NOTES

The following individuals were among those who received doctorates during 1954 in the mathematical sciences and related subjects from universities in the United States and Canada. The university, month in which the degree was conferred, minor subjects (other than mathematics), and title of the dissertation are given in each case if available.


J. E. Adney, Ohio State, June, *On the power of a prime dividing the order of the group of automorphisms.*


S. L. Andersen, North Carolina State, June, *Robust tests for variances and effect of non normality and variance heterogeneity on standard tests.*

F. W. Anderson, Iowa, August, *A lattice characterization of completely C-spaces.*

Louis Auslander, Chicago, June, *Contributions to the curvature theory of Finsler spaces.*

Maurice Auslander, Columbia, May, *Relative cohomology theory of groups and continuations of homomorphisms.*


A. V. Balakrishnan, Southern California, May, *On powers of the infinitesimal generators of groups and semigroups of linear bounded transformations.*


Evelyn M. Bender, Massachusetts Institute of Technology, June, minor in modern languages, *Some generalizations of the Krull ramification theory for rings.*

Dean C. Benson, Iowa State, December, minor in physics, *Regularization of certain systems of differential equations.*

Donald C. Benson, Stanford, June, *Extensions of a theorem of Loewner on integral operators.*
W. J. Berger, Carnegie, June, *Special calculational methods in matrix theory.*


Allan Birnbaum, Columbia, April, *Characterizations of complete classes of tests of some multiparametric hypotheses, with applications to likelihood ratio tests.*

R. C. Blanchfield, Princeton, October, *Intersection theory of manifolds with operators with applications to knot theory.*


R. N. Bradt, Stanford, *On the design and comparison of certain dichotomous experiments.*

Barron Brainerd, Michigan, June, *An algebraic theory of probability with applications to analysis and mathematical logic.*


Leo Breiman, California, Berkeley, June, *Homogenous processes.*

E. H. Brown, Jr., Massachusetts Institute of Technology, September, minor in humanities, *Finite computability of the homotopy groups of finite groups.*


C. F. Brumfiel, Purdue, August, minor in physics, *Noetherian minimal bases and equations with prescribed groups.*


D. A. Buchsbaum, Columbia, May, *Exact categories and duality.*

C. C. Buck, Michigan, February, *The algebraic aspect of integration in space.*

M. D. Burrow, McGill, May, *A generalization of the method of Young operators and its use in constructing primitive idempotents for the representation of GL(2, q).*

J. B. Butler, Jr., California, Berkeley, June, *On the behavior of an analytic operator in Banach space in the neighborhood of a singular point.*

S. G. Campbell, Syracuse, June, *On a class of non linear partial differential equations.*


J. H. Case, Tulane, August, *Some relations between induced homomorphisms on homology and cohomology groups.*
Anna Chandapillai, Wisconsin, June, *The distribution of characteristic values of a linear boundary problem of the second order based on a differential equation with a turning point.*


N. A. Childress, Florida, June, minor in education, *Surfaces obtained from involutions generated by homographies of periods three, five and thirteen.*

R. R. Christian, Yale, June, *On integration with respect to a finitely additive measure whose values lie in a Dedekind complete partially ordered vector space.*


A. H. Copeland, Jr., Massachusetts Institute of Technology, September, minor in physics, *On the composability of mapping classes.*

W. R. Cowell, Wisconsin, August, *Quasinormal kernels of loops.*

Arno Cronheim, Illinois, June, minors in logic and philosophy, *Motion groups of planes.*

R. B. Crouch, Kansas, October, minor in education, *Monomial groups.*


P. P. Crump, North Carolina State, June, *Optimal designs to estimate the parameters of a variance component model.*


H. F. Davis, II, Massachusetts Institute of Technology, June, minor in physics, *Decomposition theorem for the Haar integral.*

Cyrus Derman, Columbia, March, *Some contributions to the theory of Markov chains.*


L. I. Deverall, Utah, August, minor in mechanical engineering, 1. *Solution of some problems in bending of thin plates by the finite Fourier sine transform.* 2. *Some relations involving the special functions of mathematical physics.*


R. J. Dickson, California Institute of Technology, June, minor in
aeronautics, *Bounds for solutions of some non-linear parabolic problems.*

J. J. Dunne, Notre Dame, June, minor in chemistry, *Theory of games in the extensive form.*


A. R. Eckler, Princeton, June, *Rotation sampling.*

D. E. Edmondson, California Institute of Technology, June, minor in aeronautics, *Homomorphisms of a modular lattice.*


Jacqueline P. Evans, Harvard, March, *An approximation and interpolation by functions analytic in a given region and an application to orthonormal systems.*

