

general meeting in the evening, at which the retiring President, Dr. W. G. Waterman, of Northwestern University, gave the address. Friday morning and evening were also devoted to general meetings, at which invitation addresses were given. On Friday afternoon the following sections met for the presentation of papers and discussions: Biology and Agriculture; Chemistry and Physics; Geography and Geology; Medicine and Public Health; Psychology and Education; High-school Science, and Mathematics.

There were 73 papers on the program for all the meetings, and most of these will be published in the annual *Transactions*.

On Saturday, May 3, there were three excursions: One to the Elgin Watch Factory and Astronomical Observatory; another, a field trip, to regions of interesting glacial deposits about Elgin. This excursion was led by Dr. M. M. Leighton and Dr. Paul MacClintock. The third excursion was a botanical field trip, and was led by Dr. H. C. Cowles. The White Cedar Swamp, a relic of the glacial age, was studied, and the famous Evergreen Nurseries at Dundee were visited.

At noon on Saturday all three excursion groups met at Trout Park, Elgin, and enjoyed the complimentary luncheon furnished by the Illinois Nature Study Society. Mr. Carl Gronemann, chairman of the local committee of arrangements, ably assisted by many local organizations, did much toward making the convention a pronounced success.

The following officers were elected for 1924-25:

President: W. G. Bain, M.D., Springfield.
Vice-president: C. H. Smith, Chicago.
Secretary: C. Frank Phipps, DeKalb.
Treasurer: W. B. McDougall, Urbana.
Librarian: A. R. Crook, Springfield.

There were 34 candidates elected to membership, making the total membership of the academy about 550.

C. FRANK PHIPPS,
Secretary

THE VIRGINIA ACADEMY OF SCIENCE

THE second annual meeting of the Virginia Academy of Science was held at Washington and Lee University, Lexington, Virginia, on May 2 and 3. The Virginia Section of the American Chemical Society met with the academy.

The presidential address "The church and science" was delivered by the retiring president, Professor Ivey F. Lewis, of the University of Virginia. Dr. C. S. Lind, of the Bureau of Mines, Washington, D. C., gave an address on "Radioactivity."

The following officers were elected for 1924-25:

President: James L. Howe, Washington and Lee University.

Secretary-Treasurer: E. C. L. Miller, Medical College of Virginia.

Member of the Council: Ivey F. Lewis, University of Virginia.

The following scientific program was presented:

A simple and yet fairly accurate method of measuring directly quantities of fluid of the order of one cubic millimeter without resorting to pipettes and dilutions: E. C. L. MILLER.

Corn pith as a substitute for cork in the entomological laboratory: J. B. UNDERHILL.

The effects of various inorganic salts on paramecia: E. V. GRAY.

A comparative study of Bacillus carotovorus Jones and B. aroideae Townsend: A. B. MASSIE.

Plant diseases; their occurrence and importance in Virginia: F. D. FROMME.

Effects of endocrine glands upon frog larvae: C. C. SPEIDEL.

Pollination in Plantago decipiens: LENA B. HENDERSON.

Modern man as related to pre-historic man: R. B. BEAN.

The evolutionary history of the spleen in its relation to blood formation: H. E. JORDAN.

Internal motions in the spiral nebulae and their bearing on cosmogony: H. L. ALDEN.

An unusual migration date for the chimney swallow: I. F. LEWIS.

Digestive enzymes of the coelenterates—Hydra viridis and H. fusca: M. C. YODER.

Ciliogenesis in the oesophagus of the frog tadpole: J. E. KINDRED.

Inheritance of flower color in the garden balsam: D. W. DAVIS and RACHEL TARRAL.

Social and economic status of college students: WM. M. BROWN.

A bacteriological study of the water of Lexington and the swimming pool: W. D. HOYT and D. C. T. TSENG.

Vapor pressure measurements: SIDNEY S. NEGUS.

Perchloric acid as an analytical reagent: JOHN H. YOE.

Examination of a turbine petroleum sludge: ALBERT SALATHE.

A discussion of chemical education was introduced as follows:

The correlation of high-school and college chemistry from the standpoint of the college: GARNETT RYLAND.

The correlation of high-school and college chemistry from the standpoint of the secondary school: LEROY L. SUTHERLAND.

The correlation of college and medical school chemistry: E. C. L. MILLER.

E. C. L. MILLER,
Secretary

THE AMERICAN MATHEMATICAL SOCIETY

THE twenty-first regular western meeting of the American Mathematical Society was held at the Uni-

versity of Chicago on April 18 and 19, 1924. Nearly one hundred persons were present at this meeting. The council announced the election of 37 new members, and an equal number of applications for membership were received.

