

NOTES

A grant of \$10,000 has been made to the 1950 International Congress of Mathematicians by UNESCO to be used for transportation expenses of foreign mathematicians attending the Congress. A Conference which it is hoped will lead to the formation of an International Mathematical Union will be held just before the Congress. UNESCO has made an additional grant of \$10,000 for transportation of delegates to this Conference.

The second summer seminar and the second quadrennial congress of the Canadian Mathematical Congress were held at the University of British Columbia from August 16 to September 10, 1949. The seminar consisted of four lecture series of eight lectures each and four expository courses of fifteen lectures each. In addition there were sub-seminars in pure and applied mathematics. The second congress included two lecture series of three lectures each, eight additional lectures, and a number of short research papers. A full report of these meetings will appear in the Proceedings of the Canadian Mathematical Congress of 1949.

The Institute for Teachers of Mathematics sponsored by the Association of Teachers of Mathematics in New England will be held at Tufts College August 22–29, 1950.

The Council of the Royal Society of Edinburgh has announced the award of the Keith Prize for the period 1947–1949 to Professor A. G. Walker of the University of Sheffield, for his papers on the general theory of relativity published in the Proceedings of the Society within the period and in recognition of his distinguished contributions to Riemannian geometry.

Professor J. E. Littlewood of Cambridge University is retiring and will be succeeded by Professor A. S. Bessicovitch.

Dr. Shmuel Agmon of the National Research Center in Paris has been appointed as visiting lecturer in mathematics at the Rice Institute.

Assistant Professor L. A. Aroian of Hunter College has accepted a position with Hughes Aircraft Company, Culver City, California.

Dr. Emilio Baiada of the University of Pisa is on leave of absence and has been appointed to a visiting professorship at the University of Cincinnati.

Associate Professor Joseph Barnett of Oklahoma Agricultural and Mechanical College has retired with the title associate professor emeritus.

Professor M. A. Biot of Brown University is now a member of the firm of consultants, Biot and Arnold, New York, New York.

Professor D. H. Blackwell of Howard University is on leave and has been appointed to a visiting professorship at Stanford University.

Mr. Joseph Blum of the Los Alamos Scientific Laboratories has accepted a position with the National Bureau of Standards, Washington, D. C.

Dr. R. P. Boas, Executive Editor of *Mathematical Reviews*, has been appointed to a professorship at Northwestern University.

Associate Professor J. W. Calkin of Rice Institute is on leave of absence at the Los Alamos Scientific Laboratories.

Dr. Ion Carstoiu of the University of Paris has been appointed to an assistant professorship at Johns Hopkins University.

Professor Lamberto Cesari of the University of Bologna is on leave and has been appointed to a visiting professorship at the University of Wisconsin.

Professor Patrick Du Val of the University of Istanbul, has been appointed to a professorship at the University of Georgia.

Mr. G. W. Evans of New York University has accepted a position as associate mathematician with the Argonne National Laboratory, Chicago, Illinois.

Mr. H. H. Goode of the Office of Naval Research has accepted a position as supervisor, Aeronautical Research Center, at the University of Michigan.

Professor M. R. Hestenes of the University of California at Los Angeles is on leave and has been appointed a visiting staff member at the National Bureau of Standards.

Mr. H. A. Hill has accepted a position as mathematician with the National Bureau of Standards, Washington, D. C.

Dr. S. T. Hu of the Academia Sinica has been appointed lecturer at Tulane University.

Associate Professor F. B. Jones of the University of Texas has been appointed to a professorship at the University of North Carolina.

Assistant Professor William Karush of the University of Chicago has accepted a position as mathematician with the Institute for Numerical Analysis, National Bureau of Standards.

Professor E. S. Kennedy of the American University of Beirut, Lebanon, is on leave and has accepted a Rockefeller Fellowship at the Institute for Advanced Study.

Dr. Jacob Korevaar of the Mathematical Center in Amsterdam has been appointed visiting lecturer at Purdue University.

Mr. R. M. Lakness has been appointed lecturer at the University of California.

Dr. Nathan Lazar of Teachers College, Columbia University, has been appointed to an associate professorship of education at Ohio State University.

