NOTES

A new journal entitled Applied Mathematics and Mechanics has been founded under the auspices of the Leningrad Mechanical Society. Professor E. L. Nicolai is managing editor.

The Congress of Mathematicians of the Slavic Countries will meet at Prague, September 23–28, 1934. All mathematicians are invited to attend. Inquiries may be addressed to the Jednota Ceskoslovenskych Matematiku a Fysiku, Vodickova 20, Prague II.

Under the auspices of the Edinburgh Mathematical Society, a Colloquium will be held at St. Andrews University, St. Andrews, Scotland, from July 18 to July 28, 1934. The following courses of lectures have been arranged: *World-structure by the kinematic methods of the special theory of relativity*, by Professor E. A. Milne, of the University of Oxford; *Ramanujan's note-books and their place in modern mathematics*, by Professor B. M. Wilson, of University College, Dundee; *Pictorial geometry*, by Professor H. W. Turnbull, of the University of St. Andrews; *Some expansions relating to the problem of lattice points*, by W. L. Ferrar, of Hertford College, Oxford. Inquiries may be sent to Dr. D. E. Rutherford, United College, St. Andrews.

At Cambridge University, Smith's prizes have been awarded to K. Mitchell, of Peterhouse, and A. J. Ward, of Emmanuel College, and Rayleigh prizes to M. S. Bartlett, of Queen's College, and C. G. Pendse, of Downing College.

The Catherine Wolfe Bruce gold medal of the Astronomical Society of the Pacific for the year 1934 has been awarded to Alfred Fowler, Yarrow research professor of the Royal Society and professor of astrophysics in the University of London, for distinguished service in the field of astronomy.

A prize of one thousand dollars awarded to Dr. Annie J. Cannon by the Association to Aid Scientific Work by Women has been donated by Dr. Cannon to the American Astronomical Society as an endowment for a prize to be awarded to women "for distinguished contributions to astronomy or for similar contributions in related sciences which have immediate application to astronomy."

The Belgian Academy of Sciences announces the following subjects for prize memoirs: *A contribution to the invariant theory of the calculus of variations* (competition closes July 31, 1934); *Researches on the properties of algebraic varieties in three dimensions that are invariant under birational transformations* (competition closes July 31, 1934); *A study of the formal logic of Plato* (competition closes October 31, 1934); *A mathematical or experimental investigation that represents important progress in the mathematical theory of the Earth* (competition closes June 30, 1936).

The prize instituted by the review Scientia in memory of Eugenio Rignano for a memoir on the evolution of the concept of time has been awarded jointly to Professor S. Zawirski, of Poznan, and Professor G. Giorgi, of Palermo.

The Francqui prize of the Francqui Foundation of Belgium has been awarded to the Abbé Georges Lemaitre, professor of the theory of relativity and the history of physical and mathematical sciences at the University of Louvain.

The Leningrad Academy of Sciences has elected to honorary membership the following mathematicians and mathematical physicists: Professor G. H. Hardy, of Cambridge; Dr. Erwin Schroedinger, of Oxford (formerly of Berlin); Professor David Hilbert, of Göttingen; Dr. Max Born, of Cambridge (formerly of Göttingen); Professor Tullio Levi-Civita, of Rome.

Gaston Julia has been elected a member of the Paris Academy of Sciences in the section of geometry, as successor to the late Paul Painlevé.

A tablet has been unveiled at the University of Pavia in honor of G. Saccheri, the precursor of non-euclidean geometry, who died in 1733.

Dr. Francesco Severi, professor of mathematics at the University of Rome, has been elected a corresponding member of the Prussian Academy of Sciences.

The following mathematicians have been elected fellows of the Royal Society of Edinburgh: Mr. W. L. Edge and Dr. I. M. H. Etherington, of the University of Edinburgh, Dr. D. E. Rutherford, of the University of St. Andrews (United College), and Professor B. M. Wilson, of the University of St. Andrews (University College, Dundee).

Mr. A. S. Besicovitch, of Cambridge, and the Reverend Alfred Young, rector of Birdbrook, Essex, have been elected fellows of the Royal Society of London.

A Leverhulme research fellowship has been awarded to C. R. Burch, of the Metropolitan-Vickers Electrical Company, for research on the production of aspherical optical surfaces and on their imaging properties in combination.

Sir William Hopwood Jeans has been elected president of the British Association for the Advancement of Science, as successor to the late Sir William Hardy.

