NOTES

The following individuals were among those who received doctorates during 1955 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.

S. S. Abhyankar, Harvard, March, *Local uniformization on algebraic surfaces over modular ground fields.*

J. W. Addison, Jr., Wisconsin, January, *On some points of the theory of recursive functions.*

M. W. Al-Dhahir, Michigan, June, *Configurational characterizations of commutativity in projective spaces.*

A. R. Amir-Moez, California, Los Angeles, June, *Extreme properties of eigenvalues of a Hermitian transformation and singular values of the sum and product of linear transformations.*

R. J. Aumann, Massachusetts Institute of Technology, June, minor in humanities, *Asphericity of alternating linkages.*

H. R. Bailey, Purdue, August, minor in electrical engineering, *Problems of existence and stability of solutions of differential systems.*

W. L. Baily, Jr., Princeton, June, *On the quotient of a complex analytic manifold by a discontinuous group of complex analytic self-homeomorphisms.*

J. Y. Barry, Yale, June, *Generation of abstract Markov processes.*

R. W. Bass, Johns Hopkins, June, minor in physics, *On the singularities of certain non-linear systems of differential equations.*

E. H. Batho, Wisconsin, January, *On a class of rings with ideal nuclei.*

W. A. Beck, Purdue, June, *On commutators and generalizations of commutators in a Hilbert space.*

Barbara J. Beechler, Iowa, June, *Complete ideals in polynomial rings.*

Stoughton Bell, II, California, Berkeley, June, *Aspects of the boundary-layer problem near the leading edge of a flat plate.*

R. H. Bender, Boston, June, *An investigation of the general second order linear partial differential equation of elliptic type.*

J. P. Benzecri, Princeton, June, *Variété localement plate.*

Sterling Berberian, Chicago, December, *The ring of closed operators affiliated with a finite AW^*-algebra.*

D. D. Betts, McGill, October, *Theoretical investigation of resonance electron-capture cross sections.*

P. P. Billingsley, Princeton, June, *The invariance principle for dependent random variables.*

E. A. Bishop, Chicago, June, *Spectral theory for operators on a Banach space.*

C. H. Boll, Stanford, April, *Comparison of experiments in the infinite case and the use of invariance in establishing sufficiency.*

W. E. Boyce, Carnegie Institute of Technology, June, *Vibrations of rotating beams.*

D. L. Boyer, Kansas, October, minor in physics, *Enumeration theorems in infinite abelian groups.*

Helen Bozivich, Iowa State, June, minor in animal breeding, *Power of test procedures for certain incompletely specified random and mixed models.*

L. R. Bragg, Wisconsin, August, *The solutions of a linear ordinary differential equation of the third order about a simple turning point of the second order.*

T. R. Brahana, Michigan, June, *The local Betti numbers in topological product spaces.*

C. C. Braunschweiger, Wisconsin, August, *The C-cone and geometric constructions of (L) and (M) spaces.*

R. L. Brock, Oregon State, minor in physics, *On the mathematical theory of detection by electronic instruments.*

Julian Brody, Princeton, January, *The Fox invariant.*

S. H. Brooks, Johns Hopkins, *Comparison of methods for estimating the optimal factor combination.*

E. C. Bryant, Iowa State, June, minor in economics, *An analysis of some two-way stratifications.*

D. L. Burkholder, North Carolina, August, *On a certain class of stochastic approximation processes.*

A. T. Butson, Michigan State, June, *Systems of linear congruences and left-associativity of matrices, whose elements are integers from an algebra.*

L. L. Campbell, Toronto, May, minor in quantum mechanics, *Mixed boundary value problems for hyperbolic differential equations.*

Thelma M. Chaney, University of Washington, March, *Invariant means and measures on semigroups.*

C. C. Chang, California, Berkeley, June, *Cardinal and ordinal factorization of relation types.*

Clive Chester, New York, June, *Uniform asymptotic expansions.*

T. S. Chihara, Purdue, June, *Generalized Hermite polynomials.*

Solomon Ciolkowski, New York, June, *Swept-back wing.*

E. J. Cogan, Pennsylvania State, January, minor in philosophy,

A formalization of the theory of sets from the point of view of combinatory logic.

