

THE degree of LL.D. has been conferred by Columbia University on the Kaiser Wilhelm Professor, CARL RUNGE.

PROFESSOR C. J. KEYSER has been appointed head of the department of mathematics at Columbia University to succeed Professor J. H. VAN AMRINGE on the latter's retirement at the close of the present academic year.

PROFESSOR A. S. CHESSIN will deliver at the University of Pennsylvania in February a course of lectures on "The gyrostat and its modern applications."

PROFESSOR E. MILLER, of the University of Kansas, will retire from active service at the close of the present academic year under the conditions of the Carnegie foundation.

### 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 Wilmot Street, Ann Arbor, Mich.*)

#### I. HIGHER MATHEMATICS.

AUTONNE (L.). *Sur les groupes de matrices linéaires non invertibles.*  
Paris, 1909. 8vo. 80 pp. Fr. 5.00

BECK (H.). See BÖCHER (M.).

BLUMENTHAL (O.). *Principes de la théorie des fonctions entières d'ordre infini.* Paris, Gauthier-Villars, 1909. 8vo. 7 + 150 pp. Fr. 5.50

BÖCHER (M.). *Einführung in die höhere Algebra.* Deutsch von H. Beck.  
Mit einem Geleitwort von E. Study. Leipzig, Teubner, 1910. 8vo.  
12 + 348 pp. Cloth. M. 7.00

BOLZA (O.). *Vorlesungen über Variationsrechnung.* Umgearbeitete und stark vermehrte deutsche Ausgabe der "Lectures on the calculus of variations" desselben Verfassers. 3te Lieferung. Leipzig, Teubner, 1909. 8vo. 9 pp. + pp. 541-705. M. 5.00  
In 1 volume, cloth. M. 20.00

BOREL (E.). *Leçons sur la théorie de la croissance, professées à la Faculté des Sciences de Paris, recueillies et rédigées par A. Denjoy.* Paris, Gauthier-Villars, 1909. 8vo. 6 + 172 pp. Fr. 5.50

BRIOSCHI (F.). *Opere matematiche, pubblicate per cura del comitato per le onoranze a F. Brioschi.* Vol. V (ultimo). Milano, Hoepli, 1909. 4to.  
12 + 556 pp. L. 30.00

BÜCHER, neue, über Naturwissenschaften und Mathematik. (Die Neuigkeiten des deutschen Buchhandels nach Wissenschaften geordnet.) Mitgeteilt Herbst 1909. Leipzig, Hinrich. 8vo. Pp. 49-67. M. 0.30

DENJOY (A.). See BOREL (E.).