Contents

MEETINGS

Calendar of Meetings ................................................................. 2

Program of the February Meeting in New York ......................... 3

NEWS ITEMS AND ANNOUNCEMENTS .................................... 11

PERSONAL ITEMS .................................................................. 16

NEW PUBLICATIONS ................................................................ 20

CATALOGUE OF LECTURE NOTES: Supplement No. 1 ............. 24

MEMORANDUM TO MEMBERS

Directory Changes .................................................................... 27

Published by the Society

MENASHA, WISCONSIN, AND PROVIDENCE, RHODE ISLAND

Printed in the United States of America
CALENDAR OF MEETINGS

Note: This Calendar lists all of the meetings which have been approved by the Council up to the date at which this issue of the Notices was sent to press. The meeting dates which fall rather far in the future are subject to change. This is particularly true of the meetings to which no numbers have yet been assigned.

<table>
<thead>
<tr>
<th>Meeting No.</th>
<th>Date</th>
<th>Place</th>
<th>Deadline for Abstracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>523</td>
<td>April 12–14, 1956</td>
<td>Chicago, Illinois</td>
<td>February 28</td>
</tr>
<tr>
<td>524</td>
<td>April 20–21, 1956</td>
<td>New York, New York</td>
<td>February 28</td>
</tr>
<tr>
<td>525</td>
<td>April 28, 1956</td>
<td>Monterey, California</td>
<td>March 6</td>
</tr>
<tr>
<td></td>
<td>August 20–25, 1956</td>
<td>Seattle, Washington</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(61st Summer Meeting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>November 30–December 1, 1956</td>
<td>Evanston, Illinois</td>
<td></td>
</tr>
<tr>
<td></td>
<td>December 27–29, 1956</td>
<td>Rochester, New York</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(63rd Annual Meeting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>November 28–29, 1958</td>
<td>Evanston, Illinois</td>
<td></td>
</tr>
</tbody>
</table>

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.

Entered as second-class matter at the post office at Menasha, Wisconsin. Authorization is granted under the authority of the act of August 24, 1912, as amended by the act of August 4, 1947 (Sec. 34.21, P. L. & R.). Accepted for mailing at the special rate of postage provided for in section 34.40, paragraph (d).

Items for Notes should be sent to Notices of the American Mathematical Society, 80 Waterman Street, Providence 6, R.I.
FIVE HUNDRED TWENTY-SECOND MEETING
New York, New York
February 25, 1956

--

PROGRAM

The five hundred twenty-second meeting of the American Mathematical Society will be held at Hunter College in New York City on Saturday, February 25, 1956.

Professor Everett Pitcher of Lehigh University will deliver an address on *Inequalities of critical point theory* 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 Rooms 300, 302, and 306.

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. The meeting rooms are on the third floor at the Park Avenue end of the building. A registration desk will be found near the meeting rooms.

PROGRAM OF THE SESSIONS
(Time limit for each contributed paper, 10 minutes)

SATURDAY, 10:00 A.M.

Session on Analysis, Room 300

(1) Functions integrable with respect to a finitely additive measure
Professor Solomon Leader, Rutgers University

(2) A characterization of the Lebesgue area
Dr. C. J. Neugebauer, Purdue University

(3) An axiomatization for rings of operators
Dr. Jacob Feldman, Institute for Advanced Study
(4) Holomorphic functionals and complex convexity in Banach spaces  
Dr. H. J. Bremermann, Institute for Advanced Study  
(Introduced by Professor R. D. Schafer)

(5) Topologies defined by transformations. Preliminary report  
Professor R. C. Buck, University of Wisconsin

(6) On reducing subspaces and unitary invariants of certain Volterra operators  
Professor G. K. Kalisch, University of Minnesota and Institute for Advanced Study

(7) An optimal gap theorem  
Dr. L. A. Rubel, Cornell University

(8) Applications of a certain measure of non-analyticity  
Dr. M. A. Martino, National Security Agency, Washington, D. C.

(9) A characteristic property of polynomials  
Professor A. O. Huber, University of Maryland

(10) Polynomials with prescribed values at critical points  
Professor Joseph Andruskiw, Seton Hall University

Session on Applied Mathematics, Room 306

(11) A compact method for solving a system of linear equations of any condition  
Professor I. F. Ritter, New York University

(12) Axiomatics of the binocular visual geometry  
Professor A. A. Blank, University of Tennessee

(13) On the characteristic values of a complex quadratic form  
Professor Imanuel Marx, University of Michigan

(14) On the existence of gravity waves near critical speed  
Mr. Walter Littman, New York University

(15) Successive block overrelaxation  
Mr. R. J. Arms, Dr. L. D. Gates, Jr., and Dr. Bernd Zondek, U. S. Naval Proving Ground, Dahlgren, Virginia

(16) On the integration methods of Bergman and Le Roux  
Professor J. B. Diaz and Professor G. S. S. Ludford, University of Maryland

(17) Remark on the quotient-difference algorithm of H. Rutishauser  
Professor Peter Henrici, American University
(18) Hotspot problems
   Dr. J. R. Isbell, Ballistic Research Laboratories, and Dr. W. H. Marlow, George Washington University