C. S. Coleman, Princeton, January, *Homogeneous and quadratic differential equations.*

Raymond Collier, Minnesota, *Experimental designs in which the observations are assumed to be correlated.*

G. E. Collins, Cornell, June, *The modelling of Zermelo set theories in new foundations.*

P. E. Conner, Jr., Princeton, June, *The Green's and Neumann's problems for differential forms on Riemannian manifolds.*

Erben Cook, Jr., Boston, June, *The fundamental solution of a parabolic differential equation of arbitrary even order.*

J. W. Coy, Michigan, February, *A differential calculus for functions of matrices.*

T. H. M. Crampton, Indiana, June, minor in chemistry, *Explicit formulas for norm groups in generalized local class field theory.*

E. H. Crisler, Michigan, June, *On partition systems, chordal systems and their application to regular curve-families filling the plane.*

Lonnie Cross, Cornell, September, *On the distribution of eigenvalues of $\int_{-a}^{a} a(s-t)\phi(t)dt = \rho\left[\int_{-a}^{a} b(s-t)\phi(t)dt + \eta\phi(s)\right].$*

R. H. Crowell, Princeton, June, *Invariants of alternating link types.*

C. H. Cunkle, Missouri, August, *Equicontinuity in dynamical systems.*

P. C. Curtis, Jr., Yale, June, *Representations of AW^* algebras.*

R. H. Davis, California, Berkeley, June, *Singular normal differential operators.*

Ruth M. Davis, Maryland, June, *On a regular Cauchy problem for the Euler-Poisson-Darboux equation.*

F. W. Donaldson, Texas, August, minor in physics, *Integration formulae and boundary conditions for the elliptic parabolic partial differential equation with three independent variables.*

W. S. Dorn, Carnegie Institute of Technology, June, *On plastic collapse of structures and linear programming.*

L. E. Dubins, Chicago, September, *Generalized random variables.*

R. D. Edwards, Pittsburgh, February, *Almost-continuous mappings of Hausdorff spaces.*

Kathryn P. Ellis, Iowa, August, *On the structure of topological rings.*

Lillian Elveback, Minnesota, *Some aspects of estimation problems in follow-up studies in chronic disease.*

Walter Feit, Michigan, June, *Topics in the theory of group characters.*

Leopold Flatto, Massachusetts Institute of Technology, June,

minor in languages, *Periodic solutions associated with singular perturbations of a system of non-linear differential equations.*

H. K. L. W. Flesch, Illinois, October, minor in physics, *On the classification of finite elementary nilpotent groups of class* 2.

N. P. Fofonoff, Brown, June, minor in oceanography, *A theoretical study of zonally uniform oceanic flow.*

J. E. Folkert, Michigan State, August, *The distribution of the number of components of a random mapping function.*

W. C. Fox, Michigan, June, *The critical points of real functions defined on 2-manifolds.*

T. T. Frankel, California, Berkeley, September, *Harmonic integrals.*

R. J. Fruend, North Carolina State, *Introduction of risk into a linear programming model.*

B. A. Galler, Chicago, September, *Some results in algebraic logic.*

Seymour Geisser, North Carolina, June, *On the exact distributions of certain statistics related to the mean square successive difference.*

L. S. Gephart, Florida, January, minor in education, *A study of the effect of non-normality on sampling distributions of the range.*