A. G. Fadell, Ohio State, December, *Accessibility in Euclidean N-space with application to differentiability theorems.*

W. M. Faucett, Tulane, August, *Topological semigroups and continua.*

W. J. Feeney, Catholic, June, minors in physics and philosophy, *Certain unsolvable problems in the theory of cancellation semi-groups.*

Jacob Feldman, Chicago, June, *Isomorphisms of rings of operators.*

E. H. Feller, Wisconsin, June, *The lattice of submodules of a module over a noncommutative ring.*

W. J. Firey, Stanford, June, *On ballistically closed regions.*

J. E. Fischer, St. Louis, June, *Quaternary-binary representations in quadratic forms.*

Harvey Fletcher, Jr., Utah, March, minor in physics, *Trigonometric series applied to bending of thin rectangular plates.*


G. E. N. Fox, McGill, May, *Topology in the field of p-adic numbers.*

Phyllis A. Fox, Massachusetts Institute of Technology, February, minor in electrical engineering, *On the use of coordinate perturbations in the solution of physical problems.*

Elvy L. Fredrickson, Oregon State, June, minor in the college teaching program, *Application of the Schmidt theory to nonlinear integral equations.*

R. A. Fuchs, California, Berkeley, September, *Asymptotic developments of water waves obliquely incident to a dock.*


A. O. Garder, Jr., Washington University, January, *Topics in the theory of convolution transforms.*


R. K. Getoor, Michigan, June, *Some connections between operators in Hilbert space and random functions of the second order.*

Richard Goldberg, New York, June, *The slow flow of a rarefied gas past a spherical obstacle.*

R. E. Gomory, Princeton, June, *Critical points at infinity and forced oscillation.*

L. E. Grosh, Purdue, May, minor in general engineering, *Uniform distribution and round off error.*

Seymour Haber, Massachusetts Institute of Technology, September, minor in chemical engineering, *Boundary value problem for a singularly perturbed differential equation.*

J. E. Hafstrom, Minnesota, December, *Non-linear transformations in Wiener space of the form y(t) = x(t) + q[t, x(t_1), \ldots, x(t_n)].*

J. D. Hankins, Missouri, August, *Metric characterizations of elliptic n-space.*

H. A. Hauptman, Maryland, June, minor in physics, *An n-dimensional Euclidean algorithm.*

Sigurdur Helgason, Princeton, June, *Banach algebras and almost periodic functions.*


J. L. Howell, Yale, June, *A class of fourth order differential operators.*

W. M. Huebsch, Notre Dame, June, *Covering homotopy.*

C. W. Huff, Georgia, August, *A study of the exponential equation in non-commuting matrices.*

S. P. Hughart, California Institute of Technology, June, minor in physics, *Representations for dicyclics.*

D. V. Huntsberger, Iowa State, June, minor in physics, *An extension of preliminary tests of significance permitting control of disturbances in statistical inferences.*


P. K. Ito, St. Louis, June, *On the simultaneous minimax point estimation.*


Sister Mary Andrea Johnston, Catholic, June, minors in physics and education, *General expressions for certain coefficients in the cyclotomic polynomial \( \Psi_d(x) \).*


Elsa E. Keitzer, Carnegie, June, *Some problems of network analysis and synthesis.*


Maurice Kennedy, California Institute of Technology, June, minor in physics, *Ergodic theorems for a certain class of Markov processes.*

Hewitt Kenyon, California, Berkeley, September, *Webbing derivatives and their integrals.*


H. S. Konijn, California, Berkeley, September, *On the power of some tests for independence.*

P. J. Koosis, California, Berkeley, September, *On Fourier coefficients of absolutely continuous measures.*

G. L. Krabbe, California, Berkeley, June, *Certain groups of operators in Banach space.*

C. H. Kraft, California, Berkeley, June, *On the problem of consistent and uniformly consistent statistical procedures.*


J. B. Kruskal, Jr., Princeton, June, *The theory of well-partially-ordered sets.*

W. T. Kyner, Jr., California, Berkeley, September, *Fixed point theorems in Banach space.*

H. T. LaBorde, North Carolina, August, *A method for the numerical computation of the characteristic roots of a matrix and extensions of some theorems of P. Stein.*