(19) Inequalities for eigenvalues of a free plate
   Professor L. E. Payne, University of Maryland

(20) Stresses at the boundary of a symmetrically shaped hole in an infinite plate
   Professor Margaret F. Conroy, Boston College

Session on Statistics and Probability, Geometry, and Analysis, Room 302

   Professor D. G. Austin, Ohio State University

(22) A law of large numbers for identically distributed random variables with identically distributed increments
   Professor Emanuel Parzen, Columbia University

(23) Four-space representation of the complex plane. I. The line at infinity
   Dr. D. K. Pease, University of Connecticut

(24) On the holonomy group of locally euclidean spaces
   Dr. Louis Auslander and Dr. Masatake Kuranishi, Institute for Advanced Study

(25) Projectively euclidean Hermitian manifolds. I
   Professor S. I. Goldberg, Wayne University

(26) The differential geometry of mapping spaces. II
   Dr. James Eells, Jr., Institute for Advanced Study

(27) On the differential geometry of hypersurfaces in the large
   Professor C. C. Hsiung, Lehigh University

(28) On the line-complex representation of Riemann surfaces
   Dr. Friedrich Huckemann, Harvard University
   (Introduced by Professor R. D. Schafer)

(29) Retraction of surfaces
   Professor Lamberto Cesari, Purdue University

SATURDAY, 2:00 P.M.

General Session, Room 300

Inequalities of critical point theory (One hour)
   Professor Everett Pitcher, Lehigh University
Session on Analysis, Room 300

(30) On the asymptotic solutions of a class of ordinary differential equations of the fourth order, with special reference to an equation of hydrodynamics
   Professor R. E. Langer, University of Wisconsin

(31) On singular perturbations of nonlinear systems of differential equations related to conditional stability
   Dr. J. J. Levin, Massachusetts Institute of Technology

(32) On periodic solutions of second-order linear differential equations with periodic coefficients
   Professor W. S. Loud, University of Minnesota and Massachusetts Institute of Technology

(33) The inverse matrix in summability
   Professor Albert Wilansky, Lehigh University

(34) Asymptotic forms for Whittaker functions with both parameters large
   Professor N. D. Kazarinoff, Purdue University

(35) On the inverse Sturm-Liouville problem
   Dr. R. B. Barrar, Hughes Aircraft Company

(36) A device for studying Hausdorff moments
   Dr. Chandler Davis, Kenyon and Eckhardt, Inc. and Columbia University

(37) A vector-valued random ergodic theorem
   Mr. Anatole Beck and Professor J. T. Schwartz, Yale University

(38) A theorem on mixed derivatives
   Professor George Klein, Tufts College

Session on Algebra and Theory of Numbers, Room 306

(39) A class of non-Desarguesian projective planes
   Dr. D. R. Hughes, Ohio State University

(40) Approximately finite algebras
   Dr. Harold Widom, Cornell University

(41) Lie and Jordan systems in simple rings with involution
   Professor I. N. Herstein, University of Pennsylvania

(42) Derivations of differential fields. Preliminary report
   Professor M. P. Epstein, Johns Hopkins University
(43) Finite elementary nilpotent groups of class 2
    Dr. H. K. Flesch, Cornell University

(44) Simple near-rings of differentiable transformations
    Professor D. W. Blackett, Boston University

(45) Functions of commutable linear transformations
    Mr. D. W. Robinson, Case Institute of Technology
    (Introduced by Professor R. F. Rinehart)

(46) Generalization of the concept of derivative of a metric function
    Professor R. F. Rinehart, Case Institute of Technology

(47) On the representation of Boolean rings by sets. Preliminary report
    Professor J. R. Büchi, University of Illinois

Session on Topology, Room 302

(48) Invariants of alternating link types
    Dr. R. H. Crowell, Princeton University

(49) A Vietoris mapping theorem for homotopy
    Mr. Stephen Smale, University of Michigan

(50) Test spaces for dimension $n$
    Professor B. H. McCandless, Rutgers University

(51) A function-space formulation of the switching-circuit problem
    Dr. J. P. Roth, Institute for Advanced Study

(52) A continuous curve admitting monotone open maps onto all locally connected metric continua
    Professor R. D. Anderson, University of Pennsylvania and Institute for Advanced Study

(53) Open mappings and dimension. Preliminary report
    Professor Eldon Dyer, Johns Hopkins University

(54) The second level in obstruction theory
    Professor Paul Olum, Cornell University and Institute for Advanced Study

(55) Asymptotic cycles. I
    Dr. Sol Schwartzman, Johns Hopkins University

SUPPLEMENTARY PROGRAM
    (To be presented by title)

(56) On spirals in the plane
    Mr. Steve Armentrout, University of Texas
(57) Closed level curves
   Professor Hubert Arnold, University of California, Davis

(58) On the Weierstrass-Stone approximation theorem
   Dr. Bernhard Banaschewski, McMaster University
   (Introduced by Professor D. B. Sumner)

(59) The existence and uniqueness of a uniformly most powerful unbiased randomized test for the binomial
   Professor A. A. Blank, University of Tennessee

