NOTES

The following one hundred doctorates, with mathematics or mathematical physics as a major subject, were conferred during 1941 in universities in the United States and Canada; the major subject is mathematics unless otherwise specified. The university, month in which the degree was conferred, minor subject (other than mathematics), and the title of the dissertation are given in each case if available.

J. C. Abbott, Notre Dame, August, *The projective theory of non-euclidean geometry.*

R. L. Anderson, Iowa State, June, minors in statistics and economics, *Serial correlation in the analysis of time series.*

Elizabeth S. Arnold, California (Berkeley), December, *On certain projective properties of the configurations of m general hyperplanes in hyperspace.*

K. J. Arnold, Massachusetts Institute of Technology, June, minor in economics, *On spherical probability distributions.*

J. D. Bankier, Rice, June, *Arithmetical continued fractions.*

C. B. Barker, California (Berkeley), December, *The Lagrange multiplier rule for two dependent and two independent variables.*

J. H. Bell, Wisconsin, March, *Topics related to the factorization of matrices.*

T. J. Benac, Yale, June, *The associativity condition for linear associative algebras.*

W. D. Berg, Iowa, August, *Theorems on certain type-A difference-equation graduations.*

F. C. Biesele, Texas, June, *Substitutes for the commutative law in the theory of semi-groups.*

D. H. Blackwell, Illinois, June, minor in physics, *Some properties of Markhoff chains.*

E. E. Blanche, Illinois, June, major in statistics, minor in economics, *A systematic analysis of frequency distributions by the Edgeworth method.*

E. L. Buell, Massachusetts Institute of Technology, June, minor in

physics, *Solution of some problems in plane stress using functions of a complex variable.*

P. B. Burcham, Northwestern, June, *Certain inclusion relations in the domain of Hausdorff methods of summation.*

I. W. Burr, Michigan, June, *Cumulative frequency functions.*

Ethel B. Callahan, Columbia, April, *Some properties of the system of trajectories defined by equations* $\ddot{X} = \Phi(X, Y)$, $\ddot{Y} = \Psi(X, Y)$.

P. W. Carruth, Illinois, June, minor in astronomy, *Valuations with given residue class field and value group.*

A. B. Carson, Chicago, August, *An analogue of Green's theorem for multiple integral problems in the calculus of variations.*

Mary D. Clement, Chicago, August, *Loci of osculants of asymptotic plane sections of a surface.*

A. C. Cohen, Jr., Michigan, June, *Estimation of parameters in truncated Pearson frequency distributions.*

Esther Comegys, Radcliffe, June, *Sufficient conditions for applicability of Riemannian spaces.*

E. L. Crow, Wisconsin, June, *The expansion problem associated with an ordinary differential equation of the first order which is quadratic in the parameter.*

Benjamin Epstein, Illinois, June, minor in physics, *On a certain class of transforms.*

G. E. Forsythe, Brown, June, *Summability of random variables.*

David Gilbarg, Indiana, June, minor in physics, *On the structure of the group of* $\mathfrak{P}$*-adic* 1*-units.*

F. G. Gravalos, Harvard, June, *The algebraic integrals of Hill's equations.*

P. E. Guenther, Harvard, June, *On a canonical form for the linear homogeneous q-difference equations.*

W. W. Gutzman, Iowa, August, *On the distribution of means of middle items.*

Margaret M. Hansman, Illinois, February, minors in physics and statistics, *A geometric investigation into metabelian groups generated by four elements of order P.*

W. J. Harrington, Cornell, June, *A study of certain functions auxiliary to Brun's method in number theory.*

J. G. Herriot, Brown, June, I. *Cesàro summability of ordinary double Dirichlet series.* II. *Nörlund summability of double Fourier series.*

G. P. Hochschild, Princeton, June, *Semi-simple algebras and generalized derivations.*

F. E. Hohn, Illinois, October, minor in physics, *Curves on Cayley's dianodal surface.*

C. T. Hsu, Columbia, June, *Tests of certain statistical hypotheses concerning bivariate normal populations.*

H. B. Huntington, Princeton, June, major in mathematical physics, *Mechanisms for self-diffusion in a copper lattice.*

L. W. Johnson, Princeton, January, *A linear algebraic theory of complexes.*

R. E. Johnson, Wisconsin, June, *Rings of infinite matrices and polynomial rings.*

H. F. S. Jonah, Purdue, June, minor in mathematical physics, *Congruences connected with the solution of a certain diophantine equation.*

Irving Kaplansky, Harvard, June, *Maximal fields with valuations.*

Lois Kiefer, Illinois, June, minor in astronomy, *A radial analysis of the structure of the Milky Way in Auriga, based on star counts and color excesses.*

E. R. Kolchin, Columbia, September, *On the exponents of differential ideals.*

David Krabill, Ohio State, August, *Matrices whose elements are functions of one variable.*

