

NOTES

The *Annals of Mathematics* is now issued under the joint auspices of the department of mathematics of Princeton University and the school of mathematics of the Institute for Advanced Study. The American Mathematical Society will continue to be represented on the editorial board by three associate editors elected by the Society.

The British Association for the Advancement of Science will meet at Leicester, September 6–13, 1933, under the presidency of Sir F. G. Hopkins. Sir Gilbert Walker is Secretary of Section A (mathematical and physical sciences).

A foundation for the promotion of the international language "Interlingua" (Latin without inflections), in which the late Giuseppe Peano was especially interested, has been established in his honor, under the auspices of the journal *Schola et Vita*; it will be called the *Fondo Peano pro Interlingua*. Professor Tullio Levi-Civita is a member of the committee in charge.

Professor Emil Artin, of the University of Hamburg, and Professor Emmy Noether, of the University of Göttingen, have been awarded the Ackermann-Teubner prize for research in mathematics.

The Rudolf-Virchow medal of the Berlin Anthropological Society has been awarded to Professor Karl Pearson, of the University of London.

The 1932 gold medal of the International Aeronautic Association has been awarded to Juan de la Cierva, inventor of the autogiro.

The Italian Society of Sciences (the XL) has awarded its prize in mathematics for the year 1931 to Professor F. Cantelli, of the University of Rome, for his researches in the calculus of probability.

The Royal Academy of Belgium has awarded its Charles Lagrange prize for the period 1928–30 to Dr. William Bowie, of the United States Coast and Geodetic Survey, for his uniform triangulation of Canada, the United States, and Mexico.

The Paris Academy of Sciences announces the award of the following prizes for 1932: The Poncelet prize to Raoul Bricard, for his work in geometry; the Francœur prize to Henri Milloux, for his work in analytic functions; the Montyon prize in mechanics to Jules Haag, for his work in chronometry; the Fournayron prize to Maurice Roy for his work in applied mechanics; the Henri de Parville prize to Joseph Pérès, for his work in hydrodynamics; the Henri Bazin Foundation prize to Dimitri Riabouchinsky, for his work in aerodynamics and hydraulics; the prize of the Navy to Pierre Malaval, for his work in the resistance and strength of materials; the LaCaze prize in physics to Eugène Darmois, for his scientific work as a whole; the Hébert prize to Charles Lavanchy, for his work on the calculation and construction of aerial

lines at high tension; the Binoux prize to Abel Rey, for his work in the history of the sciences; the Grand Prix of the mathematical sciences to Jacques Soula, for his work in entire series; the Vaillant prize to Maurice Gevrey, for his work in partial differential equations; the Albert de Monaco prize to Louis de Broglie; a Trémont Foundation prize to Lucien Malassis, for his work on calculating machines; a Gegner Foundation prize to Wladimir Margoulis, for his work in nomography and its applications in aerodynamics and aviation; the Hirn Foundation prize to Adolphe Buhl, for his researches in transformations and invariances of multiple integrals, and their applications in mathematical physics; the Henri Becquerel Foundation prize to Henri Galbrun, for his work in the calculus of probabilities and the mathematical theory of insurance, and his study of the propagation of sound waves in the atmosphere.

The Hopkins prize of the Cambridge Philosophical Society for the period 1924–27 has been awarded to Professor G. I. Taylor, Yarrow research professor of the Royal Society, for his researches on hydrodynamics and on the deformation of crystals, and for the period 1927–30 to Professor P. A. M. Dirac, of Cambridge, for his researches on the theory of quantum mechanics.

The Royal Astronomical Society has awarded its gold medal for 1933 to Dr. V. M. Slipher, director of the Lowell Observatory, Flagstaff, Arizona, for his spectroscopic researches on planets, stars, and nebulae.

The Mathematical Association of America has awarded its Chauvenet prize for an expository paper on a mathematical subject to Professor G. H. Hardy, of the University of Cambridge, for his paper entitled *An introduction to the theory of numbers*, which appeared in this Bulletin, vol. 35 (1929), pp. 778–818.