Karel deLeeuw, Princeton, June, *The relative cohomology theory of finite groups and algebraic number theory.*


R. S. Lehman, Stanford, June, *Developments in the neighborhood of the beach of surface waves over an inclined bottom.*


J. L. McGregor, California Institute of Technology, June, minor in aeronautics, *Generalized translation operators.*


E. B. McLeod, Jr., Stanford, January, *An application of the Schiffer variation to the free boundary problems of hydrodynamics.*

Josiah Macy, Jr., Massachusetts Institute of Technology, Septem-

E. A. Maier, Oregon, June, *Matrices in a Boolean algebra.*

M. D. Marcus, California, Berkeley, June, *The application of fixed-point theorems to the perturbation of ordinary differential equations.*


C. H. Meng, Southern California, January, *On approximately normal operators.*

J.-P. G. Meyer, Cornell, February, *Classification of mappings of a 3-dimensional complex into a 2-dimensional projective space.*

P. L. Meyer, Stanford, *An application of the invariance principle to the Student hypothesis.*


Sister Irene Morvan, Catholic, June, minors in physics and chemistry, *A study of loci associated with systems of isopolar lines of lines with respect to a quadrangle.*

Mervin Muller, California, Los Angeles, September, *Some Monte Carlo methods for the Dirichlet problem.*


H. A. Myers, Michigan State, December, *The unsymmetrically fed prolate spheroidal antenna.*


C. J. Neugebauer, Ohio State, June, *Cyclic additivity.*

D. V. Newton, University of Washington, June, *A generalized form of the problem of Bolsa in the calculus of variations.*

C. A. Nicol, Texas, May, *Generating functions for restricted partitions and the von Sterneck number.*

R. H. Niemann, Purdue, August, *A study of Stieltjes integral transforms of a certain class of functions.*
Walter Noll, Indiana, September, minor in physics, *On the continuity of the solid and the fluid states.*


R. Z. Norman, Michigan, June, *On the number of linear graphs with given blocks.*


C. S. Ogilvy, Syracuse, January, *An investigation of some properties of asymptotic lines on surfaces of negative Gaussian curvature.*

F. R. Olson, Duke, June, minor in physics, *Arithmetic properties of Bernoulli numbers of higher order.*

R. C. Osborn, Texas, May, minor in philosophy, *Integration formulae for the hyperbolic partial differential equation with four independent variables and regions interior to the cone.*


P. B. Patterson, Florida, June, minor in education, *Almost regular forms.*


Jacqueline L. Penez, Minnesota, June, minor in mechanics, *Approximation by boundary values of analytic functions.*

R. H. Pennington, Stanford, June, *Surface instabilities on pulsating gas bubbles.*

L. L. Philipson, California, Los Angeles, June, *The asymptotic character of the solutions of a class of ordinary linear differential equations depending on a parameter.*


E. E. Posey, Tennessee, June, minor in physics, *Almost polyhedral cells in Euclidean 3-space.*

J. H. Powell, Michigan State, December, *A mathematical model for single function group organization theory with applications to sociometric investigations.*

G. C. Preston, Minnesota, June, *On locally compact totally disconnected Abelian groups and their character groups.*


Bayard Rankin, California, Berkeley, *The concept of sets enchained by a stochastic process and its use in cascade shower theory.*


Edgar Reich, California, Los Angeles, March, *Some distortion theorems for functions analytic in the unit circle.*


W. F. Reynolds, Harvard, June, *On finite groups related to permutation groups of prime degree.*

T. D. Riney, Purdue, August, minor in engineering mechanics, *On the coefficients occurring in the asymptotic expansion of the generalized hypergeometric function.*

Rose M. Ring, Brown, June, *The complex eigenvalue problem for radio waves in a curvilinearly tapered atmosphere.*

B. V. Ritchie, Purdue, August, minor in physics, *On Galois theory for certain classes of nilpotent algebras.*


W. C. Ross, Jr., Iowa, June, *Certain functions of order statistics.*

J. P. Roth, Michigan, February, *An investigation in algebraic topology and Morse theory.*

R. W. Royston, Michigan, February, *A frequency function which can be transformed into a gamma type function by a quadratic transformation of the variable.*