E. F. Gillette, Syracuse, May, *On the four-vertex theorem and some of its generalizations.*

Malcolm Goldman, Chicago, June, *The structure of AW^*-algebras.*

A. J. Goldstein, Massachusetts Institute of Technology, June, minor in physics, *On some operations in homotopy groups.*

A. V. Granato, Brown, June, *Internal friction and modulus changes due to dislocation damping in undeformed crystals.*

R. T. Gregory, Illinois, June, minor in astronomy, *A numerical solution to a class of Sturm-Liouville systems.*

J. S. Griffin, Jr., Tulane, August, *A notion of parallelism in general fibre bundles.*

R. C. Gunning, Princeton, June, *A classification of factors of automorphy.*

Irwin Guttman, Toronto, May, minor in genetics, *Characterization of tolerance regions.*

C. J. A. Halberg, Jr., California, Los Angeles, May, *Spectral theory of linked operators in the spaces l_p.*

Dilla Hall, St. Louis, June, *A relationship of Reiss with extensions to multiple points, tangential points, inflectional points and simple cusps.*

W. J. Hall, North Carolina, June, *Most economical multiple-decision rules.*

J. W. Hamblen, Purdue, June, *Distributions of roots of algebraic equations with variable coefficients.*

N. T. Hamilton, Chicago, June, *Foundations of the theory of complex analytic varieties.*

J. W. Hardy, Jr., Stanford, June, *On axially-symmetric subsonic flow of a compressible fluid.*

Juris Hartmanis, California Institute of Technology, June, minor in physics, *Some embedding theorems for lattices.*

W. C. Healy, Jr., Illinois, June, minor in mechanical engineering, *Optimum invariant estimation.*

R. E. Heaton, Indiana, June, minor in physics, *Polynomial cocycles.*

Robert Hermann, Princeton, October, *On the differential geometry of homogeneous spaces.*

Smith Higgins, Jr., Notre Dame, August, *On minima of indefinite ternary quadratic forms.*

T. P. Higgins, Texas, June, minors in electrical engineering and physics, *On the Hankel transform.*

J. H. Hodges, Duke, June, minor in physics, *Number of solutions of some matric equations in a finite field.*

J. F. Hofmann, Iowa State, June, minor in economics, *Life testing in controlled environmental conditions.*

L. I. Holder, Purdue, August, *On generalizations of absolute and strong Cesàro summability.*

B. J. Hollingsworth, Kansas, June, minor in physics, *A study of conjugate nets on n-ply systems of hypersurfaces in n-dimensional projective space.*

C. V. Holmes, Kansas, October, minor in astronomy, *Automorphisms of monomial groups.*

J. L. Howland, Harvard, June, *Induced potentials.*

H. T. Hsu, Yale, June, *Semi-groups and the problems of Cauchy for linear partial differential equations.*

D. R. Hughes, Wisconsin, January, *Planar division neo-rings.*

J. A. Hummel, Rice, June, *Doubly orthogonal functions on Riemann surfaces.*

J. P. Jans, Michigan, June, *On the indecomposable representations of algebras.*

George Jeromson, California, Berkeley, September, *Propagation of electromagnetic waves in ferrites.*

J. W. Jewett, Michigan, February, *Differentiable approximations to light interior transformations.*

Guy Johnson, Jr., Rice, June, I. *Collective singularities of families of*

analytic functions. II. *Regions of flatness for analytic functions and their derivatives.*

J. B. Johnston, California Institute of Technology, June, minor in physics, *Universal infinite partial orders.*

J. A. Kalman, Harvard, June, *Some inequalities related to Hölder inequality and some contributions to lattice theory.*

D. A. Kearns, Boston, June, *Initial value problem for a parabolic equation of arbitrary even order.*

R. W. Kennard, Carnegie Institute of Technology, June, *On the determination of significance levels of control charts for continuous variates.*

Jean Kestens, Brown, June, *The normal self-adjoint eigenvalue problem and upper and lower bounds for the eigenvalues with the iteration method.*

John Killeen, California, Berkeley, September, *Asymptotic perturbation of differential equations.*

E. G. Kimme, Minnesota, *On the convergence of sequences of stochastic processes with independent increments.*

R. F. King, Illinois, June, minor in electrical engineering, *Periodic and reducible nonlinear differential systems.*

Manfred Kochen, Columbia, December, *Organized systems with discrete information transfer.*