The title "honorary fellow of University College, London," has been conferred on Dr. Karl Pearson, professor emeritus of eugenics.

Professor R. D. Carmichael has been elected vice-president and chairman of Section A (mathematics) of the American Association for the Advancement of Science.

Dr. A. H. Diamond, of the University of California, has been awarded an American Field Service fellowship for study at the Sorbonne in the field of the applications of analysis to geometry.

Professor Arnold Dresden, of Swarthmore College, has been awarded a Guggenheim fellowship, for the preparation of a book on the calculus of variations, an attempt to unify the three points of view now dominant in this field; he will work at Pisa and at the Institute for Advanced Study.

Professor E. T. Whittaker, of the University of Edinburgh, who was appointed Hitchcock Professor at the University of California for the second semester of 1933–34, lectured in Berkeley from March 19 to April 3, and in Los Angeles on April 5 and 6, at the University of California. At Berkeley, he delivered five public lectures on the general topic *The geometrical description of nature*, and five technical lectures on *Recent general field-theories, especially those of Schouten and van Dantzig*. At Los Angeles he repeated his public lectures in briefer form. He returned immediately to Edinburgh to resume his duties there. The honorary degree of Doctor of Laws was conferred upon him by the University of California on the occasion of its Charter Day celebration on March 23, 1934.

The following seventy-five doctorates with mathematics or mathematical physics as major subject were conferred during 1933 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.

Helen Schlauch Adams (Mrs. L. P.), Cornell, September, minor in physics, *The normal rational n-ic.*

Beatrice Aitchison, Johns Hopkins, June, *On mapping with functions of finite sections.*

H. H. Alden, Ohio State, June, *Properties of differential equations and integrals of differential equations arising from properties of the solution curves.*

E. W. Anderson, Iowa State College, June, minors in physics and engineering, *Statics of special types of homogeneous elastic slabs with variable thickness.*

H. M. Bacon, Stanford, June, minor in history, *An extension of Kronecker's theorem.*

S. F. Barber, Illinois, June, minor in astronomy, *Planar Cremona transformations.*

J. H. Binney, Rice Institute, June, *An elliptic system of integral equations on summable functions.*

Julia W. Bower, Chicago, June, *The problem of Lagrange with finite side conditions.*

Dorothy S. Brady, California (Berkeley), May, *On the solution of homogeneous linear integral equations.*

S. H. Caldwell, Massachusetts Institute of Technology, June, major in electrical engineering, minor in physics, *The ex ension and application of differential analyzer technique in the solution of ordinary differential equations.*

Josephine H. Chanler, Illinois, June, minor in physics, *Poristic double binary forms.*

S. P. Cheo, Michigan, June, *Singularities of analytic vector functions.*

W. S. Claytor, Pennsylvania, June, *On the immersion of a Peanian continuum in a spherical surface.*

H. E. Crull, Illinois, June, minor in astronomy, *Quartic surfaces invariant in the symmetric group G_{24}.*

W. M. Davis, Chicago, August, *Contributions to the theory of conjugate nets.*

J. G. Estes, Massachusetts Institute of Technology, June, minor in aeronautical engineering, *The lift and moment of an arbitrary aerofoil-Joukovsky potential.*

H. M. Feldman, Washington University (St. Louis), June, minor in physics, *Product moments of samples drawn from a set of infinite populations.*

J. S. Frame, Harvard, June, *The theory of tables of group characteristics.*

Gordon Fuller, Michigan, February, *On the invariant character of certain systems of partial differential equations.*

A. T. Goble, Wisconsin, December, major in physics, *The four vector problem in quantum mechanics with applications to platinum-like spectra.*

H. S. Grant, Pennsylvania, June, *Concerning powers of certain classes of ideals in a cyclotomic realm which give the principal class.*

N. M. Gray, New York, June, major in physics, *On the calculation of the magnetic moment of the Li^7 nucleus from hyperfine structure data.*

T. N. E. Greville, Michigan, June, *Invariance of the property of admissibility under certain general types of transformations.*

D. F. Gunder, Wisconsin, October, *The flexure problem for rectangular beams with slits.*

Abraham Hackman, Rensselaer Polytechnic Institute, June, minor in mathematical physics, *An investigation of the applicability of Fourier's integral and Fourier's series to the summation of series of integral powers of the reciprocals of the natural numbers.*

E. H. Hadlock, Cornell, June, *On the progression associated with a ternary quadratic form.*

D. L. Hibbard, Massachusetts Institute of Technology, June, minor in business and engineering administration, *Mathematical risks.*

