

CORRECTION.

In Miss Noether's abstract on page 116 of the January BULLETIN the last sentence should read: The two fundamental theorems of the symbolic method, that concerning invariant processes and that regarding the totality of the invariant identities, readily appear by this method.

In the February BULLETIN, page 274, the amount of the prize granted by the Göttingen academy to Dr. Wieferich should have been stated as 1,000 Marks. Dr. Wieferich's paper appeared in volume 136 of *Crelle*.

NOTES.

THE twenty-sixth regular meeting of the Chicago Section of the AMERICAN MATHEMATICAL SOCIETY will be held at the University of Chicago on Friday and Saturday, April 8, 9, 1910, the first session opening at 10 o'clock a. m. in Room 32, Ryerson Physical Laboratory.

THE lectures delivered before the New Haven Colloquium of the American Mathematical Society in September, 1906, by Professors E. H. MOORE, E. J. WILCZYNSKI, and MAX MASON are now in press and will soon be issued in book form. The lectures are published by Yale University.

AT the meeting of the London mathematical society held on February 10, the following papers were read: By H. W. RICHMOND, "A note on double series of lines"; by H. LAMB, "On the diffraction of a solitary wave"; by H. F. BAKER, "Notes on various points in the theory of functions."

THE valuable library on mathematics and science of the late OREN ROOT, for many years professor of mathematics at Hamilton College, has been presented to the college by his son, Senator ELIHU ROOT.

UNDER the auspices of the Italian ministry of public instruction and the editorial direction of Professors V. Volterra, G. Loria and D. Gambioli the first complete edition of the mathematical works of Count JULIUS CHARLES DI FAGNANO will be

published in the course of the year. The edition will include his papers of a controversial character and scientific correspondence, several valuable documents of which have been recently discovered in the Oliveriana library in Pesaro. In order to make this collection as complete as possible, the editors request the coöperation of any persons who can supply information as to the existence in public or private libraries of manuscripts regarding Count Fagnano.

THE mathematical papers of the late Professor H. MIN-KOWSKI are being collected and edited by Professor D. HILBERT. They will be published in two octavo volumes by Teubner during the summer, and will include all his writings except the two books, *Geometrie der Zahlen* and *Diophantische Approximationen*. The memoirs are arranged in four groups, comprising the theory of numbers, the geometry of numbers, geometry, and physics. An extensive manuscript concerning the theory of convex bodies will appear for the first time in the forthcoming publication.

THE firm of Macmillan and Company of London announce the publication of a two-volume biography of Sir William Thomson by Professor S. P. THOMPSON. While the present work also considers his early life, it does not encroach upon the family narrative which has just been edited by Lord Kelvin's nieces.

THE prize of 1,200 francs announced by the Istituto Lombardo (at Milan) for an important contribution to the theory of continuous groups has been awarded to Professor U. AMALDI, of the University of Modena, for a paper entitled "I gruppi continui infiniti di trasformazioni puntuali della spazio a tre dimensioni."

THE next summer meeting of the British association for the advancement of science will be held at Sheffield beginning August 31, under the presidency of Professor T. G. BONNEY. Professor E. W. HOBSON is chairman of section A, mathematics and physics.

DURING the interval from April 11 to April 22 a vacation course in mathematics for teachers of secondary schools will be held at the University of Göttingen. The following programme is announced: By Professor H. BEHRENDSEN: Geo-

metric methods in instruction in arithmetic, four hours.—By Professor F. KLEIN : Elementary mechanics, six hours.—By Professor L. PRANDTL : Aerial dynamics and ballooning, four hours.—By Professor E. LANDAU : Theory of aggregates, four hours.

THE following university courses are announced for the summer semester :

UNIVERSITY OF BONN.—By Professor E. STUDY : Theory of elliptic functions, four hours ; Seminar, two hours.—By Professor F. LONDON : Descriptive geometry with exercises, four hours ; Selected chapters of analytic geometry, two hours : Seminar, two hours.—By Professor S. HESSENBERG : Foundations of geometry, two hours ; Seminar, two hours.—By Dr. J. O. MÜLLER : Theory of numbers, three hours.—By ——— : Differential and integral calculus, four hours.

UNIVERSITY OF GIESSEN.—By Professor M. PASCH : Analytic geometry of the plane, four hours ; Selected portions of the theory of functions, two hours ; Seminar.—By Professor H. GRASSMANN : Ordinary differential equations, four hours ; Descriptive geometry, II, five hours ; Seminar.

