NOTES

The Italian Society for the Progress of Science announces the following subjects for its Mussolini prize in the mathematics section: Finite thermoelastic determinations; Characteristics of differential systems; Waves of discontinuity, in particular, waves caused by shocks, and the theory of explosives. Competition is restricted to members of the Society and closes August 31, 1935.

The gold medal of the Royal Astronomical Society has been awarded to Professor E. A. Milne, Rouse Ball professor of mathematics at the University of Oxford, for his work on radiactive equilibrium and the theory of stellar atmospheres.

Dr. Moritz v. Rohr, of the University of Jena, has been awarded a Leibniz medal for his work in geometrical optics.

Dr. Charles A. Kraus, professor of chemical research at Brown University, has been awarded the Willard Gibbs medal of the Chicago section of the American Chemical Society for 1935, for his research on the theory of solutions.

The following have been elected to membership in the Royal Society of London: E. N. da C. Andrade, Quain professor of physics, University of London; J. S. Foster, professor of physics, McGill University; and R. S. Stoneley, lecturer in mathematics, University of Cambridge.

The following ninety-four doctorates, with mathematics or mathematical physics as major subject, were conferred during 1934 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 title of dissertation are given in each case if available.

E. B. Allen, Rensselaer Polytechnic Institute, June, minor in physics, *Extension of a theorem due to M. D'Ocagne to partial differential equations in n variables.*

A. E. Andersen, Harvard, June, *Topics in the theory of binary forms.*

Frances E. Baker, Chicago, March, *A contribution to the Waring problem for cubic functions.*

D. H. Ballou, Harvard, June, *A class of completely monotonic functions every positive power of which is also completely monotonic.*

J. L. Barnes, Princeton, June, *On the Laplace-Stieltjes transformation* I.

J. J. Barron, Wisconsin, June, *The application of asymptotic forms to an expansion problem of the Sturm-Liouville type where the coefficient of the parameter changes sign.*

Miriam F. Becker, Yale, June, *On relative fields.*

A. F. Bernhard, Michigan, June, *The mechanics of the top.*

Solomon Bilinsky, Washington University (St. Louis), June, minor in physics, *A theory of functions of an abstract variable.*

M. T. Bird, Illinois, June, minors in statistics and physics, *On generalizations of sum formulas of the Euler-Maclaurin type.*

W. M. Borgman, Chicago, August, *Intersector varieties in hyperspace.*

F. L. Brooks, Ohio State, August, *Various properties of the metric limit.*

G. M. Brown, Michigan, February, *On sampling from compound populations.*

J. A. Clarkson, Brown, June, *Riemann-Stieltjes double integrals and bounded variation for functions of two variables.*

Nancy Cole, Harvard, June, *The index form associated with an extremaloid.*

Byron Cosby, II, Chicago, March, *Fields for multiple integrals in the calculus of variations.*

G. F. Cramer, Missouri, August, *Rings and ring-ideals in a relative quadratic field.*

R. H. Downing, West Virginia, June, minor in mathematical physics, *Flat-sphere geometry in non-euclidean n-space.*

T. L. Downs, Jr., Harvard, June, *On the planar points of an analytic surface.*

Mary J. Fisher, Toronto, March, *A new method in the theory of algebraic functions of one variable.*

Amelia Frank, Wisconsin, October, major in physics, *The effect of crystalline fields on the magnetic susceptibilities of $SM+++$, and $EU+++$, and the heat capacity of $SM+++$.*

B. C. Getchell, Michigan, June, *Integration of interval functions.*

H. A. Giddings, Massachusetts Institute of Technology, June, minor in chemistry, *On the extension of the notion of developable surfaces to V_2 and V_3 in R_4.*

Margaret Gurney, Brown, June, *Some general existence theorems for partial differential equations of hyperbolic type.*

Mary E. Haller, Washington, June, minor in physics, *Self-projective rational octavics.*