R. C. Hildner, Ohio State, December, *Inverse problems of the calculus of variations involving the Hamilton and the Hamilton-Carathéodory functions.*

P. G. Hoel, Minnesota, March, minor in physics, *Certain problems in the theory of closest approximation.*

Roberta F. Johnson, Cornell, June, minor in philosophy, *Involutions of order 2 associated with surfaces of genera $P_a = p_g = 0$, $P_2 = 1$, $P_3 = 0$.*

H. K. Justice, Cincinnati, June, *Group theory applied to vector differential equations.*

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

V. S. Lawrence, Jr., Cornell, June, *Closed orbits in central distance force fields.*

Joseph Lev, Cornell, September, minor in physics, *Effects of linear transformations on the divergence of bounded sequences and functions.*

J. F. Locke, Illinois, February, minor in philosophy, *Repeated sums of certain functions.*

E. R. Lorch, Columbia, April, *Elementary transformations.*

Emma W. McDonald, California (Berkeley), May, minor in astronomy, *Magic cubes which are uniform step cubes.*

M. L. MacQueen, Chicago, December, *A projective generalization of euclidean parallelism of surfaces.*

G. R. Magee, Chicago, June, *Conjugate nets of ruled surfaces in a congruence.*

J. R. Mayor, Wisconsin, June, *A generalization of the Veronese and Steiner surfaces.*

W. I. Miller, Pittsburgh, February, *Fundamental regions for the simple group of order* 168 *in* S_4.

Deane Montgomery, Iowa, January, minor in philosophy, *Sections of point sets.*

L. T. Moston, Harvard, June, *Invariant methods in the infinitesimal geometry of surfaces.*

D. S. Nathan, Cincinnati, June, *Groups of transformations in a composite function space.*

Abba V. Newton, Chicago, August, *Consecutive covariant configurations at a point of a space curve.*

G. W. Nicholson, North Carolina, June, *The generalized form of the Lorentz transformation.*

E. R. Ott, Illinois, February, minor in physics, *A modular manifold determined by the planar quartic curve.*

L. F. Palmer, Cincinnati, June, *On the strong summability of the double Fourier series.*

Ruth M. Peters, Radcliffe, June, *Parallelism and equidistance in Riemannian geometry.*

Melba N. Phillips, California (Berkeley), May, major in physics, *Problems in the spectra of the alkalis*: I. *Photo-ionization probabilities in atomic potassium.* II. *Theoretical considerations on the inversion of doublets in alkali-like spectra.*

H. S. Pollard, Wisconsin, October, minor in statistics, *On the relative stability of the median and arithmetic mean, with particular reference to certain frequency distributions which can be dissected into normal distributions.*

T. E. Raiford, Michigan, February, *Some geometric aspects of linear transformations.*

H. W. Raudenbush, Jr., Columbia, September, *Differential fields and ideals of differential forms.*

P. K. Rees, Rice Institute, June, *Transforms of Fuchsian groups.*

Casper Shanok, Yale, June, *Convex polyhedra and criteria for irreducibility.*

P. M. Singer, California (Berkeley), May, *Periodic continued fraction expansions of quadratic irrationalities.*

Abraham Sinkov, George Washington, June, *Families of groups generated by two operators of the same order.*

H. E. Spencer, Cornell, June, minor in physics, *On convergence and oscillation of transforms of sequences of vectors.*

Anna A. Stafford, Chicago, August, *Knotted varieties.*

Morris Stone, Pittsburgh, June, minors in physics and mechanical engineering, *The general torsion problem; solution by electric flow analogue.*

Alexander Tartler, Pennsylvania, June, *On a certain new class of orthogonal polynomials.*

Arthur Tilley, New York, June, minor in physics, *On spaces (E) of Fréchet.*

Y. Y. Tseng, Chicago, March, *The characteristic value problem of Hermitian functional operators in a non-Hilbertian space.*

H. L. Turrittin, Wisconsin, June, *Asymptotic solutions of certain ordinary differential equations associated with multiple roots of the characteristic equation.*

T. L. Wade, Jr., Virginia, June, minor in physics, *Irreducible complete systems of euclidean concomitants for some cubic curves with their syzygies and their geometric interpretations.*

G. P. Wadsworth, Massachusetts Institute of Technology, June, minor in physics, *The geometry of linear homogeneous partial differential equations of the first order.*