(60) Maximal subalgebras in commutative Banach algebras
   Professor Paul Civin and Professor Bertram Yood, University of Oregon

(61) Equivalence of theta reciprocity and Gaussian sum reciprocity. I
   Professor Harvey Cohn, Wayne University

(62) One-dimensional open maps onto Cantorian manifolds
   Professor Eldon Dyer, Johns Hopkins University

(63) The differential geometry of mapping spaces. I
   Dr. James Eells, Jr., Institute for Advanced Study

(64) A theorem on principal fibre maps
   Professor Herbert Federer, Brown University

(65) The uniformly closed ideals in an $AW^*$ algebra
   Dr. Jacob Feldman, Institute for Advanced Study

(66) The solution of Post's problem by the construction of two recursively enumerable sets of incomparable degrees of unsolvability
   Mr. R. M. Friedberg, Harvard University
   (Introduced by Dr. Hartley Rogers, Jr.)

(67) The bounded topologies in locally convex topological vector spaces. Preliminary report
   Dr. Jesús Gil de Lamadrid, Ohio State University

(68) Spaces of mappings. Preliminary report
   Dr. Jesús Gil de Lamadrid, Ohio State University

(69) Projectively euclidean Hermitian manifolds. II
   Professor S. I. Goldberg, Wayne University

(70) The determination of the ergodic projection for Markov chains and processes. I
   Mr. D. G. Kendall, Oxford University, and Mr. G. E. H. Reuter, Victoria University

(71) The determination of the ergodic projection for Markov chains and processes. II
   Mr. D. G. Kendall, Oxford University, and Mr. G. E. H. Reuter, Victoria University

8
(72) Automorphisms of the Gaussian unimodular group
   Professor Joseph Landin, University of Illinois, and Professor Irving Reiner, Institute for Advanced Study

(73) Riemannian metrics associated with convex bodies and normed spaces
   Dr. Detlef Laugwitz, Mathematisches Forschungsinstitut, Germany
   (Introduced by Professor E. R. Lorch)

(74) On a nonlinear differential equation of second order. Preliminary report
   Professor W. S. Loud, University of Minnesota and Massachusetts Institute of Technology

(75) An extension of the Minkowski determinant inequality
   Professor M. D. Marcus, University of British Columbia

(76) Eigenvalue inequalities for finite matrices. I
   Professor M. D. Marcus, University of British Columbia

(77) Eigenvalue inequalities for finite matrices. II
   Professor M. D. Marcus and Professor B. N. Moyls, University of British Columbia

(78) Eigenvalue inequalities for finite matrices. III
   Professor M. D. Marcus and Professor B. N. Moyls, University of British Columbia

(79) A simplification of Tarski’s formulation of the predicate calculus
   Mr. Richard Montague and Professor Donald Kalish, University of California, Los Angeles
   (Introduced by Professor Alfred Horn)

(80) Zermelo-Fraenkel set theory is not a finite extension of Zermelo set theory
   Mr. Richard Montague, University of California, Los Angeles
   (Introduced by Professor Alfred Horn)

(81) An extension of Tarski’s notion of satisfaction
   Mr. Richard Montague and Professor Donald Kalish, University of California, Los Angeles
   (Introduced by Professor Alfred Horn)

(82) Formulations of the predicate calculus with operation symbols and descriptive phrases
   Mr. Richard Montague and Professor Donald Kalish, University of California, Los Angeles
   (Introduced by Professor Alfred Horn)
(83) Classification of mappings of compact 2-manifolds
    Professor Paul Olum, Cornell University and Institute for Advanced Study

(84) Four-space representation of the complex plane. II. Affinities
    Dr. D. K. Pease, University of Connecticut

(85) Four-space representation of the complex plane. III. Anti-affinities
    Dr. D. K. Pease, University of Connecticut

(86) An algorithm for the problem of Quine
    Dr. J. P. Roth, Institute for Advanced Study

(87) Numerical integration of $y'' = \phi(x, y, y')$ using osculatory interpolation
    Dr. H. E. Salzer, Diamond Ordnance Fuze Laboratories, Washington, D. C.

(88) Mathematics and literary composition. I
    Dr. A. R. Schweitzer, Lake Forest, Illinois

(89) Mathematics and literary composition. II
    Dr. A. R. Schweitzer, Lake Forest, Illinois

(90) Mathematics and literary composition. III
    Dr. A. R. Schweitzer, Lake Forest, Illinois

(91) Asymptotic cycles. II
    Dr. Sol Schwartzman, Johns Hopkins University

(92) Variational measure
    Dr. Maurice Sion, Institute for Advanced Study and University of California, Los Angeles

(93) Prime power representations of some classical finite groups
    Professor Robert Steinberg, Institute for Advanced Study

(94) Embedding in algebras of type I
    Dr. Harold Widom, Cornell University

(95) A new class of nonassociative algebras. Preliminary report
    Professor J. L. Zemmer, University of Missouri

R. D. Schafer
Associate Secretary

Storrs, Connecticut
January 12, 1956
NEWS ITEMS AND ANNOUNCEMENTS

SYMPOSIUM ON CALCULUS OF VARIATIONS AND ITS APPLICATIONS. This symposium, which is the eighth in the Society's series of Applied Mathematics Symposia, will be sponsored jointly by the Society and the Office of Ordnance Research. It will be held in connection with the April meeting at the University of Chicago. The sessions of the symposium will be on April 12 and 13, and the sessions of the regular meeting will occur on April 13 and 14.

