IN the department of mathematics of the Naval academy at Annapolis, the following promotions have been announced: to be professor, Mr. PAUL CAPRON; to be associate professors, Mr. W. J. KING and Mr. J. B. EPPES; to be assistant professors, Mr. J. A. BULLARD, Mr. JOHN TYLER, Mr. ARTHUR KIERNAN, Mr. J. N. GALLOWAY, Mr. ALEXANDER DILLINGHAM, and Dr. G. R. CLEMENTS. Dr. G. H. CRESSE, of the University of Michigan, has been appointed instructor.

AT the University of Minnesota, Professor G. N. BAUER remains on leave of absence until January 1, 1920. Assistant professor DUNHAM JACKSON, of Harvard University, has been appointed professor of mathematics, and Major W. L. HART has been appointed assistant professor. Mr. R. W. BRINK has been promoted from an instructorship to an assistant professorship, and granted leave of absence for the academic year 1919–1920, during which time he will be lecturer at the University of Edinburgh. Miss MINNA J. SCHICK has been appointed instructor in mathematics.

DR. C. E. WILDER has been appointed assistant professor of mathematics at Northwestern University.

MR. P. A. FRALEIGH, of Cornell Uuniversity, has been appointed instructor in mathematics at Dartmouth College.

NEW PUBLICATIONS.

I. HIGHER MATHEMATICS.

ANDERSEN (A. F.), BOHR (H.) og MOLLERUP (J.). Nyere Undersøgelser over Integralregningen. Kjøbenhavn, 1917. 63 pp.

BOHR (H.). See ANDERSEN (A. F.).

BOREL (E.). Die Elemente der Mathematik. Vom Verfasser genehmigte deutsche Ausgabe von P. Stäckel. Band I: Arithmetik und Algebra nebst den Elementen der Differential-Rechnung. 2te Auflage. Leipzig, Teubner, 1919. 8vo. 16 + 404 pp.   M. 12.00

CASTELNUOVO (G.). Calcolo delle probabilità. Milano, Albrighi, Segati e compagnia, 1919. 23 + 373 pp.   L. 20.00

HALPHEN (G. H.). Œuvres publiées par les soins de C. Jordan, H. Poincaré, E. Picard, avec la collaboration de E. Vessiot. Tome 2. Paris, Gauthier-Villars, 1918. 7 + 560 pp.   Fr. 40.00

HJELMSLEV (J.). Lærebog i Gemoetri. Til Brug ved den Polytekniske Læreanstalt. 1ste Afsnit. Kjøbenhavn, Gjellerup, 1917. 8vo. 208 pp.

JORDAN (C.). See HALPHEN (G. H.).

MILNE (W. P.) and WESTCOTT (J. B.). A first course in the calculus. Part 1: Powers of x. London, Bell, 1918. 20 + 196 pp. 3s. 6d.

MOLLERUP (J.). See ANDERSEN (A. F.).

PASCAL (E.). Lezioni di calcolo infinitesimale. 2a parte: Calcolo integrale. 4a edizione riveduta. (Manuali Hoepli.) Milano, Hoepli, 1919. 24mo. 8 + 330 pp. L. 4.50

PICARD (E.). See HALPHEN (G. H.).

POINCARÉ (H.). See HALPHEN (G. H.).

RICCI-CURBASTRO (G.). Lezioni di analisi algebrica ed infinitesimale. Padova, tip. Universitaria, 1918. 8vo. 13 + 645 pp. L. 27.00

STÄCKEL (P.). See BOREL (E.).

STUTZ (A.). Wahrscheinlichkeitsrechnung. Zürich, Leemann, 1916. 4to. 27 pp.

VESSIOT (E.). See HALPHEN (G. H.).

WESTCOTT (J. B.). See MILNE (W. P.).

WESTIN (O. E.). Grafisk räkning med komplexa tal. Stockholm, Norstedt, 1918. 8vo. 67 pp. Kr. 2.50

WIELEITNER (H.). Algebraische Kurven. II: Allgemeine Eigenschaften. (Sammlung Göschen, Nr. 436.) Berlin, Göschen, 1918. M. 1.25

II. ELEMENTARY MATHEMATICS.

AHRENS (W.). Hebräische Amulette mit magischen Zahlenquadraten. Berlin, L. Lamm, 1916. 8vo. 19 pp. M. 1.00

ALLEN (F.). See TAYLOR (E. H.).

