

Angewandte Potentialtheorie in elementarer Behandlung. Von E. GRIMSEHL. Sammlung Schubert XXXVIII. Leipzig, G. J. Göschen. Vol. 1, vii + 219 pp., 1905.

FOR those who desire to teach the potential theory for the sake of its applications and to classes of students of limited mathematical advancement, Grimsehl has done a real service in writing this book, and promises to do an additional service in the second volume. Starting with the ideas of force and work, the author develops the potential theories for particles of mass and applies the results to the discussion of the attraction due to spherical shells, spheres, and homologous ellipsoids; the conception of lines and tubes of force and of equipotential surfaces are appropriately treated. There immediately follows a discussion of the determination of the constant of gravitation, of the density of the earth, and of other similar problems. The next section of the book takes up electric potential and fields of force with the theory of electric images. The usual theory of conductors and condensers is given in detail and with great clearness, and considerable attention is paid to the quadrant electrometer. The second volume will set forth the applications of potential theory to magnetism, electromagnetic phenomena, and electric currents. It is certainly a great convenience for any teacher of elementary mathematical physics to have all these matters carefully collected, set in relation to one another, and thoroughly explained from the one unifying principle of potential.

E. B. WILSON.

NOTES.

THE Sixteenth Summer Meeting and Sixth Colloquium of the AMERICAN MATHEMATICAL SOCIETY will be held at Princeton University during the entire week, September 13-18, 1909. The first two days will be devoted to the regular sessions for the presentation of papers. At the Colloquium, which will open on Wednesday morning, the following courses of lectures will be delivered: Professor G. A. BLISS, "Existence theorems in analysis;" Professor J. H. JEANS, "Statistical mechanics;" Professor EDWARD KASNER, "Geometric aspects of dynamics."

The Annual Register of the AMERICAN MATHEMATICAL SOCIETY is now in preparation and will be issued in January.

Blanks for furnishing necessary information have been sent to the members. Early notice of any changes since the issue of the last Register will greatly facilitate the work of the Secretary. The Register is widely circulated and it is desirable that the information which it contains should be accurate and reliable.

AT the meeting of the London mathematical society held on December 10 the following papers were read: By H. LAMB, "On the propagation of sound waves vertically in the atmosphere;" by E. W. HOBSON, "On Sir William Rowan Hamilton's fluctuating functions," and "On the representation of a function by series of Bessel's functions;" by G. H. HARDY, "Theory of Cauchy's principal values (fourth paper);" by T. STUART, "Solution of a problem of Mersenne's;" by L. J. ROGERS, "Note on a continued fraction equivalent to the remainder after n terms of Taylor's series;" by B. RAM, "Solid angles and potentials of plane discs."

AT the third international congress of philosophy, held at Heidelberg, August 31 to September 5, the following papers on the philosophy of mathematics were read: By P. MANSION, "Gauss versus Kant and non-euclidean geometry;" by M. KUNTZE, "The philosophic significance of Grassmann's Ausdehnungslehre;" by M. M. WINTER, "Relation between intuition and mathematical thought;" by A. REY, "Deduction and experience in scientific methods;" by E. MEYERSON, "Scientific explanations and common sense;" by F. ENRIQUES, "Principle of sufficient reason;" by M. DUFUMIER, "The notion of a positive formal logic." In the section of logic and theory of knowledge there was a symposium on mathematical logic, in which E. MÜLLER, M. G. ITELSON and Mrs. LADD-FRANKLIN participated. The next meeting of the congress will be held at Bologna in the summer of 1911.

THE ninth meeting of the Swiss teachers of mathematics was held at Baden, October 4, under the presidency of Professor H. FEHR, and in affiliation with the Swiss society of gymnasium teachers. The following papers were read: By D. RUEFLI, "Presentation of maxima and minima in the secondary schools;" by C. JACCOTET, "Demonstration of a theorem of Descartes;" by H. FEHR and E. GUBLER, "Report of the fourth international congress of mathematicians;" by H. FEHR,

“The international commission on mathematical instruction.” The retiring officers were reelected. The next session will be held at Bern, May 22, 1909.

IN the series of monographs on mathematical physics for engineers and students published by Teubner, Leipzig-Berlin, three volumes have already appeared and the following are in the press : Principles of ship construction, by O. ALT ; Theory of gases, by A. BYK ; Mathematical instruments, by A. GALLE ; Theory of potential, by R. GANS ; Problems in oscillation, by E. GRÜNEISEN ; Vector analysis and its applications to mathematical physics, by W. V. IGNATOWSKY ; Tables of functional values with formulas and curves, by E. JAHNKE and F. EMDE ; Acoustics, by A. KALÄHNE ; Thermoelectricity, by F. KRÜGER ; Conformal representation, by L. LEWENT ; Introduction to the theory of elasticity, by R. MARCOLONGO ; Technical hydromechanics, by R. V. MISES ; Principles of the mechanics of alternating currents, by E. ORLICH ; Fourier series, by R. ROTHE ; Partial differential equations, by R. ROTHE ; Electromagnetic oscillations, by R. RÜDENBERG ; Bessel functions, by P. SCHAFFHEITLIN ; Measurements of temperature, by S. VALENTINER ; Thermodynamics of mixtures, by E. BOSE ; Motors for alternating currents, by J. SUMEC.

PROFESSOR G. DARBOUX, of the University of Paris, has been elected to membership in the academy of sciences of Halle.

PROFESSOR G. H. DARWIN, of the University of Cambridge, has been elected corresponding member of the Prussian academy of sciences.

PROFESSOR G. LORIA, of the University of Genoa, has been elected honorary member of the mathematical society of Amsterdam.

PROFESSOR H. A. SCHWARZ, of the University of Berlin, has been decorated with the order of the cross of the second class.

DR. G. W. HILL has been elected corresponding member of the Bavarian academy of science.

DR. E. SCHMIDT, of the University of Bonn, has accepted a call as professor of mathematics at the University of Zurich.

DR. U. CISOTTI has been appointed docent in rational mechanics at the University of Padua.

DR. M. HELLINGER has been appointed docent in mathematics at the University of Marburg.

PROFESSOR G. HESSENBERG, of the agricultural academy at Bonn-Poppelsdorf, has been appointed docent in mathematics at the University of Bonn.

DR. C. MÜLLER has been appointed docent in mathematics at the University of Göttingen.

DR. H. TIETZE has been appointed docent in mathematics at the University of Vienna.

DR. P. BOUTROUX has been appointed associate in rational mechanics at the University of Poitiers, succeeding Dr. H. LEBESGUE, who was recently promoted to the chair of analysis.

DRS. M. GOURSAT and C. A. LAISANT have been promoted to the full rank of examiners, in analysis and mechanics respectively, at the Ecole polytechnique at Paris. Dr. E. MAILLET succeeds Dr. GOURSAT as associate examiner in analysis.

AT BROWN UNIVERSITY Drs. N. J. LENNES and R. C. ARCHIBALD have been appointed instructors in mathematics.