V. A. Kramer, California, Berkeley, January, *Investigations in asymptotic perturbation series.*

Lester Kraus, New York, June, *Diffraction by a plane angular sector.*

I. S. Krule, Tulane, August, *Structs on compact spaces.*

W. H. Kruskal, Columbia, *On the problem of non-normality in relation to hypothesis testing.*

R. G. Kuller, Michigan, February, *Locally A-convex topological vector lattices and their representations.*

J. J. J. Lavallee, McGill, October, *Asymptotic theorems in the theory of normal correlation.*

Anneli Lax, New York, June, *Cauchy's problem for a partial differential equation with real multiple characteristics.*

Eugene Levin, California, Los Angeles, June, *Reinforced openings in plane structural members.*

Frank Levin, Cincinnati, June, *On the algebraic theory of linear multi-differential polynomials.*

Gene Levy, Oklahoma, June, *Structure theory for generalized p-rings.*

S. D. Liao, Chicago, March, *On the theory of obstructions of fiber bundles.*

A. H. Lightstone, Toronto, November, minors in methodology and philosophy of science, *Contribution to the theory of quantification*.

C. S. Lin, Ohio State, December, *On sums of sets of integers*.

C. T. Long, Oregon, June, *Minimal conditions for normality of numbers*.

F. W. Lott, Jr., Michigan, February, *The use of a certain linear order statistic, related to the mean difference, as an unbiased estimate of the standard deviation in finite and infinite populations*.

R. A. Lytle, Georgia, June, *Properties of the overlap topology*.

P. J. McCarthy, Notre Dame, June, *On genera of class number one*.

F. S. McFeely, Virginia Polytechnic Institute, *Decision procedures for the comparison of exponential and geometric populations*.

H. P. McKean, Jr., Princeton, April, *Sample functions of stable processes*.

E. K. McLachlan, Kansas, October, minor in astronomy, *Extremal elements of certain convex cones of functions*.

R. M. McLeod, Rice, June, *On the zeros of the derivatives of some entire functions*.

T. J. McMinn, California, Berkeley, January, *Topics in measure theory*: I. *Restricted measurability*. II. *Measure splitting and average measurability*.

Vincent McRae, Catholic, June, minors in physics and education, *On the unitary similarity of matrices*.

R. A. Macauley, Illinois, June, minor in logic, *Analytic group kernels and Lie algebra kernels*.

J. G. MacCarthy, Pittsburgh, August, *The homographic aspect of the Euler-Knopp transformation*.

Mark Mahowald, Minnesota, July, minor in physics, *Measure in groups*.

W. E. Malbon, Virginia, June, *Invariants for quasi-compact mappings*.

M. A. Martino, Illinois, June, minor in aeronautics, *Concerning a measure of non-analyticity for functions of a complex variable*.

H. F. Mattson, Jr., Massachusetts Institute of Technology, June, minor in humanities, *Generalization of the Riemann-Roch theorem*.

C. N. Maxwell, Illinois, October, minor in physics, *Fixed point and coincidence theorems for multi-valued functions*.

J. P. Mayberry, Princeton, October, *Abelian branched covering of knots*.

Elliott Mendelson, Cornell, June, *The independence of the axiom of choice*.

W. E. Mientka, Colorado, June, minor in philosophy, *A method of*

*approach towards the solution of the problem concerning the existence of
at least one prime between consecutive perfect squares.*

V. J. Mizel, Massachusetts Institute of Technology, September,
minor in physics, *Boundary layer problem for an elliptic equation in the
neighborhood of a singular point.*

J. T. Mohat, Texas, June, *Concerning spirals in the plane.*

T. O. Moore, Missouri, August, *Metric foundations of elliptic 2-space.*

Dietrich Morgenstern, Indiana, June, minor in physics, *Analytical
studies related to the Maxwell-Boltzmann equation.*