The invitation of Cornell University to hold the summer meeting and colloquium of 1925 in Ithaca was accepted and the council expressed their appreciation of the invitation. It was announced that at this colloquium there would be two courses of lectures, by Professor L. P. Eisenhart on "The differential geometry of general surfaces," and by Professor Dunham Jackson on "The theory of approximation."

Professor Veblen has appointed Professor E. B. Van Vleck as delegate to the fiftieth anniversary celebration of La Société Mathématique de France at the Sorbonne on May 22-24, and Professor William Marshall to represent the society at the semi-centennial of the founding of Purdue University on May 1-3, 1924.

The need for continued support of the endowment campaign was emphasized. Considerable success has been attained so far, but the committee is still far from its goal, that of raising an endowment fund of \$100,000 to enable the society to carry on its work. The committee was authorized to enter into agreements with industrial firms for a service of information. Resolutions were passed thanking the firm of Allyn and Bacon and the Carnegie Corporation for their contributions to the endowment fund, and Professor O. D. Kellogg for the generous aid which he has contributed to the work of the committee.

On Friday afternoon, Professor H. L. Rietz gave a symposium lecture on "Certain topics in the mathematical theory of statistics."

At the other sessions the following papers were read:

The canonical eight-point quadric of a space curve: E. P. LANE.

A characterization of surfaces of translation: E. P. LANE.

Some problems of closure connected with the Geiser transformation: ARNOLD EMCH.

The Jonquières space transformation of Godeaux: F. R. SHARPE.

On the relations between the focal surfaces of two congruences obtained from certain functions of a complex variable: GLADYS E. C. GIBBENS.

Non-monoidal involutorial transformations which leave each monoid of a web invariant: VIRGIL SNYDER.

A direct method for solving systems of linear differential equations with constant coefficients: J. A. NYSWANDER.

Prime power groups containing only one invariant subgroup of every index which exceeds this prime number: H. A. BENDER.

The derivative as independent function in the calculus of variations: L. M. GRAVES.

On the development of a continuous function into a series of Tchebycheff's polynomials: J. SHOHAT.

Note on the asymptotical expression of certain definite integrals: J. SHOHAT.

On the convergence of certain methods of closest approximation: ELIZABETH CARLSON.

The approximate representation of a function by a Sturm-Liouville interpolating formula: C. M. JENSEN.

Some theorems on convex functions: DORA E. KEARNEY.

Orthogonal polynomials for interpolation: EARL L. MICKELSON.

The correlation between two variates one of which is normally distributed: PAUL R. RIDER.

Elementary applications of the notion of angle in function space—preliminary communication: DUNHAM JACKSON.

A symmetrical coefficient of correlation for several variables: DUNHAM JACKSON.

Notation in tensor analysis: K. P. WILLIAMS.

Concerning a type of integral equation: K. P. WILLIAMS.

Derivation of the Fredholm theory from a differential equation of infinite order: H. T. DAVIS.

Algebraic functions and their divisors: G. A. BLISS.

A generalization of Levi-Civita's parallelism and the Frenet formulas: J. H. TAYLOR.

The connection of sheets in mapping: R. P. BAKER.

Necessary and sufficient conditions that every closed and connected subset of a continuous curve be a continuous curve: H. M. GEHMAN.

Conjugate functions in three dimensions: E. R. HEDRICK and LOUIS INGOLD.

On the representation of a positive integer by the form $ax^2 - by^2$: J. S. TURNER.

Extensions of relative tensors: O. VEBLEN and T. Y. THOMAS.

Note on arc and angle in function space: DUNHAM JACKSON.

Expansion problems in connection with the hypergeometric differential equation: B. P. REINSCH.

On the summability and regions of summability of a general class of series of the form

$$c_0 + \sum_{n=1}^{\infty} c_n g(nx): \text{L. L. STEIMLEY.}$$

On a general class of integrals of the form

$$\int_0^{\infty} \varphi(t)g(tx)dt: \text{L. L. STEIMLEY.}$$

Invariants of the linear group modulo

$$\pi = \begin{matrix} \lambda_1 \\ p_1 \end{matrix} \quad \begin{matrix} \lambda_n \\ p_n \end{matrix} : \text{CORNELIUS GOUWENS.}$$

Miss Kearney, Mr. Jensen and Mr. Mickelson were introduced to the society by Professor Dunham Jackson, Mr. Reinsch by Professor Carmichael. The papers of Baker, Davis, Gehman, Kearney, Mickelson, Steimley and Williams (first paper) were read by title.

ARNOLD DRESDEN,
Assistant Secretary