E. K. Haviland, Johns Hopkins, June, *On the theory of absolutely additive distribution functions.*

M A. Heaslet, Stanford, June, minor in physics, *Concerning the development coefficients of an aequianharmonic function.*

Grace M. Hopper (Mrs. V. F.), Yale, June, *New types of irreducibility criteria.*

Olive Hughes, Bryn Mawr, June, minor in physics, *A certain mixed linear integral equation.*

Antoinette Killen Huston (Mrs. R. E.), Chicago, June, *The integral bases of all quartic fields with a group of order eight.*

J. A. Hyden, Cornell, June, minor in physics, *The Weddle and Kummer surfaces for restricted positions of six base points.*

Nathan Jacobson, Princeton, January, *Non-commutative polynomials and cyclic algebras.*

Evan Johnson, Jr., Chicago, August, *Dynamics of variable masses.*

H. S. Kaltenborn, Michigan, June, *On Stieltjes mean integrals.*

Rosella Kanarik, Pittsburgh, June, *Fundamental regions in S_4 for the Hessian group.*

Nathan Kaplan, Massachusetts Institute of Technology, June, minor in

physics, *A study of three-dimensional Riemann surfaces in six-dimensional euclidean space.*

Gertrude S. Ketchum (Mrs. P. W.), Illinois, June, minor in English, *On certain generalizations of the Cauchy-Taylor expansion theory.*

Irving Kittell, New York University, June, minor in physics, *On the classification and coloring of spherical maps.*

S. C. Kleene, Princeton, January, *A theory of positive integers in formal logic.*

J. C. Knipp, Pittsburgh, June, *Frégier surfaces.*

R. L. Krueger, Marquette, June, minor in physics, *Plane quintic curves, a classification and projective construction.*

W. S. Lawton, Pennsylvania, February, *A method of deriving a homogeneous linear differential equation of the second order satisfied by a certain class of orthogonal polynomials.*

Marjorie Leffler, Ohio State, August, *A lemma in potential theory.*

Jack Levine, Princeton, June, *Projective scalar differential invariants.*

F. A. Lewis, Ohio State, August, *Some properties of an infinite class of collineation groups.*

Marie Litzinger, Chicago, August, *A basis for residual polynomials in n variables.*

A. N. Lowan, Columbia, May, *Application of the Laplace transformation to certain problems in physics.*

S. T. Ma, California (Berkeley), May, *The relations between the solutions of the linear differential equations of the second order having four regular singular points.*

L. A. MacColl, Columbia, May, *On the distribution of the zeros of sums of exponentials of polynomials.*

C. W. MacGregor, Pittsburgh, June, minors in physics and mechanics, *Selected problems in the theories of flat plates and plane stress.*

J. D. Mancill, Chicago, December, *The minimum of a definite integral with respect to unilateral variations.*

M. F. Manning, Massachusetts Institute of Technology, June, major in physics, *Exact solutions of the Schrödinger equation.*

W. T. Martin, Illinois, June, minor in astronomy, *On expansions in terms of a certain general class of functions.*

B. B. Murdock, Yale, June, *Skew frequency curves.*

E. P. Northrop, Yale, June, *An operational solution of the Maxwell field equations.*

Rufus Oldenburger, Chicago, March, *Composition and rank of n-way matrices and multilinear forms.*

J. W. Querry, State University of Iowa, February, minors in applied mathematics and education, *A general theory of mechanical quadrature.*

W. C. Randels, Brown, June, *Some problems in the theory of Fourier series.*

J. A. F. Randolph, Cornell, September, minor in astronomy, *Carathéodory measure and a generalization of the Gauss-Green lemma.*

Louis Rauch, California (Berkeley), August, minor in physics, *The almost periodic solution of a problem in forced vibrations by a process of iteration.*