W. W. Murray, Brown, June, *Interaction of a spherical acoustic
wave with a cylindrical beam.*

J. E. Nelson, Chicago, September, *On the operator theory of Markoff
processes.*

W. L. Nicholson, Illinois, June, minor in psychology, *Uniform ad-
missibility and its application to classification problems.*

J. A. Novarro, Purdue, August, *Studies in statistical ecology.*

R. J. Nunke, Chicago, September, *Modules of extensions over Dede-
kind rings.*

F. C. Ogg, Jr., Johns Hopkins, June, minor in physics, *The domain
of existence of the isoperiodic families of the first kind in the restricted
problem of three bodies.*

Katsumi Okashimo, Toronto, November, minor in quantum me-
chanics, *Numerical integration of integro-differential equations of con-
volution type.*

H. A. Osborn, Stanford, January, *The existence of conservation laws.*

J. M. Osborn, Michigan, February, *Sets of radial discontinuity of
entire and meromorphic functions.*

Robert Osserman, Harvard, June, *Contributions to the problem of
type.*

J. B. O'Toole, Pittsburgh, August, *Ideals of null sets of a topological
space.*

F. P. Palermo, Brown, June, *Cohomology rings of product complexes.*

Prom Panitchpakdi, Kansas, June, minor in physics, *Extension of
uniformly continuous transformations and hyperconvex metric spaces.*

H. C. Parrish, Ohio State, December, *On the symmetric structure of
unconditioned point sets and real functions.*

M. H. Pearl, Wisconsin, June, *Some extensions of Cayley's theorem.*

B. J. Pearson, Texas, June, *A connected point set in the plane which
spirals down on each of its points.*

D. K. Pease, Pittsburgh, August, *A study of affinities and anti-
affinities of the plane of two complex variables and their representation
in a space of four dimensions.*

W. M. Perel, Indiana, June, minor in physics, *The co-ideal theory of commutative semigroups.*

F. P. Peterson, Princeton, June, *Generalized cohomotopy groups.*

T. J. Pignani, North Carolina, August, *A system of cyclicly related functional equations.*

Roger Pinkham, Harvard, June, *Inversion of the Laplace and Stieltjes transforms utilizing difference operators.*

John Pratt, Stanford, *Some results in the decision theory of one-parameter multivariate Pólya type distributions.*

R. T. Prosser, California, Berkeley, June, *Structure of operator algebras.*

John Raleigh, Pennsylvania, June, *The Fourier coefficients of the invariants $j(2^{1/2}; \tau)$ and $j(3^{1/2}; \tau)$.*

K. V. Ramachandran, North Carolina, June, *On certain tests and the monotonicity of their powers.*

Paul Randolph, Minnesota, *Multivariate acceptance sampling.*

Rimhak Ree, British Columbia, May, minor in physics, *On generalized Witt algebras.*

George Resnikoff, Stanford, *Contributions to sampling inspection by variables.*

R. A. Restrepo, California Institute of Technology, June, minor in physics, *Optimal decisions with applications to tactical problems.*

D. E. Richmond, Iowa State, June, minor in physics, *Boundedness of the solutions of some general nonlinear second order differential equations.*

W. J. Riordan, Chicago, December, *On the interpolation of operations.*

Murray Ritterman, New York, February, *Integration of boundary value problems for parabolic equations by difference methods.*

J. B. Roberts, Minnesota, December, minor in philosophy, *Summability methods in valuation fields.*

A. C. Rohloff, Purdue, January, *Sequential tests of composite hypotheses.*

Marvin Rosenblum, California, Berkeley, January, *Perturbation of the continuous spectrum.*

Jean E. H. Rubin, Stanford, January, *Bi-modal logic and double-closure algebras.*

E. E. Said, North Carolina State, *A comparison between alternate techniques using supplementary information in sample survey design.*

Parfeny Saworotnow, Harvard, June, *On the generalization of the notion of H^*-algebras.*

E. C. Schlesinger, Harvard, June, *Conformal invariants and prime ends*.

S. I. Schlesinger, Illinois Institute of Technology, June, *Some eigenvalue problems in the transport theory of neutrons*.

