

of mathematics; Dr. W. H. WILSON has been promoted to the rank of associate; Dr. ROSCOE WOODS, of the University of Illinois, has been appointed instructor in mathematics, and Mr. H. M. JEFFERS, of the Lick Observatory, instructor in mathematics and astronomy.

At the University of Wisconsin, Professor C. S. SLICHTER has been appointed dean of the graduate school; associate professor E. B. SKINNER has been promoted to a full professorship; assistant professor H. W. MARCH has been promoted to an associate professorship; Dr. WARREN WEAVER has been appointed assistant professor; Mr. HAROLD DAVIS, of Harvard University, and Mr. M. L. MACQUEEN, of Southwestern Presbyterian University, have been appointed instructors in mathematics.

ASSISTANT professor EUGENE TAYLOR, of the University of Wisconsin, has been appointed professor and head of the department of mathematics at the University of Idaho.

PROFESSOR D. A. ROTHROCK has been elected dean of the college of liberal arts of Indiana University.

At the University of Kentucky, Dr. F. ELIZABETH LE-STOURGEON, of Carleton College, has been appointed assistant professor of mathematics, and Mr. W. E. PAYNE has been appointed instructor. Dr. G. W. SMITH has resigned, to accept an assistant professorship of mathematics at the University of Kansas.

PROFESSOR PAUL BACHMANN died at Weimar, March 31, 1920, at the age of eighty-three years.

NEW PUBLICATIONS.

I. HIGHER MATHEMATICS.

BONOLA (R.). Die nichteuklidische Geometrie. Historisch-kritische Darstellung ihrer Entwicklung. Autorisierte deutsche Ausgabe, besorgt von H. Liebmann. 2te Auflage. Leipzig, Teubner, 1919.

M. 6.40

DRAEGER (M.). Ueber rekurrente Reihen von höherer, insbesondere von der dritten Ordnung. (Dissertation.) Jena, 1919.

- FISCHER (P.). Koordinatensysteme. 2te, verbesserte Auflage. Berlin, 1919. M. 1.25
- FRICKE (R.). Hauptsätze der Differential- und Integralrechnung. 7te Auflage. Braunschweig, 1919. M. 7.60
- INGHIRAMI (G.). Table des nombres premiers et de la décomposition des nombres de 1 à 100,000, revue et corrigée par le P. V. Prompt et suivie de la table des bases des nombres tessaréens de 1 à 20,000. Paris, Gauthier-Villars, 1919. 8vo. 20 + 36 pp. Fr. 7.50
- LIEBMANN (H.). See BONOLA (R.).
- MANN (W. D.). Das Preisproblem der Potenzenreihe $x^\lambda + y^\lambda - z^\lambda$ in Beziehung zu verwandten Problemen und Tatsachen der Gegenwart. Mexico, Deutsche Buchhandlung, 1919. \$1.25
- PAULY (J.). Notions élémentaires du calcul différentiel et du calcul intégral. Paris et Liège, Béranger, 1920. 8vo. 330 pp. Fr. 20.00
- PRÖLSS (O.). Graphisches Rechnen. Leipzig, Teubner, 1920. M. 1.60
- PROMPT (P. V.). See INGHIRAMI (G.).
- SALMOIRAGHI (A.). Guida pratica del geometra moderno. 2a edizione. Milano, tip. U. Allegretti, 1920. 8vo. 24 + 120 pp. L. 10.00
- ZSIGMONDY (K.). Zum Wesen des Zahlbegriffes und der Mathematik Antrittsrede, gehalten bei der feierlichen Rektors-Inauguration am 26. Oktober 1918 in der Technischen Hochschulen zu Wien. Wien, Verlag des Verfassers, 1919.