Associate Professor Eugene Leimanis of the University of Riga, Latvia, has been appointed to an assistant professorship at the University of British Columbia.

Professor Emeritus W. R. Longley of Yale University has been appointed to a visiting professorship at Haverford College.

Professor J. N. Michie of Texas Technological College has retired.

Mr. J. L. Miller is now associated with the Mathematical Computing Service, Brooklyn, New York.

Mr. C. N. Mooers is now owner and director of research of the Zator Company in Boston.

Dr. G. K. Overholtzer of the University of Kansas has been appointed to an assistant professorship at Purdue University.

Professor F. W. Owens of Pennsylvania State College has retired with the title emeritus.

Assistant Professor Helen B. Owens of Pennsylvania State College has retired.

Mr. T. K. Pan has been appointed lecturer at the University of California.

Professor W. V. Parker of the University of Georgia has been appointed to a professorship at Alabama Polytechnic Institute.

Mr. G. W. Petrie of Bethlehem Steel Company has accepted a position with International Business Machines, Philadelphia, Pennsylvania.

Dr. H. E. Rauch of Rutgers University is now a member of the Institute for Advanced Study.

Dr. T. D. Reynolds of Duke University has accepted a position as Director of Instruction for schools in Buncombe County, North Carolina.

Assistant Professor Fritz Rothberger of Acadia University has been appointed to an assistant professorship at the University of New Brunswick.

Mrs. Mollie A. Rubenstein has accepted a position as statistician with Michigan State College.

Dr. W. C. Sangren of the University of Michigan has been appointed to an assistant professorship at Miami University.

Professor A. C. Schaeffer of Purdue University is on leave and has been appointed to a visiting professorship at Carnegie Institute of Technology.

Miss Esther Seiden has been appointed lecturer at the University of California.

Mr. D. J. Smith of the University of Notre Dame has accepted a position with the Royal-Liverpool Groups of Insurance Companies, New York, New York.

Assistant Professor W. H. Smith of the University of Chicago has been appointed to an associate professorship at Bluefield State College, Bluefield, West Virginia.

Dr. R. G. Stanton of the University of Michigan has been appointed lecturer at the University of Toronto.

Dr. N. P. Yeardley of the University of Cincinnati has been appointed to an assistant professorship at Purdue University.

The following promotions have been announced:

F. S. Beale, Lehigh University, to an associate professorship.

I. W. Burr, Purdue University, to a professorship.

Eckford Cohen, Syracuse University, to an assistant professorship.

S. P. Diliberto, University of California, to an assistant professorship.

Bernard Epstein, University of Pennsylvania, to an assistant professorship.

Caspar Goffman, University of Oklahoma, to a professorship.

Mary E. Haller, University of Washington, to an associate professorship.

J. L. Hodges, University of California, to an assistant professorship.

Nathan Jacobson, Yale University, to a professorship.

J. W. Lawson, University of Manitoba, to Acting Dean of Arts and Sciences.

P. E. Lewis, North Carolina State College, to an associate professorship.

Sophia L. McDonald, University of California, to a professorship.

W. H. McEwen, University of Manitoba, to Dean of the Faculty of Graduate Studies and Research.

A. P. Morse, University of California, to a professorship.

A. E. Trabant, Purdue University, to an assistant professorship.

M. L. Vest, West Virginia University, to an associate professorship.

Fumio Yagi, University of Washington, to an assistant professorship.

The following appointments to instructorships are announced: University of British Columbia: Dr. T. E. Hull; University of California: Dr. H. B. Ribeiro; Catholic University of America: Dr. Meyer Jerison; Iowa State College of Agriculture and Mechanic

Arts: Mr. R. N. Goss; Iowa State Teachers College: Miss Dorothy DeWitt; Johns Hopkins University: Mr. A. C. Smith; Lehigh University: Mr. B. C. Kenny, Mr. Michael Tikson; University of North Carolina: Mr. Leo Moser; Oberlin College: Mr. M. E. White; Oklahoma Agricultural and Mechanical College: Dr. C. J. Clark, Dr. Arthur Zeichner; Pennsylvania State College: Mr. J. D. E. Konhauser, Mr. E. F. Ormsby; Purdue University: Dr. C. C. Goldman; Rensselaer Polytechnic Institute: Mr. J. C. Gibson, Dr. M. R. Spiegel; University of Southern California: Dr. Harold Shniad; University of Utah: Mr. R. E. Janssen; University of Washington: Mr. G. E. Uhrich; Yale University: Dr. D. T. Finkbeiner.