R. F. Rinehart, Ohio State, August, *Some properties of the discriminant matrices of a linear associative algebra.*

M. I. S. Robertson, Princeton, June, *On the theory of univalent functions.*

W. J. Robinson, Ohio State, August, *Rings with one prime.*

J. B. Rosser, Princeton, June, *A mathematical logic without variables.*

M. F. Rosskopf, Brown, June, *Some inequalities for non-uniformly bounded ortho-normal polynomials.*

J. M. Rowat, Toronto, June, *Existence theorems for the differential equation $dy/dx=f(x, y)$ under conditions of Perron integrability.*

O. K. Sagen, Chicago, June, *The integers represented by sets of positive ternary quadratic non-classic forms.*

G. E. Schweigert, Johns Hopkins, June, *The analysis of certain curves by means of derived local separating points.*

Nathan Schwid, Wisconsin, June, minor in applied mathematics, *The asymptotic forms of the Hermite and Weber functions.*

C. H. W. Sedgewick, Brown, June, *Generalized Lambert series.*

Robert Serber, Wisconsin, June, major in physics, *Some optical properties of molecules.*

J. A. Sharpe, Wisconsin, June, major in physics, *Surface motion in the compressional phase of a deep-focus earthquake and the effects of a layered crust.*

Sister Ann Elizabeth Shea, Wisconsin, October, *Regular Cremona transformations in S_4.*

R. C. Shook, Chicago, June, *Concerning Waring's problem for sixth powers.*

A. J. Smith, Pennsylvania, June, *Concerning upper semi-continuous collections on curves and two-dimensional manifolds.*

F. C. Smith, Michigan, June, *Contributions to the study of the asymptotic developments of analytic functions.*

F. H. Steen, Harvard, June, *On a class of polynomials which minimize definite integrals.*

J. K. Stewart, West Virginia, June, minor in mathematical physics, *Some birational transformations associated with a class of ruled varieties in n-space.*

J. W. T. Suckau, Ohio State, June, *Uniform convergence and the Lebesgue theory.*

Sister Helen Sullivan, Catholic University, June, minor in physics and mechanics, *The non-self-symmetric quadrilaterals in- and circumscribed to the rational cuspidal quartic with a line of symmetry.*

W. R. Talbot, Pittsburgh, August, *Fundamental regions in S_6 for the simple quaternary G_{60}, type I.*

Henrietta P. Terry, Illinois, June, minor in chemistry, *Abelian subgroups of order P^m of the I-groups of the Abelian groups of order P^n type 1, 1, 1, $\cdots$.*

R. W. Thomas, Pittsburgh, June, minor in physics, *Four-space representation of chain congruences in the plane of two complex variables.*

G. R. Trott, Johns Hopkins, June, *On the canonical form of a non-singular pencil of Hermitian matrices.*

P. L. Trump, Wisconsin, October, *On a reduction of a matrix by the group of matrices commutative with a given matrix.*

J. L. Vanderslice, Princeton, April, *Non-holonomic geometries.*

Henry Van Engen, Michigan, June, *On the asymptotic behavior of analytic functions.*

J I. Vass, Wisconsin, minor in applied mathematics, *A class of boundary problems of highly irregular type.*

W. J. Wagner, Pittsburgh, June, minor in astronomy, *Reciprocals of some elementary figures with respect to a space cubic.*

R. J. Walker, Princeton, June, *Reduction of the singularities of an algebraic surface.*

G. C. Webber, Chicago, June, *Waring's problem for cubic functions.*

K. W. Wegner, Wisconsin, June, *The equivalence of pairs of Hermitian matrices.*

C. B. Wright, Pittsburgh, June, *Fundamental regions in S_4 for the collineation group $G_{3:\,360}$.*

C. R. Wylie, Jr., Cornell, June, minor in physics, *Curves whose tangents belong to a linear complex.*

The following doctorates were conferred in 1933 but not included in the list in the preceding volume of this Bulletin (vol. 40, pp. 378–381):

F. G. Dressel, Duke, June, *A boundary value problem for the heat equation.*

Mabel Griffin, Duke, June, *Invariants of pfaffian systems.*

Dr. W. N. Bailey has been appointed Richardson lecturer in pure mathematics at the University of Manchester.