T. O. Walton, Michigan, February, *Geometrical studies suggested by a proof of the fundamental theorem of algebra.*

C. H. Wheeler, Johns Hopkins, June, *A type of homogeneity for continuous curves.*

N. G. Whitelaw, Wisconsin, major in physics, *Theory of the quantum defect and anomalous multiple structure of Al II.*

Marian A. Wilder, Minnesota, July, minor in biometry, *Some problems in closest approximation over a discrete set of points.*

L. A. Wills, New York, June, major in physics, *Relativity corrections in the theory of hyperfine structure.*

Clement Winston, Pennsylvania, February, *On mechanical quadratures formulae related to the classical orthogonal polynomials.*

C. R. Worth, California Institute of Technology, June, minor in mathematical physics, *The subvarieties of a field.*

Y. C. Yeh, Massachusetts Institute of Technology, June, minor in naval architecture, *The distribution of stresses in welded structures.*

P. T. Yuan, Michigan, February, *On the logarithmic frequency distribution and the semi-logarithmic correlation surface.*

Dr. Karl Bechert, of the University of München, has been appointed professor of theoretical physics at the University of Giessen.

Dr. Adolf Fränkel, formerly of Kiel, has been appointed professor of mathematics at the Hebrew University, Jerusalem.

Professor Otto Haupt, of the University of Erlangen, has been appointed professor of mathematics at the University of Leipzig.

Professor Werner Heisenberg, of the University of Leipzig and Magdalen College, Oxford, has been appointed Rouse Ball lecturer at Cambridge for 1933–34.

Professor Jakob Horn, of the Darmstadt Technical School, has retired.

Dr. Johannes Picht has been appointed associate professor of theoretical physics at the Berlin Technical School.

Charles Platrier has been appointed professor of mechanics at the Ecole Polytechnique, as successor to the late Paul Painlevé.

Dr. R. Stoneley, of St. John's College, and Dr. H. M. Taylor, of Clare College, have been appointed University lecturers in the faculty of mathematics at the University of Cambridge.

Professor Theodor Vahlen, of Greifswald, has been appointed professor of applied mathematics and director of the Institute for Applied Mathematics at the University of Berlin, as successor to Professor Richard von Mises.

Professor P. A. M. Dirac, of the University of Cambridge, has been appointed visiting professor of mathematical physics at the Institute for Advanced Study, Princeton, for the academic year 1934–35.

Professor H. B. Phillips, of the Massachusetts Institute of Technology, has been appointed acting head of the department of mathematics.

Dr. J. E. Rowe, formerly president of Clarkson College of Technology, has been appointed a member of the Board of Veterans' Appeals, which passes on contested compensation and hospitalization cases.

Associate Professor George Rutledge, of the Massachusetts Institute of Technology, has been promoted to a professorship of mathematics, effective in the fall of 1934.

Dr. H. P. Thielman, of the Ohio State University, has been appointed professor of mathematics at the College of St. Thomas, St. Paul, Minnesota.

Dr. Stefan Warschawski, of Göttingen, has been appointed associate in mathematics at Columbia University for the year 1934.

Dr. Fritz Haber, formerly director of the Kaiser Wilhelm Institut für Physikalische Chemie und Elektrochemie at Berlin, died January 29, 1934, at the age of sixty-five.

The death at the age of eighty-nine is announced of Sir Thomas Muir, known for his work in determinants, and superintendent-general of education at the Cape of Good Hope. He had been a member of the American Mathematical Society since 1913.

Professor Ludwig Schlesinger died at Giessen, December 16, 1933, at the age of sixty-nine.

Professor D. M. Y. Sommerville, of Victoria College, Wellington, New Zealand, died January 31, 1934, at the age of fifty-four. He had been a member of the American Mathematical Society since 1915.

Professor Gerhard Thomsen, of the University of Rostock, died January 4, 1934, at the age of thirty-four.

Paul Vieille, member of the Paris Academy of Sciences in the section of mechanics, and known for his work in interior ballistics and the thermodynamics of explosives, has died, at the age of eighty.

A. S. Hathaway, professor emeritus at the Rose Polytechnic Institute, Terre Haute, Indiana, died March 11, 1934, at the age of seventy-eight. He had been living at Boerne, Texas, since his retirement thirteen years ago. Professor Hathaway, prominent in the early days of this Society, had been a member since 1891.

Professor Arthur Ranum, of Cornell University, died February 28, 1934, in his sixty-fourth year. He had been a member of the American Mathematical Society since 1904.