II. ELEMENTARY MATHEMATICS.

- BARKER (E. H.). Applied mathematics for junior high schools and high schools. Boston, Allyn and Bacon, 1920. 12mo. 256 pp. \$1.25
- CAMINATI (C.) e CAMINATI (P.). Nuovo manuale italiano logaritmico-trigonometrico con sette o dieci decimali. Fascicolo 2: Tavole di logaritmi delle funzioni circolari a sette decimali, per uso delle scuole secondarie. Piacenza, tip. V. Porta, 1919. 8vo. 50 pp. L. 3.50
- CAMINATI (P.). See CAMINATI (C.).
- DURELL (C. V.) and PALMER (G. W.). Elementary algebra. Part 1. London, Bell, 1920. 8 + 256 + 8 pp. 3s. 6d.
- LIETZMANN (W.). Riesen und Zwerge im Zahlenreich. 2te durchgesehene und vermehrte Auflage. (Mathematisch-physikalische Bibliothek, Nr. 25.) Leipzig, Teubner, 1919. 58 pp. M. 1.50
- MILNE (R. M.). Mathematical papers for admission into the Royal Military Academy and the Royal Military College, and papers in elementary engineering for the Royal Air force for the years 1910-1919. Edited by R. M. Milne. London, Macmillan, 1920. 10s. 6d.
- NEUENDORFF (R.). Lehrbuch der Mathematik. Für mittlere technische Fachschulen der Maschinenindustrie. 2te Auflage. Berlin, 1919. M. 12.00
- PALMER (G. W.). See DURELL (C. V.).
- WIELEITNER (H.). Die sieben Rechnungsarten mit allgemeinen Zahlen. 2te, durchgesehene Auflage. (Mathematisch-physikalische Bibliothek, Nr. 7.) Leipzig, Teubner, 1920. 55 pp.

III. APPLIED MATHEMATICS.

- ARRHENIUS (S.). Der Lebenslauf der Planeten. Nach der 4ten Auflage aus den Schwedischen von B. Finkelstein. Leipzig, Akadem. Verl. Gesellschaft, 1919. Geb. M. 10.00
- BAILLAUD (J.). Manuel de topométrie. Opérations sur le terrain et calculs. Paris, Dunod, 1920. 4to. 8 + 222 pp. Fr. 19.50
- BERGET (A.). See CHAPPUIS (J.).
- BIGOURDAN (G.). Petit atlas céleste précédé d'une introduction sur les constellations. 2e édition. Paris, Gauthier-Villars, 1920. 8vo. 56 pp. + 5 maps in colors. Fr. 3.00
- BLONDEL (A.). See MAUDUIT (A.).
- BUSCH (F.). Beobachtung des Himmels mit einfachen Instrumenten. 2te Auflage. (Mathematisch-physikalische Bibliothek, Nr. 14.) Leipzig, Teubner, 1919. 51 pp. Geh. M. 1.00
- CAUNT (G. W.). See LOUIS (H.).
- CHAPPUIS (J.) and BERGET (A.). Leçons de physique générale. Tome II: Electricité et magnétisme. 3e édition, entièrement refondue par J. Chappuis et M. Lamotte. Paris, Gauthier-Villars, 1920. 8vo. 624 pp. Fr. 45.00
- DELLINGER (J. H.). Principles of radio transmission and reception with antenna and coil aeriols. (Scientific Paper No. 354 of the Bureau of Standards.) Washington, Government Printing Office, 1919. 8vo. 64 pp. \$0.10
- DRZEWIECKI (S.). Théorie générale de l'hélice. Hélices aériennes et hélices marines. Paris, Gauthier-Villars, 1920. 8vo. 12 + 184 pp. Fr. 15.00
- FABER (O.). See FERRARI (—).
- FERRARI (—). Dioptric instruments; being an elementary exposition of Gauss's theory and its applications. Translated by O. Faber. London, Harrison, 1920. 31 + 214 pp. 4s.
- FINKELSTEIN (B.). See ARRHENIUS (S.).
- FÖPPL (A.). Vorlesungen über technische Mechanik. 3ter Band: Festigkeitslehre. 7te Auflage. 4ter Band: Dynamik. 5te Auflage. Leipzig, 1919. M. 16.00 + 16.00
- HARTING (M.). See TURRIÈRE (E.).
- HEIRMAN (E.). Calculs graphiques et analytiques du béton armé. Paris, Dunod, 1920. 4to. 208 pp. Fr. 18.00
- HENKEL (O.). Graphische Statik mit besonderer Berücksichtigung der Einflusslinien. 2ter Teil. Berlin, 1919. M. 1.25
- LAMOTTE (M.). See CHAPPUIS (J.).
- LOUIS (H.) and CAUNT (G. W.). Tacheometer tables, with an introductory chapter on tacheometric surveying. London, Longmans, 1920. 8vo. 40 + 52 pp. 12s. 6d.
- MASCART (J.). See REYNAUD (P.).
- MAUDUIT (A.). Electrotechnique appliquée. Machines électriques (théorie, essais et construction). Cours professé à l'Institut électrotechnique de Nancy. Avec une préface de A. Blondel. Nouveau tirage. Paris, Dunod, 1920. 8vo. 20 + 930 pp. Fr. 52.50