Mr. W. V. D. Hodge has been elected to a fellowship and appointed lecturer and director of mathematical studies at Pembroke College, Cambridge.

The retirement is announced of Professor Alfred Pringsheim of the University of Munich.

Dr. Franz Rellich, of the University of Göttingen, has been appointed professor of mathematics at the University of Marburg.

Dr. Emanuel Sperner has been appointed professor of mathematics at the University of Königsberg.

Professor W. H. Cramblet has been elected president of Bethany College.

Dr. J. L. Doob, of Columbia University, has been appointed associate professor of mathematics at the University of Illinois.

The Trustees of Columbia University, at their meeting on March 4, accepted the resignation of Dr. T. S. Fiske as professor of mathematics, to take effect at the end of the present academic year, and voted to bestow upon him the title of professor emeritus of mathematics. After his release from active service he will retain a study and office at Columbia University.

Professor Philip Franklin, of the Massachusetts Institute of Technology, has obtained leave of absence for advanced study and foreign travel during the coming academic year.

Professor Arthur Haas, of the University of Vienna, will be visiting profes-

sor of physics for ten weeks during the winter of 1936 at Drexel Institute. During his stay there Dr. Haas will be available for lectures in neighboring institutions.

Professor Rudolph E. Langer, of the University of Wisconsin, has been appointed lecturer in mathematics in Harvard University for the year 1935–36.

Professor W. R. Longley, of Yale University, has been nominated as representative of the Mathematical Association of America on the National Research Council for a three-year term beginning July 1, 1935. He succeeds Professor H. L. Rietz of the University of Iowa.

Dr. E. L. Mackie has been promoted to a professorship at the University of North Carolina.

Dr. I. J. Schoenberg has been appointed acting assistant professor of mathematics at Swarthmore College.

Professor Stephen Timoshenko, of the engineering mechanics department of the University of Michigan, has been appointed Hitchcock Professor at the University of California at Berkeley for the second semester of the year 1934–35 and has lectured there under that foundation.

Associate Professor J. L. Walsh has been appointed professor and tutor of mathematics at Harvard University.

Dr. Hassler Whitney has been appointed assistant professor and tutor of mathematics at Harvard University, and has been granted leave of absence for the first semester of the academic year 1935–36.

Associate Professor D. V. Widder, of Harvard University, has been granted a leave of absence for the year 1935–36.

Professor Norbert Wiener, of the Massachusetts Institute of Technology, has been granted leave of absence for the next academic year during which time he will be research professor of mathematics at the National Tsing Hua University in Peking, China.

The following appointments to instructorships are announced: College of the City of New York (tutor, evening session): Dr. R. C. Shook; West Virginia University: Dr. R. H. Downing, Dr. J. K. Stewart.

Dr. Karl Bopp, professor of mathematics at the University of Heidelberg is dead.

Arthur Lionel Pedder, formerly mathematical tutor at Magdalen College, Oxford, died December 15, 1934, at the age of sixty-six.

The death is reported of Dr. Gustav Ritter v. Escherich, professor of mathematics at the University of Vienna.

The death is reported of Dr. Arthur Schidlof, professor of mathematics at the University of Geneva.

Dr. E. A. Partridge, of the West Philadelphia Boys' High School, died March 22, 1934. He had been a member of the American Mathematical Society since 1894.

Professor M. I. Pupin, emeritus professor of electromechanics at Columbia University, died March 12, 1935 at the age of seventy-seven.

Professor E. B. Skinner, of the University of Wisconsin, died April 3, 1935. He had been a member of this Society since 1899. A more adequate notice will appear in a later issue of this Bulletin.

Professor Emmy Noether, of Bryn Mawr College, died April 14, 1935. A more adequate notice will appear in a later issue of this Bulletin.