There will be nine speakers. Thirty-five minutes will be devoted to each presentation and then fifteen minutes for discussion of each paper.

The tentative program is as follows:

Thursday, April 12, 1956

Morning session

Eric Reissner (MIT): (Title to be announced)

D. C. Drucker (Brown): Variational Principles in the Mathematical Theory of Plasticity

J. B. Keller (NYU): (Title to be announced)

Afternoon session

J. B. Diaz (Maryland): Upper and Lower Bounds for Eigenvalues

J. L. Synge (Dublin): Stationary Principles for Forced Vibrations in Elasticity and Electromagnetism

M. M. Schiffer (Stanford): Applications of Variational Methods in the Theory of Conformal Mapping

Friday, April 13, 1956

R. E. Bellman (Rand Corp.): Dynamic Programming and its Application to Variational Problems in Mathematical Economics

Subrahmanyan Chandrasekhar (Chicago): (Title to be announced)

E. H. Rothe (Michigan): Some Applications of Functional Analysis to the Calculus of Variations

INTERNATIONAL SYMPOSIUM ON ALGEBRAIC TOPOLOGY AND ITS APPLICATIONS. This Symposium, which will be held in Mexico City from August 6 to September 1, 1956, was first mentioned in the October 1955 issue of the Notices. Further information is now available.

The Symposium will include short courses of three or four hours, one hour addresses, and also sessions for the delivery of research papers.

The opening address will be given by Heinz Hopf.

There will be lectures as follows:
H. Cartan: (Title to be announced later.)
S. Eilenberg: Homological Algebra
F. Hirzebruch: On Homogeneous Spaces and Characteristic Classes
J. C. Moore: Algebraic Homotopy Theory
N. E. Steenrod: Cohomology Operations
J. P. Serre: Algebraic Bundles
R. Thom: Operations on Real Cohomology

There will be one-hour addresses as follows:
J. Adem: Second Order Cohomology Operations
S. S. Chern: On Analytic Fibre Bundles
R. H. Fox: Imbeddings in Three Dimensional Spaces
W. V. D. Hodge: Multiple Integrals of the Second Kind on Algebraic Varieties
W. Hurewicz: On Homotopy Groups and Fibre Spaces
W. S. Massey: Homotopy Constructions and Operations
J. C. Moore: The Status of $\pi_k(S^n)$
L. S. Pontrjagin: (Title to be announced later.)
D. C. Spencer: On Differentiable and Analytic Structures
G. Torres: The Characterization of the Alexander Polynomial of a Link
J. H. C. Whitehead: Homotopy Classification Problems
H. Whitney: The Embedding Problem

The Symposium is open to the general mathematical public. Those who attend may well desire to bring their families. Their wives will be entitled to attend the social functions and excursions.

For further information please write to: Miss Julieta Silva, Torre de Ciencias, Piso 6°, Mexico 20, D. F., Mexico.

JOINT MEETING OF THE OPERATIONS RESEARCH SOCIETY OF AMERICA AND THE SOUTHERN CALIFORNIA CHAPTER OF THE INSTITUTE OF MANAGEMENT SCIENCES. This meeting, which will be held on the Westwood Campus of the University of California, Los Angeles, on Friday and Saturday, March 30 and 31, 1956, was announced in the December 1955 issue of the Notices. The Council of the American Mathematical Society has now voted to cosponsor this joint meeting.

DIVISION OF FLUID DYNAMICS OF THE AMERICAN PHYSICAL SOCIETY. There will be a meeting of the Division of Fluid Dynamics in Pasadena, California on March 19, 20, and 21, 1956. The meeting
will be held at the California Institute of Technology. The deadline for submitting abstracts of papers is February 17, 1956. The abstracts, of no more than 200 words, should be prepared in duplicate. They should be sent as early as possible to F. N. Frenkiel, Applied Physics Laboratory, The Johns Hopkins University, Silver Spring, Maryland.

THE FOURTH CONGRESS OF ROUMANIAN MATHEMATICIANS, organized by the Academy of the Roumanian People’s Republic, will be held in Bucharest on May 27 to June 4, 1956. Lodgings and meals for official guests and other participants will be provided at reasonable prices through the care of the Organizing Committee. The address of the Organizing Committee is: Academia R. P. R., Comitetul de organizare al celui de al IV-lea Congres al matematicienilor romîni, Calea Victoriei 125, București – Roumania (R. P. R.)