Professor Constantin Carathéodory of the University of Munich died February 2, 1950 at the age of seventy-six years.

Professor Emeritus J. A. Eiesland of West Virginia University died March 11, 1950 at the age of eighty-three years. He had been a member of the Society for fifty years.

Dr. E. D. Hellinger of Illinois Institute of Technology died March 28, 1950 at the age of sixty-six years. He had been a member of the Society for eleven years.

Mr. Alfred Korzybski of the Institute of General Semantics died the week of March 6, 1950 at the age of seventy years. He had been a member of the Society for twenty-four years.

Professor C. E. Wilder of Dartmouth College died on February 9, 1950 at the age of sixty-one years. He had been a member of the Society for thirty-four years.

The following one hundred and thirty-nine doctorates, with mathematics, mathematical physics, or statistics as a major subject, were conferred during 1949 in universities in the United States and Canada. The university, month in which degree was conferred, minor subject (other than mathematics) and the title of the dissertation are given in each case if available.

F. S. Acton, Carnegie Institute of Technology, June, minor in chemical engineering, *The coupling of two cylindrical acoustical ducts*.

R. V. Andree, Wisconsin, June, *A development of the g -adic numbers of Hensel*.

Julius Aronofsky, Pittsburgh, June, *Investigation of the necked region for flat bars of ductile metals*.

Helmut Aulbach, Syracuse, June, *Some geometrical inequalities for sets in Hilbert space*.

W. E. Barnes, Cornell, June, minor in electronics, *Abel transforms and partial sums of Tauberian series*.

Isaac Battin, New York, February, *On the use of triangular nets*

and generalized differences in the solution of the first boundary value problem for the Laplace equation in the plane.

Howard Bergmann, New York, February, *The boundary layer problem for certain nonlinear ordinary differential equations.*

R. R. Bernard, Virginia, June, *Probability in dynamical transformation groups.*

W. A. Blankinship, Princeton, June, *Generalization of a construction of Antoine.*

H. D. Block, Iowa State, June, minor in physics, *Explicit solutions of certain singular integral equations.*

W. M. Boothby, Michigan, June, *A topological study of the level curves of harmonic functions.*

F. E. Bortle, Iowa State, December, minors in electrical engineering and physics, *Analytical study of dynamic loads on elastically supported slabs.*

R. H. Bott, Carnegie Institute of Technology, June, minor in electrical engineering, *Electrical network theory.*

Evelyn Boyd, Yale, June, *On Laguerre series in the complex domain.*

R. A. Bradley, North Carolina, June, *Sampling distributions for non-normal universes.*

F. H. Brownell, Princeton, June, *Non-linear difference differential equations.*

H. E. Campbell, Wisconsin, June, *An extension of the "principal theorem" of Wedderburn.*

O. S. Carpenter, Iowa State, June, minor in economics, *Sequential tests of the linear hypothesis.*

E. D. Cashwell, Wisconsin, February, *The asymptotic solutions of an ordinary differential equation in which the coefficient of the parameter is singular.*

Uttam Chand, North Carolina, June, *On certain composite hypotheses concerning regression coefficients and means.*

D. G. Chapman, California, June, I. *Applications of the hypergeometric distribution to sample census problems.* II. *A class of lower bounds for the variance of an estimate.*

M. T. Cheng, Princeton, June, *On the uniqueness theorem of multiple trigonometrical series.*

Peter Chiarulli, Brown, June, *Stability of two-dimensional velocity distributions of the half-jet type.*

T. T. Chung, Cornell, June, *On the sums of independent random variables.*

R. A. Clark, Massachusetts Institute of Technology, June, minor in civil engineering, *On the theory of thin elastic toroidal shells.*

