

The mathematical productions of the Pitt Press are too well known to need comment. It is sufficient to say here that the present volume is similar in form to Cayley's Collected Works. A portrait of Adams, as he appeared later in life, forms the frontispiece.

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NOTES.

A REGULAR meeting of the AMERICAN MATHEMATICAL SOCIETY was held in New York on Saturday afternoon, February 27, at half past three o'clock, the Vice-President, Professor R. S. WOODWARD, in the chair. There were sixteen members present. On recommendation of the Council the following persons, nominated at the preceding meeting, were elected to membership: Mr. ARTHUR BERRY, King's College, Cambridge, England; Professor JOHN EIESLAND, Thiel College, Greenville, Pa.; Mr. PAUL RENNO HEYL, Clinton Liberal Institute, Fort Plain, N. Y.; Professor ANNIE LOUISE MACKINNON, Wells College, Aurora, N. Y.; Mr. MILTON BROCKETT PORTER, Harvard University, Cambridge, Mass.; Professor DAVID ANDREW ROTHROCK, University of Indiana, Bloomington, Ind.; Professor WILLIAM EDWARD STORY, Clark University, Worcester, Mass.; Professor AUGUST LUDWIG PAUL WERNICKE, State College of Kentucky, Lexington, Ky.; Mr. JAMES KELSEY WHITTEMORE, Harvard University, Cambridge, Mass. Two nominations for membership were received.

A communication was received from the Council recommending certain amendments to the Constitution and By-Laws of the Society. Printed copies of the proposed changes will be mailed by the Secretary to members of the Society.

The following papers were read:

- (1) Professor E. B. VAN VLECK: "Polynomial solutions of differential equations."
- (2) Professor MAXIME BÔCHER: "On certain methods of Sturm and their application to the roots of Bessel's functions."
- (3) Dr. VIRGIL SNYDER: "Lines common to four linear complexes."

In the absence of Professor Bôcher and Dr. Snyder, their papers were read by Professor Thomas S. Fiske.

A REVISED list of the officers and members of the AMERICAN MATHEMATICAL SOCIETY, corrected to January 1, 1897,

has been issued by the Secretary. The same pamphlet contains also the Constitution and By-Laws of the Society and the reports of the Treasurer and Librarian for 1896.

At the January meeting of the Council of the AMERICAN MATHEMATICAL SOCIETY, a committee consisting of President Newcomb, Professors Fiske, Baker and White, and the Secretary, was appointed to make arrangements for the next Summer Meeting of the Society. This meeting will be held at Toronto, Canada, on Monday and Tuesday, August 16 and 17. It will thus intervene between the adjournment to Toronto of the Detroit Meeting of the American Association for the Advancement of Science and the opening of the Toronto Meeting of the British Association for the Advancement of Science. The committee will be very glad to receive suggestions from members of the Society in regard to the arrangements which are to be made.

AN International Congress of Mathematicians is announced to be held at Zürich on August 9th, 10th and 11th of the present year. The committee on arrangements comprises representatives from Austria, England, France, Germany, Italy, Russia, Sweden, Switzerland and the United States. Dr. G. W. Hill is the American member. Correspondence regarding the Congress should be addressed to Professor C. F. Geiser, Küsnacht-Zürich, Switzerland.

The following is an abstract of the preliminary circular issued by the committee: "The question of an International Congress of Mathematicians has been agitated for several years. In view of the success attained by international coöperation in other fields, the desirability of similar action by mathematicians is universally conceded. After considerable preliminary correspondence in reference to the general plan, the question of the place of holding the Congress was decided in favor of Switzerland, as a country peculiarly adapted by situation, relations, and tradition for promoting international interests. The mathematicians of Zürich, although well aware of the responsibilities of the undertaking, have not hesitated to accept them, and will do their utmost for the success of the Congress. The meetings of the Congress will be held in the halls of the Zürich Polytechnicum. The committee will hereafter issue a more elaborate programme and request the participation of mathematicians in the proceedings. It is appropriate, however, to observe in advance that both the scientific and the business transactions will naturally be confined to such questions as are of general interest and essential importance."

AMONG the prizes awarded by the French Academy of Sciences, at its annual meeting held December 21, 1896, were the following: *Grand Prix des Sciences Mathématiques* (10,000 francs), for perfecting in some important point the algebraic theory of substitutions of n letters, to EDMOND MAILLET. *Prix Bordin* (3,000 francs), for a contribution to the theory of geodesic lines, to JACQUES HADAMARD. *Prix Francoeur* (1,000 francs), awarded annually for discoveries or works furthering the progress of mathematical science, to A. VALSON, for his works in general, and in particular for editing the first eleven volumes of the collected works of Cauchy. *Prix Poncelet* (2,000 francs), awarded annually for the work published during the preceding ten years, which, in the judgment of the Academy, has been most useful to the progress of mathematical science, to PAUL PAINLEVÉ, for all of his mathematical works. *Prix Jean Reynaud* (10,000 francs), awarded annually in succession by each of the five academies for the work which in the field of that academy is the most important, from which prize, by a special provision of the founder, members of the Academy are not excluded, to HENRI POINCARÉ.

The subjects set by the Academy for the next mathematical prizes are as follows: *Grand Prix des Sciences Mathématiques* (10,000 francs), for extending the rôle played by divergent series in analysis, papers to be submitted by October 1, 1898. *Prix Bordin* (3,000 francs), for a memoir on the determination, properties and applications of systems of orthogonal curvilinear coördinates of n variables, the author to indicate as precisely as possible the degree of generality of the systems, papers to be submitted by October 1, 1898.