SUMMER INSTITUTE FOR HIGH SCHOOL TEACHERS OF MATHEMATICS. During the first term of the summer session of the University of Minnesota, the Department of Mathematics will conduct a program in the basic and applied aspects of mathematics as these are related to the pedagogical needs of high school teachers. Scholarships covering tuition and living expenses will be available. Six credits in the Graduate School will be given to those who have been admitted to the Graduate School and who satisfactorily complete the work in the program. These credits will be applicable toward advanced degrees for those whose major subject is Education and whose minor subject is Mathematics and for those whose major subject is Mathematics. Those interested in the institute should write to B. R. Gelbaum, Associate Professor of Mathematics, 119 Folwell Hall, University of Minnesota, Minneapolis 14, Minnesota.

FOREIGN STUDY GRANTS OF THE INSTITUTE OF INTERNATIONAL EDUCATION. Opportunities for foreign study in seventeen countries are listed in Foreign Study Grants, 1956–57, pamphlet published today by the Institute of International Education, 1 East 67th Street, New York City.

Fellowships at the University of Ceylon and the Free University of Berlin, scholarships for summer study in Austria and England, study awards for artists, musicians and active labor union members are described in the 20-page booklet. Other awards administered by the Institute are also listed. These have been offered by universities, private groups and governments in Europe, the Middle East, Asia and Latin America. More detailed information on these grants is available from
the Institute in New York or from its regional offices in Chicago, Den­ver, Houston, Los Angeles, San Francisco and Washington.

Earliest deadline for applications is January 15 for the two awards at the University of Ceylon and for one award for advanced study in Brazil. February 1 is the closing date for the French Government awards and for the art and music fellowships offered by the Wooley Foundation. Closing dates of other competitions are in February, March, April and May.

General eligibility requirements for the fellowships and scholarships, designed mainly for graduate students, are U.S. citizenship; proof of good academic record and capacity for independent study; good charac­ter, personality, and adaptability; and good health. Ability to read, write and speak the language of the country of study is a requirement for most competitions.

A private donor will give six grants for study in Spain. Other coun­tries in which awards are available are Austria, Brazil, Ceylon, Cuba, Denmark, Great Britain, France, Germany, Iran, Israel, Italy, the Nether­lands, Sweden and Switzerland. Competitions have closed for awards in Columbia and Mexico.

The Institute of International Education administers exchange pro­grams for public and private agencies in the U.S. and abroad. Each year approximately 4,000 persons from 80 countries study or train in a country other than their own through Institute programs.

INDUSTRIAL RESEARCH FELLOWSHIPS OF THE INTERNATION­AL BUSINESS MACHINES CORPORATION. International Business Ma­chines Corporation has announced that it will award industrial research fellowships to enable recipients to continue their academic research programs beyond the doctoral level. The grants will be made annually by a special awards committee headed by Dr. Arthur L. Samuel, re­search advisor at IBM, and assisted by an advisory panel of scientists and educators.

The program will support significant research which might not other­wise be undertaken and although projects need not have direct bearing on IBM’s development program, preference will be given to proposals which fall within the company’s broad range of interest and can be con­tinued without difficulty in IBM research laboratories.

Fellows will be provided with working space at the company’s Poughkeepsie Laboratory, where they will be permitted to attend inter­nal seminars and meetings and share in the use of all facilities, including the IBM 704 Electronic Data Processing Machine installed there.
They will receive financial support, individually determined, and will be provided with the full time assistance of one or more technicians, as required by their programs.

In addition to Dr. Samuel, the following have been appointed to the IBM Post-Doctoral Fellowship Awards Committee: Dr. Wallace J. Eckert, director, Watson Scientific Computing Laboratory; Dr. Lloyd P. Hunter, manager, Physical Research Department, IBM Research Laboratory, Poughkeepsie; Nathaniel Rochester, manager, Information Research Department, Poughkeepsie Laboratory; and Dr. Llewellyn H. Thomas, senior staff member, Watson Scientific Computing Laboratory.

A NEW ELECTRONIC COMPUTER CENTER FOR THE GEORGIA INSTITUTE OF TECHNOLOGY. The Georgia Institute of Technology dedicated its new one million dollar Rich Electronic Computer Center on Friday, December 2, 1955. This is believed to be the first electronic computation laboratory located at a southern institution of higher learning.

The Rich Electronic Computer Center project was initiated at the Georgia Institute of Technology in March of 1954 when the Rich Foundation of Atlanta made a grant to the Institute to purchase an electronic computer. The Rich grant required that the institution should furnish operating expenses and a building to house the machine. The Rich grant was thereupon matched by the Georgia Tech Research Institute, a nonprofit organization working with the Engineering Experiment Station of the Georgia Institute of Technology.

The original plan was to purchase a medium-scale, high-speed digital computer and then construct a large-scale, high-speed machine on the campus. However, the Sperry-Rand Corporation made available to the Georgia Institute of Technology their machine known as the ERA 1101, an offer which the Institute accepted. Later a medium-scale, high-speed electronic computer was purchased from the National Cash Register Company.

The Rich Electronic Computer Center is directed by Dr. Eugene K. Ritter.

APPLIED MECHANICS REVIEWS. Information has been received to the effect that the special reduced subscription rate of $10.00 which has been extended in the past to the members of the American Mathematical Society has been discontinued. The regular subscription rate is $25.00 per year.
PERSONAL ITEMS

Dr. Robert Baer of Purdue University was awarded a research grant of Purdue University for the summer of 1955.