L. W. Rutland, Colorado, June, minors in physics and education, *An optimum solution of N equations in M unknowns with N greater
than M and an application to the adjustment of electrical network
singularities.
Jacques Saint Pierre, North Carolina, Distribution of linear con-
trasts of order statistics.
J. L. Sanders, Jr., Brown, June, Plastic stress-strain relations based
on infinitely many plane loading surfaces.
Herbert Scarf, Princeton, June, Differential operators on manifolds,
and applications to stochastic processes.
Binyamin Schwarz, Washington University, June, Complex non-
oscillation theorems and criteria of univalence.
K. C. Seal, North Carolina, On a class of decision procedures for
ranking means.
B. M. Seelbinder, North Carolina, June, Some new results on positive
solutions of linear diophantine equations.
G. B. Seligman, Yale, June, Lie algebras of prime characteristic.
J. M. Shaheen, Cincinnati, September, On the theory of Nörlund
means and their application to power series and Fourier series.
Daniel Shanks, Maryland, June, minor in physics, Non-linear
transformations of divergent and slowly convergent sequences.
J. M. Shapiro, Minnesota, June, An error estimate for the convergence
of distributions of sums of independent random variables to infinitely
divisible distributions.
H. S. C. Sharp, Massachusetts Institute of Technology, June, minor in modern languages, Some series solutions for finite strain in
axisymmetric membranes.
Abe Shenitzer, New York, June, Decomposition of a group with a
single defining relation into a free product.
R. L. Shively, Michigan, February, On pseudo Laguerre poly-
nomials.
A. R. Sims, Southern California, May, Linear differential opera-
tors of the second order.
C. J. Sinke, Purdue, May, New methods for obtaining the coefficients
in certain asymptotic expansions.
Morris Skibinsky, North Carolina, Some properties of a Bayes two-
stage test for the mean.
H. T. Slaby, Wisconsin, January, Central nilpotency of commutative
Moufang loops.
M. B. Sledd, Massachusetts Institute of Technology, September,
minor in electrical engineering, On circular cylindrical shells of variable
wall thickness.
Harry Smith, Jr., North Carolina State, June, Weighting coefficients
for age-adjusted death rates.
N. B. Smith, Iowa State, June, minor in physics, *Types of functions.*
Charles Standish, Cornell, June, *Notes on a class of ergodic transformations.*
Marvin Stern, New York, June, *The rolling up of a vortex sheet.*
David Stoller, California, Los Angeles, April, *Asymptotically optimum function estimates.*
H. L. Stubbs, Boston, June, *Non-normal models for the classification of speech sounds.*
W. A. Thompson, North Carolina, *On the ratio of variances in the mixed incomplete block model.*
R. L. Vaught, California, Berkeley, September, *Topics in the theory of arithmetical classes and Boolean algebras.*
F. J. Wagner, Notre Dame, June, *Completion and compactification of topological spaces.*
J. H. Walter, Michigan, June, *Automorphisms of the projective unitary groups.*
Daniel Waterman, Chicago, June, I. *Integrals associated with functions of class $L_p$. II. A convergence theorem. III. On some high indices theorems.*
E. C. Watters, Jr., Maryland, January, minors in physics and electrical engineering, *An example of subsonic flow.*
L. H. Wegner, Jr., Oregon, June, *Contributions to the several sample problem.*
Morris Weisfeld, Yale, June, *Galois theory of derivation in division rings.*
J. E. Whitesitt, Illinois, June, *Construction of the lattice of complementary ideals within the unit group.*
Joyce W. Williams, Illinois, June, minor in physics, *Singular integral equations with symmetric complex-valued kernels of class I.*


J. C. Wilson, Louisiana State, June, *Period relations for Picard integrals defined on a special class of Kahler manifolds.*


P. S. Wolfe, California, Berkeley, September, I. *Games of infinite length. II. A non-degenerate formulation and “Simplex” solution of linear programming problems.*

E. S. Wolk, Brown, June, *Representation of topological algebras.*


Z. S. Wurtele, Columbia, March, *Some properties of Bayes procedures which improve lot quality.*


R. A. Zemlin, Ohio State, June, *On a conjecture arising from a theorem of Frobenius.*

The following doctorates were conferred in 1953, but were not included in the list in the preceding volume of this Bulletin (vol. 60, pp. 292–302):


D. B. Gillies, Princeton, October, *Some theorems on N-person games.*

Jack Laderman, Columbia, April, *On statistical decision functions for selecting one of k populations.*

Jack Moshman, Tennessee, August, *A two-sample procedure for linear discrimination in normal samples.*

D. L. Wallace, Princeton, October, *Confidence regions for the location of the vertex in quadratic regression.*