Morris Schreiber, Chicago, December, *Unitary dilations of operators*.

E. J. Schweppe, Illinois, June, minor in physics, *A projective generalization of convexity*.

R. E. Seall, Illinois Institute of Technology, January, *Characterization of genera of quadratic forms with Gaussian integer coefficients*.

N. C. Severo, Carnegie Institute of Technology, June, *A comparison of tests on the mean of a logarithmico-normal distribution with known variance*.

Norman Shapiro, Princeton, June, *Degrees of computability*.

E. M. Shoemaker, Carnegie Institute of Technology, June, *A plasticity theory of pre-sintered powdered metals*.

R. M. Simons, Massachusetts Institute of Technology, June, minor in physics, *On the nonlinear theory of thin spherical shells*.

R. W. Sloan, Illinois, June, minor in philosophy, *On analytic functions of an infinite harmonic hyper-complex variable*.

E. C. Smith, Jr., Brown, June, *Higher degrees of distributivity and completeness in Boolean algebras*.

O. K. Smith, Princeton, April, *Discontinuous oscillations*.

R. F. Smith, Syracuse, September, *An experimental comparison of two liberal arts courses in general mathematics at Syracuse University*.

W. R. Smythe, Jr., Duke, June, minor in physics, *A theorem on upper semi-continuous decompositions*.

James Snover, Syracuse, September, *Approximation by rational functions which have their zeros and poles in preassigned regions*.

Jerome Spanier, Chicago, September, *Contributions to the theory of almost complex manifolds*.

Clifford Spector, Wisconsin, June, *On degrees of recursive unsolvability and recursive well-orderings*.

R. F. Spring, Illinois, June, minor in chemistry, *On metabelian p-groups of exponent p*.

D. A. Sprott, Toronto, May, minor in genetics, *Balanced incomplete block designs*.

D. P. Squier, Stanford, September, *On some convex cones and associated monotone functions*.

F. W. Stallard, North Carolina, June, *Differential systems with interface conditions*.

G. P. Steck, California, Berkeley, *Limit theorems for conditional distributions*.

E. M. Stein, Chicago, December, *Linear operators on L_p spaces*.

F. M. Stein, Iowa, August, *Approximate solution of integro-differential equations*.

H. A. Steinberg, Yale, June, *Diffusion processes with absorption*.

J. A. Steketee, Toronto, May, minor in gas dynamics, *Some problems in boundary-layer transition*.

W. B. Stenberg, California, Berkeley, June, *On sequences with divergent total variation and on separation of convex sets in linear spaces*.

Ruth Struik, New York, June, *On associative products of groups*.

B. V. Sukhatme, California, Berkeley, *Testing the hypothesis that two populations differ only in location*.

W. J. Swartz, Iowa State, March, minor in physics, *Iterative procedures for obtaining the periodic solution of certain nonlinear differential equations*.

Peter Swerling, California, Los Angeles, June, *Families of transformations in the function spaces H^p*.

W. C. Swift, Kentucky, June, minor in physics, *A generalized matrix method of summability*.

J. C. Swihart, Purdue, January, *A theory of gravitation and its quantization*.

Morris Tenenbaum, Cornell, September, *Transforms of Tauberian series by Riesz methods of different orders*.

P. E. Thomas, Princeton, October, *A generalization of the Pontrjagin square cohomology operation*.

G. T. Thompson, Oregon State, June, minor in college teaching, *On Bateman's method for solving linear integral equations*.

B. D. Tikkiwal, North Carolina State, *Multiphase sampling on successive occasions*.

J. A. Tischendorf, Purdue, June, *Linear estimation techniques using order statistics*.

Sister M. Torline, St. Louis, June, *On Waring's theorem modulo p*.

Donald Truax, Stamford, *Multi-decision problems for the multivariate exponential fdmily*.