Professor L. M. Blumenthal of the University of Missouri spent the academic year 1954–1955 on a Fulbright Lectureship at the University of Leiden, Leiden, The Netherlands.

Professor J. A. Dieudonné of Northwestern University has been elected to a corresponding membership in the Academia Brasileira de Ciências, Rio de Janeiro.

Visiting Professor G. H. Handelman of Rensselaer Polytechnic Institute is to lead a new program of research sponsored by the Air Force Office of Scientific Research, Air Research and Development Command, Baltimore, Maryland.

Associate Professor L. L. Scott of the University of Mississippi is visiting scholar at the University of California on a Ford Foundation Fellowship.

Professor Alfred Tarski of the University of California, Berkeley, has been awarded a Guggenheim Fellowship. He will be spending part of the year in Berkeley and part of the year in Europe.

Dr. Daniel Waterman of Purdue University was awarded a research grant of Purdue University for the summer of 1955.

Mr. P. N. Armstrong of International Business Machines Corporation has accepted a position as engineer with The Magnavox Company, Santa Monica, California.

Mr. J. M. Bachar, Jr. of Northwestern University has accepted a position as research mathematician with Northrop Aircraft, Incorporated, Hawthorne, California.

Mr. Jonas Beraru of Reeves Instrument Corporation has accepted a position as member of the technical staff with Hughes Aircraft Company, Culver City, California.

Mrs. May C. Blackstock of West Virginia University has been appointed Dean of Women and Assistant Professor at Shorter College.

Dr. E. E. Blanche of American University is serving as president and senior research scientist with Ernest E. Blanche and Associates, Rockville, Maryland.

Associate Professor C. F. Christ of The Johns Hopkins University has been appointed to an associate professorship at The University of Chicago.

Assistant Professor Margaret F. Conroy of Washington University has been appointed to an assistant professorship at Boston College.

Dr. Philip Cooperman of the Research Corporation, Bound Brook,
New Jersey has accepted a position as mathematician with Gulf Research and Development Company, Pittsburgh, Pennsylvania.

Assistant Professor E. A. Davis of the University of Nevada has been appointed to an assistant professorship at the University of Utah.

Assistant Professor M. D. Davis of the University of California, Davis has been appointed to an assistant professorship at The Ohio State University.

Mr. C. E. Duncan has been appointed political officer with the State Department, Washington 25, D. C.

Dr. D. O. Ellis of The Rand Corporation has accepted a position as senior research scientist with The National Cash Register Company, Hawthorne, California.

Assistant Professor J. C. Freeman, Jr. of the Agricultural and Mechanical College of Texas is a consultant in applied mathematics and meteorology with Gulf Consultants, Houston, Texas.

Dr. D. L. Fuller of the American Cyanamid Company has accepted a position as director of research with Grace Chemical Research and Development Company, New York, New York.

Mr. P. A. Gillis of Columbia University has accepted a position as mathematician with Remington Rand, Incorporated, New York, New York.

Dr. George Gioumousis of the University of Wisconsin has accepted a position as chemist with the Shell Development Company, Emeryville, California.

Dr. Richard Goldberg of Dartmouth College has accepted a position as programmer with International Business Machines Corporation, New York, New York.

Professor Ralph Hull of Purdue University is on leave of absence as consultant at the Ramo-Wooldridge Corporation, Los Angeles, California.

Dr. Stanley Katz of the Electro Data Corporation has accepted a position with the American Cyanamid Company, New York, New York.

Professor M. S. Knebelman of the State College of Washington has been appointed Associate Dean of Natural Sciences.

Mr. Seymour Landau of the University of Connecticut has accepted a position as actuary with the New York City Transit Authority.

Dr. Paul Malliavin of the Institute for Advanced Study has been appointed to an assistant professorship at the University of Caen, Caen, France.

Dr. W. A. Michael, Jr. of Northwestern University has accepted a position as applied science representative with International Business Machines Corporation, San Francisco, California.

Mr. A. H. Miller of Rutgers University has accepted a position as
physicist with Electronics Corporation of America, Cambridge, Massachusetts.

Mr. G. M. Muller of General Electric Company has accepted a position as mathematician at the Stanford Research Institute, Menlo Park, California.

Mr. M. A. Oliver of Bennington College has accepted a position as mathematician with Aircraft Marine Products, Incorporated, Harrisburg, Pennsylvania.

Associate Professor Ingram Olkin of Michigan State University has been appointed to a visiting associate professorship at The University of Chicago.

Mr. H. I. Ottoson of Tri-State College has accepted a position as mathematician with Lockheed Aircraft Corporation, Burbank, California.

Mr. John Raleigh of the University of Pennsylvania has been appointed to an assistant professorship at Lafayette College, Easton, Pennsylvania.

Dr. W. C. Randels of Lockheed Aircraft Corporation has accepted a position as manager operations research with Crown Cork and Seal Company, Baltimore, Maryland.

Dr. G. F. Rose of Sandia Corporation has accepted a position as staff member with the Ramo-Wooldridge Corporation, Los Angeles, California.