P. A. Clement, California at Los Angeles, June, *Generalized convexity and inequalities in grossen of functions on surfaces of negative curvature.*

H. J. Cohen, Wisconsin, June, *Concerning homogeneous plane continua.*

Jane S. Cronin, Michigan, February, *Branch points of solutions of equations in Banach space.*

J. M. Danskin, California, September, *On the existence of minimizing surfaces in parametric problems in the calculus of variations.*

Robert Davies, Wisconsin, June, *Vibration of a rod weighted at one end.*

A. S. Day, Yale, June, *On an operational calculus for unbounded operators.*

M. D. Donsker, Minnesota, August, minor in physics, *The invariance principle for Wiener functionals.*

Avron Douglis, New York, February, *Some existence theorems for hyperbolic systems of partial differential equations in two independent variables.*

R. F. Dressler, New York, February, *Mathematical solution of the problem of roll-waves in inclined open channels.*

J. C. Eaves, North Carolina, August, *On quasi k^1 commutative matrices.*

R. H. Edwards, Illinois Institute of Technology, June, *Stress concentrations due to spheroidal inclusions.*

F. E. Ehlers, Brown, October, *The transonic flow through a de Laval nozzle.*

H. E. Ellingson, Iowa, February, *Problems involving a third order differential equation and irregular boundary conditions.*

J. H. Engel, Wisconsin, June, *Some contributions to the solution of the word problem for groups (canonical forms in hypoabelian groups).*

A. E. Engelbrecht, Iowa State, August, minor in aeronautical engineering, *Coupled bending and torsional free vibration of a swept wing.*

Mary E. Estill, Texas, May, minor in philosophy, *Concerning abstract spaces.*

M. W. Eudey, California, June, I. *On the treatment of discontinuous random variables.* II. *Statistical model for comparing two methods of diagnosis.*

R. M. Exner, Syracuse, August, *Surfaces invariant under motions.*

D. T. Finkbeiner, California Institute of Technology, June, minor in physics, *A general dependence relation and its application to lattice imbeddings.*

Morton Finston, Brown, June, *Thermal effects in calendering viscous fluids.*

H. M. Flanders, Chicago, September, *Unification of class field theory.*

Walter Fleming, Minnesota, July, minor in physics, *The double Wiener integral of a function of a certain quadratic functional.*

J. R. Foote, Massachusetts Institute of Technology, June, minor in aeronautical engineering, *On the stability of certain unsymmetric two-dimensional parallel flows.*

Abraham Franck, Minnesota, June, minor in physics, *Analytic functions of bounded type.*

D. A. S. Fraser, Princeton, June, *Generalized hit probabilities with a Gaussian target.*

Gerald Freilich, Brown, June, *On the measure of cartesian product sets.*

E. J. Frey, Massachusetts Institute of Technology, September, minor in physics, *On the flow of heat through a slotted wall.*

W. B. Fulks, Minnesota, June, *On integral representations and uniqueness of solutions of the heat equation.*

David Gale, Princeton, June, *Solution of finite two-person games.*

I. C. Gentry, Duke, June, minor in physics, *On extending a homeomorphism defined over subsets of 2-dimensional orientable manifolds.*

C. C. Goldman, Cincinnati, June, *On multiple Fourier series.*

S. R. Göldner, New York, February, *Existence and uniqueness theorems for two systems of non-linear hyperbolic differential equations for functions of two independent variables.*

D. B. Goodner, Illinois, October, minor in education, *Projections in normed linear spaces.*

F. G. Graff, Pittsburgh, January, *Limits to the characteristic roots of a matrix.*

F. E. Grubbs, Michigan, June, *Sample criteria for testing outlying observations.*

H. L. Harter, Purdue, August, minor in physics, *On the distribution of Wald's classification statistic.*

N. S. Hawley, Princeton, June, *Homogeneous and complex manifolds.*

J. L. van Heijenoort, New York, June, *On locally convex surfaces.*

G. P. Henderson, Toronto, November, *Curves in Euclidean space of four dimensions.*

P. G. Hodge, Brown, June, I. *On torsion of plastic bars.* II. *Approximate solutions of problems of plane plastic flow.*

L. Aileen Hostinsky, Illinois, June, minor in education, *Endomorphisms and direct decompositions in lattices*.

T. E. Hull, Toronto, June, *The factorization method and problems in quantum mechanics*.

Eugene Isaacson, New York, February, *Water waves over a sloping bottom*.