H. G. Tucker, California, Berkeley, June, *Contributions to the mathematical theory of accident proneness, with particular reference to multiple exposure*.

Anna E. Vaughan, Stanford, June, *Estimation of a biological population which is subject to a biased mortality*.

R. Z. Vause, North Carolina, June, *On the distribution of the Jacobian symbols*.

M. J. Vitousek, Stanford, January, *Some flows in a gravity field satisfying the exact free surface condition.*

D. T. Walker, Georgia, August, *On the diaphantine equation* $a^x - b^y = 1.$

E. A. Walker, Kansas, October, minor in physics, *Cancellation in direct sums of groups.*

Seth Warner, Harvard, June, *On locally convex spaces and locally multiplicatively-convex algebras.*

L. J. Warren, Oregon, June, *An ideal in the ring of polynomials over a ring.*

A. D. Wasel, Stanford, June, *On integral operators in compressible fluid flow.*

G. P. Weeg, Iowa State, June, minor in education, *Completely primary algebras which are direct products modulo the radical.*

J. W. Weihe, California, Berkeley, *On a Stieltjes integral.*

Robert Weiller, Indiana, June, minor in physics, Part I. *On the differentiability of solutions of two-dimensional regular variational problems.* Part II. *The Harnack-inequality for solutions of linear partial differential equations of elliptic type.*

Eleanor Weiss, Harvard, *Factor analysis of mathematical ability.*

Irving Weiss, Stanford, *Limiting distributions in some occupancy problems.*

Patricia J. Wells, Michigan State, August, *The solution of the integral equation for the prolate spheroidal transmitting antenna.*

D. V. V. Wend, Michigan, June, *Branched regular curve families and finite asymptotic paths of analytic functions.*

Oscar Wesler, Stanford, *A modified minimax principle.*

J. S. White, Minnesota, *Some problems of point estimation in stochastic difference equations.*

Eoin Whitney, Harvard, June, *Variability regions for the univalent functions and their derivatives.*

Harold Widom, Chicago, September, *Embedding of AW^*-algebras.*

C. H. Wilcox, Harvard, June, *The scattering of electro-magnetic radiation by a cylindrical shell of finite length.*

M. B. Wilk, Iowa State, June, minor in chemical engineering, *Linear models and randomized experiments.*

R. E. Williamson, Pennsylvania, June, *On multiply monotone functions and their Laplace transforms.*

R. L. Wine, Virginia Polytechnic Institute, June, *A power study of multiple range and multiple F tests.*

Izaak Wirszup, Chicago, December, *On an extension of the Cesàro method of summability to the logarithmic scale.*

F. L. Wolf, Minnesota, March, minor in philosophy, *Machine computability in game theory.*

Ralph Wormleighton, Princeton, June, *Some extensions of the sign test.*

L. G. Worthington, Texas, August, *Integration formulae and boundary conditions for the hyperbolic equation with three independent variables and regions exterior to the cone.*

A. W. Wymore, Wisconsin, June, *On weak compactness in functional analysis.*

A. M. Yaqub, California, Berkeley, June, *On the theory of ring-logics and universal algebras.*

J. E. Yarnelle, Pittsburgh, February, *"Heredity" theorems of certain product transformations of the line.*

F. R. Yett, Iowa State, July, minor in general engineering, *Periodic solutions of Duffing's equation with forcing term containing first and third harmonics.*

W. M. Zaring, Kentucky, June, minor in physics, *Multiply monotone complex sequences.*

The following doctorates were conferred in 1954, but were not included in the list in the preceding volume of this Bulletin (vol. 61, pp. 262–274):

R. E. von Holdt, Northwestern, August, *An iterative procedure for the calculation of the eigenvalues and eigenvectors of a real symmetric matrix.*

E. M. Jacobs, Iowa State, June, minor in economics, *A statistical technique for estimating the characteristics of consumer behavior.*

Melvin Shader, Syracuse, August, *Some inequalities for axially-symmetric potential functions.*