Dr. R. T. Shield of the Ministry of Supply, Kent, England has been appointed to an assistant professorship at Brown University.

Dr. D. T. Sigley of The Johns Hopkins University has accepted a position as associate director of the Engineering Laboratories, American Machine and Foundry Company, Greenwich, Connecticut.

Dr. H. A. Steinberg of Yale University has accepted a position as aerodynamicist with Republic Aviation Corporation, Farmingdale, New York.

Dr. E. A. Walker of the University of Kansas has accepted a position as mathematician with the National Security Agency, Washington, D.C.

Professor C. R. White of the State Colored Normal, Industrial, Agricultural and Mechanical College of South Carolina has accepted a position as mathematician with the Weapon Systems Laboratory, Aberdeen Proving Ground, Maryland.

*The following promotions are announced:*

H. L. Alder, University of California, Davis, to an associate professorship.

Leonard Bristow, Wisconsin State College, Oskosh, to a professorship.
Chester Feldman, Purdue University, to an assistant professorship.
Dr. S. M. Foulks, Field Research Laboratories of Magnolia Petroleum Company, to senior research mathematician.
P. E. Irick, Purdue University, to an associate professorship.
J. H. B. Kemperman, Purdue University, to an associate professorship.
E. N. Lorenz, Massachusetts Institute of Technology, to an assistant professorship in meteorology.

The following appointments to instructorships are announced:
Brooklyn Polytechnic Institute: Mr. P. E. Klebe;
University of California, Los Angeles: Dr. J. B. Butler, Jr.;
University of Chicago: Dr. D. A. Buchsbaum;
Harvard University: Dr. Kenneth Rogers;
The Johns Hopkins University: Dr. Sol Schwartzman;
University of Kansas: Mr. G. B. Pedrick;
Long Beach City College: Mr. R. V. Benson;
University of Maryland: Miss Ellen Correl;
University of Minnesota: Dr. W. B. Stenberg;
Mount Holyoke College: Dr. T. H. M. Crampton;
Ohio State University: Dr. Jesus Gil de Lamadrid;
University of Wisconsin: Dr. E. R. Fadell;
Yale University: Dr. R. J. Nunke.

Deaths:
Dr. Ethelwynn R. Beckwith of Milwaukee, Wisconsin died on August 30, 1955 at the age of seventy-seven years. She had been a member of the Society for thirty-two years.
Professor Emeritus I. S. Carroll of Syracuse University died on October 17, 1955 at the age of seventy-seven years. He had been a member of the Society for twenty-eight years.
Mr. N. S. Fan of Washington University died on October 26, 1955 at the age of thirty-six years.
Professor Emeritus H. P. Manning of Brown University died on January 11, 1956 at the age of 96 years. He had been a member of the Society for thirty-five years.
Professor Emeritus M. O. Tripp of Wittenberg College died on November 30, 1955 at the age of eighty-one years. He had been a member of the Society for forty-two years.
NEW PUBLICATIONS


Boron, L. F. See Riesz, F.


Burau, W. See Coxeter, H. S. M.


Haight, F. A. *Index to the distributions of mathematical statistics.* Auckland University College, 1955. 51 pp. (mimeographed)
Hall, M. See Mann, H. B.
Hirsch, K. A. See Kurosh, A. G.
Kibiel, I. A. See Kotschin, N. J.
Lees, S. See Draper, C. S.
McKay, W. See Draper, C. S.
MacMahon, P. A. See Klein, F.
Mann, H. B. *Introduction to algebraic number theory.* With a chapter by M. Hall. Columbus, Ohio State University Press, 1955. 7+168 pp.
Mordell, L. J. See Klein, F.


Panow, D. J. *Formelsammlung zur numerischen Behandlung partieller Differentialgleichungen nach dem Differenzenverfahren*. Berlin, Akademie-Verlag, 1955. 10+130 pp. 12.00 DM.

Patz, W. *Tafel der regelmässigen Kettenbrüche und ihrer vollständigen Quotienten für die Quadratwurzeln aus den natürlichen Zahlen von 1-10000*. Berlin, Akademie-Verlag, 1955. 11+1210 pp. 58.00 DM.


Rose, N.W. See Kotschin, N. J.


Sheppard, W. F. See Klein, F.

Sz.-Nagy, B. See Riesz, F.


Zippen, L. See Montgomery, D.
CATALOGUE OF LECTURE NOTES ON MATHEMATICS TOPICS

Supplement No. 1

HAVERFORD COLLEGE

The following items may be ordered from: Mathematics Department, Haverford College, Haverford, Pennsylvania

Lectures given at Haverford College. Topics include: elementary functions, convex functions, Riemann integral, transcendentality of $\pi$ and $e$, inequalities, Peano curve. Limited quantity

R. JAMES, *Combinatorial topology of surfaces*, 39 pp. A paper based on lectures given at Haverford College by A. Tucker

F. MURNAGHAN, *Matrix groups (theory of group representations)*. Lectures given at Haverford College

The following item may be ordered from: University Microfilms, 313 N. First Street, Ann Arbor, Michigan

A. W. TUCKER, *Elementary combinatorial topology*. Microfilm. Notes of lectures given at Haverford College and some related material

$2.70

UNIVERSITY OF KENTUCKY

The following item may be ordered from: J. C. Eaves, Mathematics and Astronomy Department, University of Kentucky, Lexington, Kentucky.

