnique Fédérale, 1953. 95 pp. (mimeographed). 7.00 Swiss fr.
- Croisot, R. See Dubreil-Jacotin, M. L.
- Deschamps, G. A. *A hyperbolic protractor for microwave impedance measurements and other purposes*. Nutley, N. J., Federal Telecommunication Laboratories, 1953. 44 pp. \$2.50.
- Draper, C. S., McKay, W., and Lees, S. *Instrument engineering*. Vol. II. *Methods for associating mathematical solutions with common forms*. New York, McGraw-Hill, 1953. 28+827 pp. \$15.00.
- Dubreil-Jacotin, M. L., Lesieur, L., and Croisot, R. *Leçons sur la théorie des treillis des structures algébriques ordonnées et des treillis géométriques*. Paris, Gauthier-Villars, 1953. 8+385 pp.
- Erdélyi, A., Magnus, W., Oberhettinger, F., and Tricomi, F. G. *Higher transcendental functions*. Based in part on notes left by H. Bateman. New York, McGraw-Hill, 1953. Vol. I, 26+302 pp. \$6.50. Vol. II, 17+396 pp. \$7.50.
- Euclid's Elements*. Trans. and annotated by A. Bilimović. Belgrade, Srpska Akademija Nauka, 1953. Book III, 48 pp. Book IV, 31 pp.
- Flügge-Lotz, I. *Discontinuous automatic control*. Princeton University Press, 1953. 8+168 pp. \$5.00.
- Freudenthal, H. *Machines pensantes*. Université de Paris, 1953. 16 pp.
- Hlavatý, V. *Differential line geometry*. Trans. by H. Levy. Groningen, Noordhoff, 1953. 10+495 pp. 22.50 fl.; cloth, 25.00 fl.
- Householder, A. S. *Principles of numerical analysis*. New York, McGraw-Hill, 1953. 10+274 pp. \$6.00.
- Julia, G. *Cours de géométrie infinitésimale*. Part 1. *Vecteurs et tenseurs. Théorie élémentaire*. 2d ed. Paris, Gauthier-Villars, 1953.

- 15+102+1 pp. 2000 fr.
Kartografičeskie tablicy. 2d ed. Moscow, Izdat. Geodez. i Kartograf. Lit., 1953. 137 pp. 14.00 rubles.
- Lees, S. See Draper, C. S.
- Lesieur, L. See Dubreil-Jacotin, M. L.
- Levy, H. See Hlavatý, V.
- McKay, W. See Draper, C. S.
- McLachlan, N. W. *Complex variable theory and transform calculus with technical applications*. 2d ed. Cambridge University Press, 1953. 11+388 pp. \$10.00.
- Magnus, W. See Erdélyi, A.
- Menger, K. *Géométrie générale*. (Mémorial Scientifiques Mathématiques, no. 124.) Paris, Gauthier-Villars, 1954. 80+1 pp. 1000 fr.
- Milloux, H. *Principes, méthodes générales*. Part I. (Traité de théorie des fonctions, vol. 1.) With the collaboration of C. Pisot. Paris, Gauthier-Villars, 1953. 8+300 pp. 4500 fr.
- Nevanlinna, R. *Eindeutige analytische Funktionen*. 2d ed. Berlin, Springer, 1953. 10+379 pp. 46.50 DM; bound 49.50 DM.
- Oberhettinger, F. See Erdélyi, A.
- Orzalesi, E. See Piazzolla Beloch, M.
- Piazzolla Beloch, M. *Lezioni di matematica complementare. (La Matematica Elementare vista dall'alto.)* Ed. by E. Orzalesi. Istituto di Geometria dell'Università de Ferrara, 1953. 439 pp. 2700 Lire.
- Pisot, C. See Milloux, H.
- Plemelj, J. *Teorija analitičnih funkcij*. [Theory of analytic functions.] Lublin, Slovenska Akademija Znanosti in Umetnosti, 1953. 16+516 pp.
- Poincaré, H. *Oeuvres de Henri Poincaré*. Published under the auspices of the Académie des Sciences par la Section de Géométrie. Vol. 8. Published with the collaboration of P. Sémirot. Paris, Gauthier-Villars, 1952. 693 pp. 9000 fr.
- Reidemeister, K. *Topologie der Polyeder und Kombinatorische Topologie der Komplexe*. 2d ed. Leipzig, Geest and Portig, 1953. 11+196 pp. 14 DM.
- Riabokin, T. *On real unicursal curves*. (Department of Aeronautical Engineering, University of Minnesota, Research Report No. 86) Minneapolis, 1952. 7+124 pp.
- Sémirot, P. See Poincaré, H.
- Sen, R. N. *A course of geometry*, Calcutta University Press, 1953. 36+311 pp. 12 rupees.
- Table of natural logarithms for arguments between zero and five to six-*

teen decimal places. (National Bureau of Standards Applied Mathematics Series, no. 31.) Washington, Government Printing Office, 1953. 10 + 501 pp. \$3.25.

Tables of 10^x (antilogarithms to the base 10). (National Bureau of Standards Applied Mathematics Series, no. 27.) Washington, Government Printing Office, 1953. 8 + 543 pp. \$3.50.

Tricomi, F. G. See Erdélyi, A.

Zurmühl, R. *Praktische Mathematik für Ingenieure und Physiker.* Berlin, Springer, 1953. 10 + 481 pp. 28.50 DM.