M. P. Jarnagin, Duke, June, minor in physics, *Open non-alternating at most two-to-one transformations of connected linear graphs*.

J. G. Kemeny, Princeton, June, *Type theory vs. set theory*.

V. L. Klee, Virginia, June, *Convex sets in linear spaces*.

George Laush, Cornell, September, minor in physics, *Relations among the Weierstrass methods of summability*.

Peter Lax, New York, June, *Non-linear system of hyperbolic partial differential equations in two independent variables*.

F. C. Leone, Purdue, June, minor in psychology, *Some extensions of Bayes' theorem*.

B. W. Lindgren, Minnesota, June, minor in physics, *An integral on the space of functions which are real and continuous but otherwise unrestricted on the unit interval*.

H. D. Lipsich, Cincinnati, June, *On hypergeometric summability*.

S. C. Lowell, New York, June, *Propagation of waves in shallow water*.

Myles McConnon, Pittsburgh, September, *The effect of the anharmonic potential terms on the energy of a one dimensional lattice*.

L. E. Malvern, Brown, October, *The propagation of longitudinal waves of plastic deformation in a bar of material exhibiting a strain-rate effect*.

J. S. Mamelak, Pittsburgh, September, *A singular integral equation*.

W. P. Manger, Massachusetts Institute of Technology, June, minor in aeronautical engineering, *On the foundations of the theory of thin elastic shells*.

W. R. Mann, California, June, *Researches in the mathematical theory of heat transfer between solids and gases under non-linear boundary conditions*.

Immanuel Marx, New York, February, *Type numbers of unstable minimal surfaces spanned in polygonal contours*.

W. S. Massey, Princeton, January, *Classification of mappings of an $n+1$ -dimensional space into an n -sphere*.

R. C. Meacham, Brown, October, *Theory of creep in pin-jointed trusses*.

B. C. Meyer, Stanford, June, minor in chemistry, *On spherical harmonics with a given crystallographic symmetry*.

E. P. Miles, Duke, June, minor in physics, *A minimal problem for harmonic functions in space.*

W. H. Mills, Princeton, June, *Prime power reciprocity in algebraic number fields.*

Yeh Mo, Washington, December, *Foci of plane and spherical curves.*

H. H. Mostafa, Syracuse, December, *On flows governed by simplified gas dynamical equations.*

C. E. Mullan, Pittsburgh, September, *A method of approximating the probability distribution of generating capacity forced outages in electric light and power systems.*

T. D. Newton, Princeton, June, *Localized states for elementary systems.*

Helen K. Nickerson, Harvard, June, *Studies of overconvergence.*

Louis Nirenberg, New York, June, *The determination of a closed convex surface having given line element.*

D. A. Norton, Wisconsin, August, *Hamiltonian loops.*

Bernard Ostle, Iowa State, August, minor in economics, *On certain criteria for optimum estimation.*

T. K. Pan, California, June, *Hypergeodesics and dual hypergeodesics.*

C. E. Pearson, Brown, October, *Bifurcation criterion and plastic buckling of plates and columns.*

Leslie Peck, New York, February, *Diophantine equations in algebraic number fields.*

C. L. Perry, Michigan, June, *The bending of thin elliptic plates.*

G. W. Petrie, Lehigh, October, *Axially symmetric stress distribution in a solid of revolution.*

F. J. Polansky, Minnesota, July, minor in physics, *Some approximation theorems in conformal mapping.*

J. F. Price, Oregon State, June, minor in physics, *Systems of rational differential equations.*

R. C. Prim, Princeton, June, *Steady rotational flow of ideal gases.*

Sister Miriam Frances Quinn, Catholic University, June, minors in physics and philosophy, *An investigation of the number of in- and circumscribed quadrilaterals in the plane quartic curve with one or more nodes.*