Dr. Henry Eyring, research associate in chemistry at Princeton University, has been awarded the ninth annual \$1,000 prize of the American Association for the Advancement of Science, for his paper entitled *Quantum mechanics and chemistry with particular reference to reactions involving conjugate double bonds*, presented at the Atlantic City meeting.

The Alfred Noble prize for the best technical paper of the year on a topic in engineering has been awarded to Frank M. Starr, of the General Electric Company, for his paper entitled *Equivalent circuits*, II.

Aymar de la Baume Pluvinel has been elected a member of the Paris Academy of Sciences in the section of astronomy, as successor to the late G. Bigourdan.

Professor L. Brusotti, of the University of Pavia, has been elected a corresponding member of the Reale Istituto Lombardo.

Professors P. Burgatti, of Bologna, and C. L. Ricci, of Naples, have been elected corresponding members of the Turin Academy of Sciences.

Professor Tullio Levi-Civita, of the University of Rome, has been elected foreign associate of the Royal Academy of Belgium.

Professor L. Brillouin, of the University of Paris, has been made an honorary professor.

Professor Hans Geiger, of Tübingen, has been appointed Scott lecturer at Cambridge University for the year 1933.

The following seventy-nine doctorates with mathematics or mathematical physics as major subject were conferred during 1932 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.

J. R. Abernethy, Michigan, *On the application of divided differences to approximation.*

Alice L. Ambrose, Wisconsin, June, major in philosophy, *In defense of an extensional logic.*

Sister Mary Nicholas Arnoldy, Catholic, October, minors in physics and education, *The reality of the double tangents of the rational symmetric quartic curve.*

N. H. Ball, Massachusetts Institute of Technology, June, minor in physics, *Projective geometry of element-manifolds.*

R. A. Beaver, Cornell, September, minor in physics, *Finite plane euclidean geometry.*

A. H. Black, Cornell, June, minor in physics, *Types of involutorial space transformations associated with certain rational curves.*

J. J. Brady, California (Berkeley), May, major in physics, *A quantitative study of the photo-electric properties of thin alkali metal films.*

G. S. Bruton, Wisconsin, June, *Certain aspects of the theory of equations for a pair of matrices.*

R. C. Bullock, Chicago, June, *Non-conjugate osculating quadrics of a curve on a surface.*

J. H. Butchart, Illinois, June, minor in physics, *Helices in euclidean n -space.*

R. H. Cameron, Cornell, September, minor in physics, *Almost periodic transformations.*

J. F. Carlson, California (Berkeley), May, major in physics, *The energy losses of fast particles.*

J. M. Clarkson, Cornell, June, minor in physics, *Some involutorial line transformations interpreted as points of V_2 of S_5 .*

H. H. Conwell, Wisconsin, June, *Linear associative algebras of infinite rank whose elements satisfy finite algebraic equations.*

Frances T. Cope, Radcliffe, June, *Formal solutions of irregular linear differential equations.*

A. H. Diamond, California (Berkeley), December, *The complete existential theory of the Whitehead-Huntington set of postulates for the algebra of logic.*

J. L. Doob, Harvard, June, *The boundary values of analytic functions.*

C. H. Fischer, Iowa, June, minor in economics, *On correlation surfaces of sums with a certain number of random elements in common.*

D. G. Fulton, Michigan, *Generalizations of the Cauchy integral formula.*

C. E. M. Gewertz, Massachusetts Institute of Technology, June, major in electrical engineering, *Synthesis of a finite four-terminal network whose driving point and transfer functions are prescribed.*

G. D. Gore, Chicago, August, *Surfaces associated with a congruence.*

H. E. H. Greenleaf, Indiana, October, minor in physics, *Curve approximation by means of functions analogous to the Hermite polynomials.*