H. N. Laden, Pennsylvania, June, *An application of the classical orthogonal polynomials to the theory of interpolation.*

J. P. LaSalle, California Institute of Technology, June, minor in physics, *Pseudo-normed linear sets over valued rings.*

S. J. Lawwill, Cincinnati, June, *Concerning harmonic functions especially with reference to the theory of approximation.*

Jeanne S. LeCaine, Radcliffe, June, *On the generalized gamma function and its analogue for q-difference equations.*

H. L. Lee, Duke, June, *Power sums of polynomials in a Galois field.*

Joseph Lehner, Pennsylvania, June, *A partition function connected with the modulus five.*

R. J. Levit, California (Berkeley), May, *Characterizations of fields as systems of single composition.*

C. B. Lindquist, Wisconsin, September, *Rectangular isotropic and anisotropic plates under forces in their planes.*

D. B. Lloyd, Catholic University, February, minors in physics and education, *Some properties of rational quintic equations.*

L. A. Lorch, Cincinnati, June, *Some problems in Borel summability of Fourier series.*

Leonard McFadden, Brown, October, *Absolute Nörlund summability.*

Rhoda Manning, Stanford, June, minor in biochemistry, *On the derivatives of the sections of bounded power series.*

A. E. Marston, California (Berkeley), December, *A linear elliptic partial differential equation whose leading coefficients may vanish at a point.*

F. L. Martin, Chicago, August, *Integral domains in quartic fields.*

Herman Meyer, Chicago, June, *Polynomial approximations to functions defined on abstract spaces.*

E. J. Mickle, Ohio State, June, *Hamiltonian and quasi-Hamiltonian functions associated with double integral variation problems.*

D. D. Miller, Michigan, February, *Extension and reduction theorems for certain types of continuous transformations.*

D. S. Miller, Cornell, September, *Some properties of Carathéodory and Gillespie linear measure.*

G. T. Miller, Purdue, June, minors in statistics and mathematical physics, *Analytic continuation of functions defined by factorial series.*

Harlan C. Miller, Texas, June, *On compact unicoherent continua.*

Philip Newman, Columbia, June, *The geometry of the planar* (2, 2) *connex.*

E. H. Nicholson, Washington University, June, minor in physics, *On the degree of approximation in some convergence theorems concerning derivatives of the mapping function in conformal mapping.*

E. N. Nilson, Harvard, June, I. *Interpolation and approximation to an analytic function by functions analytic and bounded in a region.* II. *Approximation to a harmonic function by functions harmonic and bounded in a region.*

C. G. A. Nordling, Massachusetts Institute of Technology, June, minor in mechanical engineering, *Solution by polynomial approximation of the integral equation for the circulation around an airfoil.*

Sister Jeanette Obrist, Catholic University, February, minors in physics and botany, *A problem arising from the special symmetric correspondence C_2 set up by the rational quartic curve with two cusps.*

R. E. O'Connor, Harvard, June, *Representation of integers by power-products of two real numbers.*

J. W. Odle, Michigan, February, *Non-alternating and non-separating transformations modulo a family of sets.*

O. G. Owens, California (Berkeley), May, *An explicit formula for the solution of the ultrahyperbolic equation in four variables.*

A. S. Peters, New York, June, minor in physics, *On a simply supported-free half-plane plate and a clamped infinite-sector plate.*

Anatol Rapoport, Chicago, December, *Construction of non-abelian fields with prescribed arithmetic.*

G. E. Reves, Cincinnati, June, *On the absolute convergence of double Fourier series.*

C. E. Rickart, Michigan, June, *Integration in a convex, linear topological space.*

L. A. Ringenberg, Ohio State, March, *On functions of intervals.*

F. E. Satterthwaite, Iowa, August, *Developments on the theory of Chi-square.*

L. J. Savage, Michigan, June, *The application of vectorial methods to the study of distance spaces.*

Ivor Schilansky, Michigan, June, *On generalized zeta functions and their associated lattice point problems.*

W. M. Scott, Michigan, February, *On matrix algebras over an algebraically closed field.*

D. M. Seward, Duke, June, minor in physics, *Harmonic continuation in space.*

Ernst Snapper, Princeton, January, *Structure of linear sets.*

C. D. Solin, Toronto, June, *Positive ternary quadratic forms of determimant* $\leqq 200$, *and positive ternary quadratic forms in genera of one class.*

R. H. Sorgenfrey, Texas, June, *Concerning triodic continua.*

A. H. Sprague, Princeton, January, *Surfaces whose lines of curvature are nets R, and their transformations.*

C. F. Strobel, Illinois, June, minor in physics, *The quadrilinear form* (1, 1, 1, 2).

R. L. Swain, Texas, June, I. *Proper and reductive-transformations.* II. *Continua obtained from sequences of simple chains of point sets.* III. *Distance axioms in Moore spaces.* IV. *Linear metric space.* V. *A space in which there may exist uncountable convergent sequences of points.*