RECENT PUBLICATION

GEOMETRY OF MOMENT SPACES, by S. Karlin and L. S. Shapley
Memoir 12, 1953, 93 pp., paperbound, \$1.50 postpaid. 25% discount on direct orders from members.

The authors use the theory of dual convex sets to investigate properties of distribution functions, nonnegative polynomials, and orthogonal systems of polynomials. The moment spaces D^n are convex bodies formed by taking the first n moments of all distribution functions on a fixed finite interval. Dual convex bodies P^n are obtained by taking the coefficients of all n th degree polynomials nonnegative on the same interval. An analysis of the boundaries, extreme points, and supporting planes of these bodies yields a sharpening of some classical results – for example, on the characterization of the distributions having a given finite set of moments, and on the representation of a nonnegative polynomial as the sum of two squares. The polynomials orthogonal with respect to a given weight function appear geometrically as points in the polynomial spaces P^{2n} dual to the moment points of the weight function. A special study is made of the geometrical properties of the Tchebycheff polynomials.

REQUEST FOR RESERVATIONS
AMERICAN MATHEMATICAL SOCIETY

Yosemite Park Meeting

May 1, 1954

Mail to:

Convention Department
Yosemite Park and Curry Co.
Yosemite National Park, California

Please reserve accommodations as indicated below:

YOSEMITE LODGE: (Convention Headquarters) European plan – no meals included – Cafeteria meal service available.

Pine and Oak Cottage rooms with private bath. New multiple type housing, radiant heat, twin beds. Maximum two persons in a room.

Per Person

- | | | |
|--------------------------|---------------------|----------------|
| <input type="checkbox"/> | One person in room | \$6.00 per day |
| <input type="checkbox"/> | Two persons in room | 6.00 per day |

Pine Cottage rooms without private bath. Showers and toilets in same building, hot and cold running water. Twin beds.

- | | | |
|--------------------------|---------------------|----------------|
| <input type="checkbox"/> | One person in room | \$6.00 per day |
| <input type="checkbox"/> | Two persons in room | 4.00 per day |

Bungalow room with enclosed attached sleeping porch, private bath. Twin beds in each room. Electric heat. Minimum three persons to a unit.

- | | | |
|--------------------------|-------------------------|----------------|
| <input type="checkbox"/> | Three persons to a unit | \$4.00 per day |
| <input type="checkbox"/> | Four persons to a unit | 3.50 per day |

Housekeeping cabins without bath, toilets or running water. Wood stoves. Completely equipped for light housekeeping. Double beds for three or more persons.

- | | | |
|--------------------------|---------------------------------|----------------|
| <input type="checkbox"/> | One person in cabin | \$3.50 per day |
| <input type="checkbox"/> | Each additional person in cabin | 1.00 per day |

Maximum of four persons in a cabin.

Bungalow rooms with private bath, electric heat, twin beds in Yosemite Lodge Annex (Camp Curry). Double and single beds for 3 persons.

- | | | |
|--------------------------|-----------------------|----------------|
| <input type="checkbox"/> | One person in room | \$6.00 per day |
| <input type="checkbox"/> | Two persons in room | 4.50 per day |
| <input type="checkbox"/> | Three persons in room | 3.75 per day |

Cut along this line.

Cabin rooms without bath, toilets or running water. Oil heat. Maximum four persons to a cabin in two double beds.

- () One person in room \$4.50 per day
- () Two persons in room 2.75 per day
- () Additional person in room 1.00 per day

Time and date of arrival

Time and date of departure

A deposit of \$5.00 per room is requested. Enclosed find \$ as deposit. Check should be made payable to *Yosemite Park and Curry Co.* Deposit will be refunded if notice of cancellation is received in Yosemite National Park at least 48 hours preceding arrival date.

* * * * *

Please type or print below the names and addresses of the persons for whom accommodations are requested.

Name and address of applicant to whom confirmation should be sent.

.....
.....

Name and address of other members of party.

Name

Address

Name

Address

Name

Address

Name

Address

Name

Address

Reservations will be filled in the order they are received. To avoid disappointment we suggest early reservation requests. Room reservations will be confirmed promptly by the *Yosemite Park and Curry Co.*

INTERNATIONAL CONGRESS OF MATHEMATICIANS 1954

General Information

The International Congress of Mathematicians will convene in Amsterdam, the Netherlands, from September 2nd to September 9th, 1954, under the auspices of *Het Wiskundig Genootschap* (the Mathematical Society of the Netherlands). The Congress will be open to all mathematicians.

The scientific program will include plenary sessions at which one hour invited addresses will be presented and sectional sessions in algebra and the theory of numbers, analysis, geometry and topology, probability and statistics, mathematical physics and applied mathematics, logic and foundations, and philosophy, history and education. The program of the sectional sessions will include half hour invited addresses and fifteen minute papers contributed by members of the Congress. A number of events, including several excursions, are being planned for entertainment.

Inquiries concerning the Congress should be addressed: Secretariat, International Congress of Mathematicians 1954, 2d Boerhaavestraat 49, Amsterdam, The Netherlands.

NEW PRINTING

RUSSIAN-ENGLISH VOCABULARY, 66 pp., paperbound, \$1.40 postpaid. 25% discount on direct orders from members.

The Russian-English vocabulary contains approximately 2800 words and includes a short sketch of Russian grammar. It is designed to assist mathematicians in reading mathematical texts in Russian. It is printed by the photo-offset process from a typewritten manuscript prepared under contract between the Society and the Office of Naval Research.

The new printing is a reprint, without material change, of the original (1950) edition.