Only a few copies are available. *Plus postage


4.00*

UNIVERSITY OF MARYLAND

Institute for Fluid Dynamics and Applied Mathematics

The following items are mimeographed publications of public lectures and proceedings of seminars held at the Institute for Fluid Dynamics and Applied Mathematics. Remittances should accompany orders. They should be made payable to the University of Maryland and addressed to Reba A. Turner, Secretary, Institute for Fluid Dynamics and Applied Mathematics, University of Maryland, College Park, Maryland
Lecture:

No. 1. J. KAMPE DE FERIET, *Mathematical methods used in the statistical theory of turbulence: Harmonic analysis*  
$2.20

No. 2. S. GOLDSTEIN, *Linearized theory of supersonic flow* .50

No. 3. F. N. FRENKIEL, *Turbulence* 2.15

No. 4. G. K. BATCHelor, *Turbulent diffusion* .40

No. 5. JOHN L. SYNGE, *The relativity theory of A. N. Whitehead* 1.40

No. 6. S. GOLDSTEIN, *Statistical theory of turbulence* .80

No. 7. J. KAMPE DE FERIET, *Atmospheric turbulence* .65

No. 8. J. KAMPE DE FERIET, *Introduction to the statistical theory of turbulence correlation and spectrum* 2.25

No. 9. J. L. SYNGE, *Hamilton’s methods in geometrical optics* 1.70


No. 11. LARS GARDING, *Applications of the theory of direct integrals of Hilbert spaces to some integral and differential operators* 1.15


No. 13. S. R. de GROOT, *The thermodynamics of irreversible processes* .60


No. 18. J. B. DIAZ, *Inequalities and minimal principles in mathematical physics* 1.15

No. 19. S. CHAPMAN, *Thermal diffusion* .60

No. 20. S. CHAPMAN, *Ionized gases in magnetic fields* .50

No. 21. S. CHAPMAN, *Some cosmical problems in gas dynamics* .50

No. 22. H. G. KUESsNER, *On the mathematical treatment of movements of the earth’s crust* 1.10

No. 23. H. G. KUESsNER, *A review of the two-dimensional problems of unsteady lifting surface theory during the last thirty years* 1.15

No. 24. D. C. SPENCER, *On Green’s operators* 1.15

No. 25. FRITZ JOHN, *On behavior of solutions of partial differential equations* 1.15


No. 28. E. W. MONTROLL, *Topics in statistical mechanics of interacting particles*  $1.60$

No. 29. RUDOLPH E. LANGER, *On the asymptotic solutions of ordinary linear differential equations about a turning point*  $0.50$

No. 30. WILLIAM R. SEARS, *Some aerodynamic problems of compressors and turbines*  $1.25$

No. 31. HANNES ALFVEN, *Magnetic storms and aurorae*  $1.60$

**UNIVERSITY OF MONTREAL**

*The following item may be ordered from:* The Institute of Mathematics, University of Montreal, P. O. Box 6128, Montreal, Quebec, Canada

ISTVAN FARY, *Topological foundations of geometry, 7 pp.* Text, with bibliography, of a lecture given in December 1955 containing unpublished original work  $0.10$

**PRIVATELY AVAILABLE**

*The following item may be ordered from:* Mr. H. V. McIntosh, 105-G Rodman Road, Aberdeen, Maryland

H. V. McINTOSH, *Matrix analysis I, Mathematical introduction* and *Matrix analysis II, Physical applications,* 215 pp., dittoed, stapled. Lecture notes used in seminars at Cornell University and Colorado Agricultural and Mechanical College  $3.00$

**ERRATUM**

It has been called to our attention that the December 1955 issue of the *Notices* on page 26 contains an error in pricing. The correct price for Leray's notes on *Hyperbolic differential equations* is $4.16$
DIRECTORY CHANGES

Any member of the Society who has not informed the Providence Office of changes in position or rank should fill out the form below and send it to the Providence Office. In particular, if there are errors in your listing in the 1955 Directory, it would be appreciated if they are called to our attention now.

Changes in mailing address must be reported at least thirty days before the change becomes effective, in order to avoid the payment of forwarding postage on your journals. Such changes should also be reported on the form below.

Name in full ....................................................................................................
(Please print) Last First Middle or Maiden
( )Mr. ( )Miss ( )Mrs. ........................................................................... Husband's Initials

Highest earned degree ..............................................................................
My regular employer is ............................................................................
Address of this employer is ......................................................................

My regular position is .............................................................................. Organizational title and rank
I was appointed to this position in .............................................................. Year of present rank
But at present I have a temporary position with:
.................................................................................................................. as ........................................................................................ Organizational title and rank
Employer Organizational title and rank
The mailing address for my journals UNTIL FURTHER NOTICE is as follows:
..................................................................................................................