C. J. Thorne, Iowa State, June, minor in physics, *The approximate solution of linear differential equations by the use of functionals.*

L. V. Toralballa, Michigan, June, *The sum of the values of a rational function of s variables over the set of all the n-partite permutational partitions of a given positive integer.*

W. R. Transue, Lehigh, October, minor in physics, *Contributions to the theory of subharmonic functions.*

J. R. Vatnsdal, Michigan, February, *Minimal variance and its relation to efficient moment tests.*

L. I. Wade, Jr., Duke, June, minor in philosophy, *Certain quantities transcendental over the field* $GF(p^n, x)$.

Muriel Wales, Toronto, June, *Theory of algebraic functions based on the use of cycles.*

Dzung-shu Wei, Iowa, February, *Necessary and sufficient condi-*

tions that regression systems of sums with elements in common be linear.

William Wernick, New York, June, minor in physics, *Complete sets of logical functions.*

R. L. Westhafer, Ohio State, August, *Singular solutions of ordinary differential equations of the first order.*

G. W. Whitehead, Jr., Chicago, June, *Homotopy properties of the real orthogonal groups.*

P. M. Whitman, Harvard, June, *Free lattices.*

W. F. Whitmore, California (Berkeley), May, *Convergence theorems for functions of two complex variables.*

W. D. Wray, Cornell, June, *Some applications of uniformity trials.*

Paul Young, Ohio State, August, *On the approximation of functions by integral means.*

Professor J. L. Gibson of the University of Utah has retired with the title professor emeritus.

Assistant Professor Max Astrachan of Antioch College has been promoted to an associate professorship and made chairman of the department of mathematics.

Dr. Alfred Basch of Holy Cross College has accepted a position at the College of Paterson, Paterson, New Jersey.

Assistant Professor T. C. Benton of Pennsylvania State College has been promoted to an associate professorship.

Associate Professor J. E. Davis of Drexel Institute of Technology has been promoted to a professorship.

Associate Professor M. A. Hill of the University of North Carolina has been promoted to a professorship.

Assistant Professor Nathan Jacobson of the University of North Carolina has been promoted to an associate professorship.

Professor R. D. James of the University of Saskatchewan is at the University of Wisconsin for the second semester of this current academic year.

Dr. A. E. Marston of the University of California has accepted a position at Compton Junior College, Compton, California.

Associate Professor F. C. Ogg of Bowling Green State University has been promoted to a professorship.

Dr. Arthur Rosenthal has been appointed to a lectureship at the University of New Mexico.

Professor M. H. Stone has been appointed chairman of the department of mathematics at Harvard University, succeeding Professor J. L. Walsh.

Assistant Professor Antoni Zygmund of Mount Holyoke College has been appointed visiting assistant professor at the University of Michigan for the second semester of the current academic year.

Mr. C. L. Carroll of the Georgia School of Technology is on leave at the University of North Carolina.

Assistant Professor B. E. Gatewood of Louisiana Polytechnic Institute is on leave and with MacDonnell Aircraft Corporation.

Professor W. R. Hutcherson of Berea College is on leave at Brown University.

Professor H. W. March of the University of Wisconsin is on leave of absence.

Professor F. W. Owens of Pennsylvania State College is on leave of absence.

Professor Mary E. Sinclair of Oberlin College is on leave of absence.

Dean T. M. Putnam and Assistant Professor B. C. Wong of the University of California are on leave of absence.

Professor H. C. Carver, Assistant Professor P. S. Dwyer, Professor C. E. Love, and Associate Professor J. A. Nyswander of the University of Michigan are on leave of absence.

The following appointments to instructorships are announced: Massachusetts Institute of Technology: Dr. J. P. LaSalle; University of Wisconsin: Dr. R. E. Johnson, Dr. R. L. Swain.

Miss Frances Hardcastle of Stocksfield-on-Tyne, England, died December 26, 1941. She had been a member of the Society since 1894.

Professor R. L. Charles of Franklin and Marshall College died December 13, 1941, at the age of fifty-six years.

Professor W. V. N. Garretson of Oklahoma Agricultural and Mechanical College died January 17, 1942, at the age of sixty-five years.

Dr. Robert Henderson died February 16, 1942. Until his retirement he had been vice president of Equitable Life Assurance Society of the United States. Dr. Henderson joined the American Mathematical Society in 1910 and served on its Board of Trustees for many years. A more complete notice will appear later in this Bulletin.

Dr. E. R. van Kampen of Johns Hopkins University died February 11, 1942.

Dr. E. J. Maurus, who was professor of mathematics at the University of Notre Dame from 1897 to 1939, died November 26, 1941, at the age of sixty-nine years.