Harvey Hall, California (Berkeley), May, major in physics, *Relativistic theory of the photo-electric effect.*

C. H. Harry, Johns Hopkins, June, *Concerning spaces without local cut points and a geometry of acyclic spaces.*

M. C. Hartley, Illinois, June, minor in astronomy, *Properties of algebraic plane quintics which are invariant under finite collineation groups.*

G. G. Havens, Wisconsin, June, major in physics, *The magnetic susceptibility of some common gases.*

M. R. Hestenes, Chicago, June, *Sufficient conditions for the general problem of Mayer with variable end-points.*

E. H. Hildebrandt, Michigan, *Systems of polynomials connected with the Charlier expansions and the Pearson differential and difference equations.*

Banesh Hoffmann, Princeton, April, *On the spherically symmetric field in relativity.*

I. O. Horsfall, Cornell, June, minor in physics, *Transformations associated with the lines of a cubic, quadratic, or linear complex.*

Kuen-Sen Hu, Chicago, June, *The problem of Bolza and its accessory boundary value problem.*

Ralph Hull, Chicago, August, *The numbers of solutions of congruences involving only k th powers.*

R. E. Huston, Chicago, August, *Asymptotic generalizations of Waring's theorem.*

R. D. James, Chicago, June, *Analytical investigations in Waring's theorem.*

M. W. Keller, Indiana, June, minor in physics, *A study of the angular velocity about a point between the foci in Keplerian elliptic motion.*

S. H. Kimball, Harvard, June, *On rigid motions in four dimensions, with applications to the Laguerre geometry of three dimensions.*

R. W. P. King, Wisconsin, June, major in electrodynamics, *Characteristics of vacuum tube circuits having distributed constants at ultra-radio frequencies.*

E. C. Klipple, Texas, June, *Spaces in which there exist contiguous points.*

H. L. Krall, Brown, June, *An asymptotic expression of the characteristic values of the elliptic partial differential equation.*

J. H. Kusner, Pennsylvania, June, *On continuous curves with cyclic connection of higher order.*

D. C. Lewis, Harvard, June, *Infinite systems of ordinary differential equations with applications to certain second order non-linear partial differential equations of hyperbolic type.*

S. A. Lischinsky, Toronto, May, *The expression of numbers as sums of squares and primes from specified arithmetic progressions.*

C. F. Luther, Stanford, June, minor in physics, *Concerning primitive groups of class U .*

M. H. Martin, Johns Hopkins, June, *On infinite orthogonal matrices.*

R. S. Martin, California Institute of Technology, June, minor in physics, *Contribution to the theory of functionals.*

Ruth G. Mason, Chicago, March, *Studies in the Waring problem.*

David Moskovitz, Brown, June, *Certain irregular non-homogeneous linear difference equations.*

A. F. Moursund, Brown, October, *On a method of summation of Fourier series.*

S. B. Myers, Harvard, June, *Sufficient conditions in the problem of the calculus of variations in n -space in parametric form and under general end conditions.*

Leo Nedelsky, California (Berkeley), May, major in physics, *Radiation from slow electrons.*

Emma J. Olson, Chicago, August, *Conjugate systems characterized by special properties of their ray congruences.*

G. B. Price, Harvard, June, *On the double pendulum and similar dynamical systems.*

Irene Price, Indiana, October, minor in astronomy, *On a certain type of polynomials.*

E. J. Purcell, Cornell, June, *Involutorial space Cremona transformations determined by non-linear null reciprocities.*

A. W. Raab, Chicago, August, *Jacobi's condition for multiple integral problems of the calculus of variations.*

Francis Regan, Michigan, *The application of the theory of admissible numbers to time series.*

C. E. Rhodes, Cincinnati, June, *Concerning the double Poisson integral and its derivatives.*

Nathan Rosen, Massachusetts Institute of Technology, June, major in physics, *Calculation of energies of diatomic molecules.*