CRANTZ (P.). Arithmetik und Algebra zum Selbstunterricht, I und II. (Aus Natur und Geisteswelt, Nr. 120 und Nr. 205.) 5te und 4te Auflage. Leipzig, Teubner, 1918. 16mo. 114 + 110 pp. Geb. M. 1.50 + M + 1.50

CROCKETT (C. W.). Mathematical review. Arithmetic, algebra, geometry. Troy, Rensselaer Polytechnic Institute, 1918. 12mo. 110 pp. $0.75

GALLUCCI (G.). Algebra e geometria metrica per il 2o corso liceale classico e moderno. Milano, Albrighi, Segadi e Compagnia, 1918. L. 3.00

HJELMSLEV (J.). Elementær Geometri. 1ste Bog. Kjøbenhavn, Gjellerup, 1916. 8vo. 135 pp. Kr. 2.00

JADANZA (N.). Tavole tacheometriche centesimali. 4a edizione stereotipa. Torino, V. Bona, 1918. 8vo. 4 + 64 pp. L. 3.50

MÉREL (E.). Pour s'amuser dans la tranchée, to pass time in the trenches . . . 16 démonstrations du théorème de Pythagore. Paris et Nancy, Berger-Levrault, 1916. 8vo. 22 pp.

MORGAN (F. M.). Essentials of algebra and geometry. Six lessons preparatory to the study of trigonometry. New York, National War Work Council of Young Men's Christian Association, 1919. 12mo. 58 pp.

SCHUBERT (H.). Arithmetik und Algebra. (Sammlung Göschen, Nr. 47.) 2te durchgesehene Auflage. 7ter Neudruck. Berlin, Göschen, 1917. 8vo. 171 pp. M. 1.00

SCHÜLKE (A.). Vierstellige Logarithmentafeln für den Schulgebrauch zu-
  sammengestellt. 10te Auflage. Leipzig, Teubner, 1917. 10 + 22
  pp.   M. 0.70

TAYLOR (E. H.) and ALLEN (F.). Junior high school mathematics. New
  York, Holt, 1919. 12mo. 9 + 208 pp. $0.80

III. APPLIED MATHEMATICS.

ABRAHAM (M.). Theorie der Elektrizität. 1ter Band: Einführung in die
  Maxwellsche Theorie der Elektrizität. 5te umgearbeitete Auflage.
  Leipzig, 1918.   M. 13.00

ANNUAIRE ASTRONOMIQUE et météorologique pour 1919. Par C. Flam-
  marion. 55e année. Paris, Flammarion, 1919. 364 pp.   Fr. 3.50

ANNUAIRE pour l'an 1919 publié par le Bureau des Longitudes. Avec
  des notices scientifiques de P. Appell et M. Hamy. Paris, Gauthier-
  Villars, 1919. 8 + 524 + 60 + 27 + 69 pp.   Fr. 3.35

APPELL (P.). See ANNUAIRE and BUGAT-PUJOL.

ASHLEY (R. H.). Chemical calculations. 2d edition revised. New York,
  Van Nostrand, 1918. 12mo. 9 + 276 pp.

BALL (J.). Notes on the working of the "new navigation." Cairo, Gov-
  ernment Press, 1918.

BLOCH (W.). Einführung in die Relativitätstheorie. (Aus Natur und
  Geisteswelt, Nr. 618.) Leipzig, Teubner, 1918. 16mo. 100 pp.
                                                           M. 1.50

BORDIGA (G.). Matematica finanziaria. Primo corso (genesi dei numeri,
  calcoli numerici, etc.). Padova, A. Milani, 1918. 8vo. 231 pp.
                                                           L. 10.00

BOUASSE (H.). Géographie mathématique. Paris, Delagrave, 1919.
  8vo. 494 pp.   Fr. 25.00

BRILL (A.). Das Relativitätsprinzip. Eine Einführung in die Theorie.
  3te Auflage. Leipzig, Teubner, 1918. 8vo. 48 pp.   M. 2.00

BUGAT-PUJOL (—.). Statique graphique. Préface de M. Paul Appell.
  Paris, Dunod et Pinat, 1918. 4to. 12 + 237 pp. + atlas de 41
  plates.   Fr. 24.00

COMESSATTI (A.). See SEVERI (F.).