UNIVERSITY OF GÖTTINGEN.—By Professor F. KLEIN : Applications of the calculus to geometry, four hours ; Seminar on the boundary between mathematics and philosophy (with Professor Zermelo), two hours.—By Professor D. HILBERT : Principles of mathematics, four hours ; Selected chapters in the theory of partial differential equations, two hours ; Seminar, two hours.—By Professor E. LANDAU : Differential and integral calculus, with exercises, five hours ; Selected chapters in the theory of functions, two hours ; Concerning the Fermat theorem, one hour ; Seminar, two hours.—By Professor C. RUNGE : Analytic geometry with exercises, four hours ; Seminar, two hours.—By Professor L. PRANDTL : Introduction to thermodynamics, three hours ; Seminar, two hours.—By Professor E. ZERMELO : Differential equations, three hours ; Seminar (with Dr. Toeplitz and Dr. Born), two hours.—By Dr. P. KOEBE : Introduction to synthetic geometry, two hours ; Riemann's theory of functions, four hours.—By Dr. O. TOEPLITZ : Introduction to the theory of integral equations, and of an infinite number of variables, four hours.—By Dr. F. BERNSTEIN : Quadratic and relative quadratic number fields, two hours ;

Calculation of insurance, one hour.—By Dr. C. H. MÜLLER : Mathematics of Archimedes, one hour ; Proseminar in mechanics of rigid bodies, two hours.

UNIVERSITY OF GREIFSWALD. — By Professor W. THOMÉ : Theory of analytic and particularly elliptic functions I, four hours ; Algebraic surfaces and space curves, two hours ; Seminar. — By Professor F. ENGEL : Differential and integral calculus I, four hours ; Analytic geometry of space, two hours ; Seminar. — By Professor K. T. VAHLEN : Differential geometry, three hours, with exercises, one hour.

UNIVERSITY OF MUNICH. — By Professor F. LINDEMANN : Integral calculus, five hours ; Theory of substitutions and higher algebraic equations, four hours ; Seminar, two hours. — By Professor A. VOSS : Analytic geometry of space, four hours ; Calculus of variations, three hours ; Seminar, two hours. — By Professor A. PRINGSHEIM : Selected chapters in the theory of analytic functions, four hours. — By Professor A. SOMMERFELD : Partial differential equations of physics for beginners, three hours ; with exercises, one hour. — By Professor H. BRUNN : Elements of higher mathematics for students of all faculties, four hours. — By Professor K. DOEHLEMANN : Descriptive geometry, II, four hours ; with exercises, 2 hours ; Synthetic geometry, II, two hours ; with exercises, two hours. By Dr. H. HARTOGS : Theory of abelian functions, II, with applications to the theory of algebraic curves, three hours. — By Dr. O. PERRON : Selected chapters of elementary geometry, five hours ; Theory of linear differential equations, four hours. By Dr. R. WAGNER : Mathematical supplement to the lectures on experimental physics, one hour.

PROFESSOR E. ZERMELO, of Göttingen, has been appointed professor of mathematics at the University of Zurich.

DR. A. BUHL has been appointed professor of general mathematics at the University of Toulouse.

PROFESSOR A. R. FORSYTH, of the University of Cambridge, has resigned the Sadlerian professorship of mathematics. The vacancy has been filled by the election of Dr. E. W. HOBSON, of Christ's College.

AT the University of Berlin, Professor G. FROBENIUS and Professor F. SCHOTTKY have been given the title of Geheimer Regierungsrat.

DR. —. HELLEBRAND, of the agricultural institute of Vienna, has been promoted to an associate professorship of mathematics.

THE mathematical staff of Columbia University has been enlarged by the appointment of Professor W. B. FITE, of Cornell University, and H. E. HAWKES, of Yale University, as professors of mathematics.

MR. H. H. MITCHELL, of Princeton University, has been appointed instructor in mathematics in the Sheffield Scientific School of Yale University.

PROFESSOR A. CAPELLI, of the University of Naples, died January 28 at the age of 55 years. He was a member of the Italian Society of Sciences, of the Accademia dei Lincei, etc.

PROFESSOR F. PURSER, of the University of Dublin, author of several memoirs on the Bessel functions, died January 28 at the age of 70 years.

BOOK catalogues: A. Hermann et Fils, 6 rue de la Sorbonne, Paris, catalogue for 1910, about 150 titles in mathematics. — H. Sotheran and Company, 140 Strand, London, price current No. 702, about 200 titles in mathematics.

NEW PUBLICATIONS.

(*In order to facilitate the early announcement of new mathematical books, publishers and authors are requested to send the requisite data as early as possible to the Departmental Editor, PROFESSOR W. B. FORD, 1345 Wilmoit Street, Ann Arbor, Mich.*)

I. HIGHER MATHEMATICS.

BACHMANN (P.). *Niedere Zahlentheorie. Zweiter Teil: Additive Zahlentheorie.* Leipzig, Teubner, 1910. 8vo. 10 + 480 pp. Cloth. M. 17.

BAUER (G.). *Vorlesungen über Algebra. 2te Auflage, herausgegeben vom Mathematischen Verein München.* Leipzig, Teubner, 1910. 8vo. 6 + 366 pp. Cloth. M. 12.

DANIELSEN (O.). *Nogle bemærkninger om en gruppe algebraiske flader, der kunne bringes til at svare entydig til en plan punkt for punkt.* Kjøbenhavn, 1909. 8vo. 92 pp. M. 3.60

FABRY (E.). *Problèmes et exercices de mathématiques générales.* Paris, Hermann, 1900. 8vo. 424 pp. Fr. 10.00

FRÉCHET. See HADAMARD (J.).