Helen G. Russell, Radcliffe, June, *On the degree of convergence and overconvergence of polynomials of best simultaneous approximation to several functions analytic in distinct regions.*

Jacob Sherman, Pennsylvania, June, *On the numerators of the convergents of the Stieltjes continued fractions.*

D. T. Sigley, Illinois, June, minor in physics, *Groups involving a small number of complete sets of conjugates.*

A. Sisk, Cornell, June, *The plane symmetric quintic Cremona involutions.*

A. H. Smith, Brown, October, *On the summability of derived series of the Fourier-Lebesgue type.*

A. E. Staniland, Pittsburgh, June, *On the Segre curved four-space representation of the plane of two complex variables.*

Mildred M. Sullivan, Radcliffe, June, *On the derivatives of Newtonian and logarithmic potentials near the acting masses.*

J. F. Thomson, Michigan, *Motion of the electrons of the helium atom.*

Sister Mary Domitilla Thuener, Catholic, June, minors in physics and education, *On the number and reality of the self-symmetric quadrilaterals inscribed to the triangular-symmetric rational quartic.*

E. W. Titt, Princeton, June, *Systems of partial differential equations and their characteristic surfaces.*

A. W. Tucker, Princeton, June, *An abstract approach to manifolds.*

Alice W. Turner, Toronto, October, minor in philosophy, (I) *Note on conjugate Fourier integrals*; (II) *Convergence of the Poisson integral.*

C. H. Vehse, Brown, June, *Acceleration stresses in a heavy wire rope.*

C. W. Vickery, Texas, June, minor in philosophy, *Spaces in which there exist uncountable convergent sequences of points.*

J. P. Vinti, Massachusetts Institute of Technology, June, major in physics, *The variational calculation of atomic wave functions.*

E. H. Wagner, Michigan, *A treatment of systems of linear difference equations having faculty series as coefficients.*

A. M. Wahl, Pittsburgh, June, minor in mechanics, *Bending of semicircular plates with and without radially slotted peripheral portions.*

A. E. Whitford, Wisconsin, June, major in physics, *Zeeman effect of the K II spectrum.*

Hassler Whitney, Harvard, February, *The coloring of graphs.*

Kamcheung Woo, California (Berkeley), May, *Projective-transformation group on a hyperquadric in four-dimensional space.*

Marguerite L. Zeigel, Missouri, August, minor in physics, *Some invariant properties of a two-dimensional surface in hyperspace.*

Dr. Kornel Lanczos, of the University of Frankfurt, has been promoted to an associate professorship of theoretical physics.

Dr. Emanuel Spoerner, of the University of Hamburg, has been appointed professor of mathematics at Tsing Hua University, Peking.

Professor B. L. van der Waerden, of Leipzig, has been appointed Rouse Ball lecturer at Cambridge University for the year 1932–33.

Dr. H. R. Hulme has been elected to an unofficial Drosier fellowship at Gonville and Caius College, Cambridge, for research in mathematical physics.

Professor Jesse Douglas, of the Massachusetts Institute of Technology, has been granted leave of absence for the second semester of the present academic year.

Professor Solomon Lefschetz of Princeton University has been appointed to the Henry Burchard Fine chair of mathematics to succeed Professor Oswald Veblen.

Associate Professor J. J. Nassau, of the Case School of Applied Science, has been promoted to a professorship of mathematics.

Professor R. L. Borger, of Ohio University, Athens, Ohio, died December 26, 1932. Professor Borger had been a member of the American Mathematical Society since 1905.

Mr. J. D. Grant, assistant in mathematics at the University of Illinois, died July 9, 1932.

Dr. Ormond Stone, retired professor of astronomy at the University of Virginia, died January 17, 1933, at the age of eighty-six. Dr. Stone had been a member of the American Mathematical Society since 1891.

Mr. R. M. Webb, of the Kansas City Life Insurance Company, a member of the American Mathematical Society, died December 26, 1932.