CONNAISSANCE des temps ou des mouvements célestes pour le méridien de
  Paris à l'usage des astronomes et des navigateurs pour 1920. Paris,
  Gauthier-Villars, 1918. 8vo. 30 + 756 pp.   Fr. 5.00

EDDINGTON (A. S.). Report on the relativity theory of gravitation. Lon-
  don, Physical Society of London, 1918. 7 + 91 pp.   6s.

EMSLEY (H. H.). See GLEICHEN (A.).

FAWDRY (R. C.). Dynamics. Part 2. (Bell's Mathematical Series.)
  London, Bell, 1919.. Pp. 8 + 179–355 + 7.   2s. 6d.

FLAMMARION (C.). See ANNUAIRE ASTRONOMIQUE.

FREUNDLICH (—.). Die Grundlagen der Einsteinischen Gravitations-
  theorie. 2te Auflage. Berlin, Springer, 1917.   M. 3.60

GLEICHEN (A.). The theory of modern optical instruments. A reference
  book for physicists, manufacturers of optical instruments, and for
  officers in the army and navy. Translated from the German by A.
  Gleichen, H. H. Emsley and W. Swaine. With an appendix on range
  finders. London, H. M. S. O., 1918. 12 + 376 pp.

HAMY (M.).   See ANNUAIRE.

HOYLE (B.).   Standard tables and equations in radio-telegraphy.   London, Wireless Press, 1919.   14 + 159 pp.   9s.

ISING G.).   Undersökningar rörande elektrometrar.   Lund, Gleerupska Univ.-Bokhandeln, 1917.   8vo.   173 pp.   Kr. 4.00

KEMP (P.).   Alternating current electrical engineering.   London, Macmillan, 1918.   9 + 494 pp.   17s.

LEVI-CIVITA (T.).   Corso di mecanica razionale.   Padova, tip. Universitaria, 1918.   3 volumes.   339 + 719 pp.   L. 39.00

MARCOLONGO (R.).   Il problema dei tre corpi da Newton (1686) ai nostri giorni.   (Manuali Hoepli.)   Milano, Hoepli, 1918.   24mo.   7 + 166 pp.   L. 4.50

NEUENDORFF (R.).   Praktische Mathematik.   1ter Teil: Graphische Darstellungen.   Verkürztes Rechnen.   Das Rechnen mit Tabellen. Mechanische Rechenhilfsmittel.   Kaufmännisches Rechnen im täglichen Leben.   Wahrscheinlichkeitsrechnung.   2te Auflage.   Leipzig, Teubner, 1917.   4 + 106 pp.   M. 1.20

PAGE (V. W.).   The A B C of aviation.   London, Crosby Lockwood, 1918.   274 pp. + 7 plates.   12s. 6d.

SEVERI (F.).   Lezioni di geometria descrittiva, dettate nella r. università di Padova e nella libera università di Ferrara e raccolte dall' assistente prof. A. Comessatti.   Padova, tip. Universitaria, 1918.   8vo.   12 + 728 pp. con tavole.   L. 29.00

STOLTZ (G.).   Utjämning av sjutton svenska livförsäkringsbolags dodlighetstabeller för läkareundersökta livförsäkrade.   Stockholm, K. L. Beckman, 1917.   8vo.   5 + 210 pp.

SWAINE (W.).   See GLEICHEN (A.).

VATER (R.).   Die Dampfmaschine.   I: Wirkungsweise des Dampfes im Kessel und in der Maschine.   4te Auflage.   II: Ihre Gestaltung und Verwendung.   2te Auflage.   Leipzig, Teubner, 1918.   M. 1.50 + 1.50

————.   Hebezeuge.   Hilfsmittel zum Heben fester, flüssiger und gasförmiger Körper.   2te Auflage.   Leipzig, Teubner, 1918.   M. 1.50