Gordon Raisbeck, Massachusetts Institute of Technology, June, minor in physics, *Summability: Diophantine approximations.*

L. T. Ratner, California at Los Angeles, June, *On multi-valued transformations.*

L. L. Rauch, Princeton, June, *Oscillation of a third order non-linear autonomous system.*

J. H. Raymond, Washington, August, *An extension of Chebyshev's inequality.*

J. K. Reckzeh, Kentucky, August, *Modification of the first necessary condition in the calculus of variations for the parametric non-homogeneous case.*

I. S. Reed, California Institute of Technology, June, minor in physics, *Quadratic differential equations in Banach spaces and analytic functionals.*

C. L. Riggs, Kentucky, June, *On the scedastic curve of a compound surface.*

L. G. Riggs, Northwestern, August, minor in physics, *Partially bounded J -fractions.*

E. K. Ritter, Virginia, June, *Second differentials of functions in exterior ballistics.*

R. C. Roberts, Brown, October, *Unsteady one-dimensional flow of a compressible fluid through a porous medium.*

Murray Rosenblatt, Cornell, June, minor in physics, *On distributions of certain Wiener functionals.*

J. A. Rottenberg, Toronto, June, minor in physics, *Stellar exteriors—a study of radiation problems in mathematical physics.*

Walter Rudin, Duke, June, minor in physics, *Uniqueness theory for Laplace series.*

Charles Saltzer, Brown, October, *On the numerical determination of the conformal mapping function of a nearly circular region.*

Esther Seiden, California, September, I. *On a problem of confounding in symmetrical factorial design.* II. *Contribution to the theory of tests of composite hypotheses.*

M. C. Sholander, Brown, October, I. *On the existence of the inverse operation in alternation groupoids.* II. *On certain minimum problems in the theory of convex curves.*

Annette Sinclair, Illinois, June, minor in education, *Generalization of Runge's theorem to approximation by analytic functions.*

M. L. Slater, Harvard, February, *Hausdorff measure in abstract metric spaces.*

E. V. Somers, Pittsburgh, September, *Mathematical investigation of cooperative phenomena.*

E. J. Specht, Minnesota, March, minor in physics, *Estimates on the mapping function and its derivatives in conformal mapping of nearly circular regions.*

M. R. Spiegel, Cornell, June, *On the random vibrations of harmonically bound particles in a viscous medium.*

George Springer, Harvard, June, *The coefficient problem for univalent mappings of the exterior of the unit circle.*

R. G. D. Steel, Iowa State, June, minor in genetics, *Minimum generalized variance for a group of linear functions.*

A. F. Strehler, Wisconsin, June, *The generalization of the Moebius mu-function to a partially ordered set.*

C. M. Tyler, Pittsburgh, June, minor in engineering, *Solution of the lifting line and lifting surface integral equations by the relaxation method.*

J. L. Ullman, Stanford, September, *Studies on Faber polynomials.*

C. E. Vogeley, Pittsburgh, January, *An investigation of an analysis of a simple waveguide discontinuity.*

D. D. Wall, California, September, *Normal numbers.*

Shianghaw Wang, Princeton, January, *On Grundwald's theorem.*

Maria A. Weber, Cornell, February, minor in physics, *The solution of a differential equation of parabolic type.*

Anne M. Whitney, Pennsylvania, June, *On the positivity of translation determinants for Pólya frequency functions with an application to the interpolation problem by spline curves.*

C. W. Williams, Virginia, June, *Transformation groups and recurrence.*

V. M. Wolontis, Harvard, June, *Properties of conformal invariants.*

N. P. Yearley, Cincinnati, June, *The representation of an analytic function by a general Laguerre series.*

The following four doctorates were conferred in 1948, but were not included in the list in the preceding volume of this Bulletin (vol. 55, pp. 536-542).

Leon Henkin, Princeton, February, *The completeness of formal systems.*

E. D. Nering, Princeton, October, *Reduction of an algebraic function field modulo a prime in the constant field.*

H. E. Rauch, Princeton, February, *Generalizations of some classic theorems to the case of functions of several variables.*

J. E. Walsh, Princeton, February, *Some significance tests for the median which are valid under very general conditions.*