The *Prix Damoiseau* (1,500 francs), which was to have been awarded at this meeting for work in mathematical astronomy, has been postponed until June 1, 1897. A detailed statement of the subject was given in the BULLETIN for March, 1896.

As mathematicians are not very often honored with public monuments, a somewhat fuller account of the unveiling of the Lobachevsky monument at Kazàn, Russia, may perhaps be welcome. As stated before (BULLETIN, 2d series, Vol. III, p. 93), the unveiling of the statue took place on the 13th of September, 1896. The following account is derived from a special pamphlet, describing the celebration and adorned with a heliotype showing the monument (Kazàn, University Press, 1896), for which we are indebted to Professor A. Vasiliev. The monument, which is the work of

the St. Petersburg artist, Miss M. L. Dillon, consists of a bronze bust, about one meter in height, raised on a column of polished black granite, of $1\frac{1}{2}$ meters; the pedestal is formed of two steps of unpolished gray granite; the total height is about 3 meters. The open square on which the statue is erected has received the name of Lobachevsky. The principal addresses made at the celebration were by Professors Suvòrov and Vasiliev, of the University of Kazàn, and by C. V. Shcherbakòv, President of the Physical and Astronomical Society of Nizhny-Nòvgorod (Lobachevsky's birthplace). In the evening the Physico-mathematical Society, of the University of Kazàn, held a solemn open session, at which a final account was rendered of the collection of the Lobachevsky fund. It was also stated that nine works had been received from France, Germany, Italy and America, competing for the Lobachevsky prize, which will be awarded for the first time on the 3d of October, 1897; the third volume of Professor Sophus Lie's "Theorie der Transformationsgruppen" is among these works. At the same session reports were read on the following papers, contributed by foreign mathematicians for the celebration: HERMITE, On some expansions in infinite series, occurring in the theory of elliptic functions; G. B. HALSTED, Darwinism and non-Euclidean geometry; P. GIRARDVILLE, Theory of the flight of birds; C. A. LAISANT, On the curvature of plane curves; E. LEMOINE, (a) Two new resolutions of integers, (b) Geometrography or theory of the simplification of geometrical constructions, (c) Continuous transformation in the triangle and tetrahedron; J. NEUBERG, On Jacobi's problem; M. d'OCAGNE, On the representation of equations of the second degree with three variables by means of straight lines and circles. All these papers will be printed, in the original languages, in Nos. 3-4 of the sixth volume of the *Journal of the Physico-Mathematical Society* of the University of Kazàn.

PROFESSOR O. SCHLÖMILCH, the founder of the *Zeitschrift für Mathematik und Physik*, has withdrawn from the editorship of this journal, which he has conducted for 41 years. Dr. R. MEHMKE, professor of mathematics in the Polytechnic School at Stuttgart, takes his place, while Professor M. CANTOR, of the University of Heidelberg, will continue to have charge of the "literarisch-historische Abteilung."

PROFESSOR E. PICARD has in press a work on the theory of functions of two imaginary variables.

L. VOSS, of Hamburg, Germany, announces the publication of HELMHOLTZ'S Lectures on the electro-magnetic theory of light, edited by A. KÖNIG and C. RUNGE; this will constitute the 5th of the proposed six volumes of Helmholtz's Lectures on theoretical physics.

DR. ARNOLD EMCH, assistant in graphics in the University of Kansas, has been called to a professorship of mathematics in the Polytechnic School at Biel, Switzerland.

NEW PUBLICATIONS.

I. HIGHER MATHEMATICS.

- BOHANNAN (R. D.). Simple proof of a fundamental theorem in the theory of functions. (*American Journal of Mathematics*, Vol. 19, 1 p.).
- BURALI-FORTI (C.). Le classi finite. (*Accademia reale delle scienze di Torino*, 1896-97.) Torino, Clausen, 1896. 8vo. 21 pp.
- BURALI-FORTI (C.). Sopra un teorema del Sig. G. Cantor. (*Accademia reale delle scienze di Torino*, 1896-97.) Torino, Clausen, 1896. 8vo. 11 pp.
- CAYLEY (A.). The collected mathematical papers. (In 13 volumes.) Vol. XI. Cambridge (New York, Macmillan), 1896. 4to. 16 and 643 pp. \$6.25
- DUHAMEL. Tableau donnant les carrés et les racines carrées des nombres entiers. Paris, 1896. 8vo.
- EMCH (A.). Projective groups of perspective collineations in the plane, treated synthetically. [Diss.] Lawrence, Kansas, Journal Press, 1896. 8vo. 35 pp.
- GUNDELFINGER (S.). Tafeln zur Berechnung der reellen Wurzeln sämtlicher trinomischer Gleichungen. Hinzugefügt sind vierstellige Additions-, Subtractions- und Briggische Logarithmen, sowie eine Interpolationstafel für alle Differenzen unter Hundert. Leipzig, Teubner, 1897. 4to. 4 and 15 pp. Mk. 1.40
- LAURENT (H.). See PETERSEN (J.).
- MÉRAY (C.). Leçons nouvelles sur l'analyse infinitésimale et ses applications géométriques. (En 4 volumes.) Partie III: Questions analytiques classiques. Paris, Gauthier-Villars, 1897. 8vo. Fr. 6.00
- MONTET (F.). Esquisse d'une étude analytique des courbes algébriques et transcendentes les plus remarquables avec leurs principales applications en mécanique, en astronomie et en physique. Lyon, 1896. 8vo. 4 and 60 pp.
- OETTINGEN (A. J. von). See STEINER (J.).
- OSGOOD (W. F.). Non-uniform convergence and the integration of series term by term. (*American Journal of Mathematics*, Vol. 19, No. 2, pp. 155-190.) 4to.