THE BOSTON COLLOQUIUM. LECTURES ON MATHEMATICS

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The Boston Colloquium. Lectures on Mathematics by Edward Burr Van Vleck & Henry Seely White & Frederick Shenstone Woods

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Trieste

LECTURES ON MATHEMATICS

THE BOSTON COLLOQUIUM

LECTURES ON MATHEMATICS

DELIVERED FROM SEPTEMBER 2 TO 5, 1903, BEFORE MEMBERS OF THE AMERICAN MATHEMATICAL SOCIETY IN CONNECTION WITH THE SUMMER MEETING HELD AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY BOSTON, MASS.

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TO

PROFESSOR JOHN MONROE VAN VLECK, LL.D.

THESE LECTURES ARE AFFECTIONATELY INSCRIBED BY

HIS FORMER PUPILS

HENRY SEELY WHITE

EDWARD BURR VAN VLECK

FREDERICK SHENSTONE WOODS

PREFACE.

For a number of years the American Mathematical Society has held a Colloquium in connection with its Summer Meeting at intervals of two or three years. In the circular sent out prior to the first Colloquium, in 1896, the purpose and the plan of the undertaking were described as follows:[1] "The objects now attained by the Summer Meeting are two-fold: an opportunity is offered for presenting before discriminating and interested auditors the results of research in special fields, and personal acquaintance and mutual helpfulness are promoted among the members in attendance. These two are the prime objects of such a gathering. It is believed however that a third no less desirable result lies within reach. From the concise, unrelated papers presented at any meeting only few derive substantial benefit. The mind of the hearer is too unprepared, the impression is of too short duration to produce accurate knowledge of either the content or the method. . . . Positive and exact knowledge, scientific knowledge, is rarely increased in these short and stimulating sessions.

"On the other hand, the courses of lectures in our best universities, even with topics changing at intervals of a few weeks, do give exact knowledge and furnish a substantial basis for reading and investigation. . . .

[1] *Cf. Bull. Am. Math. Soc.*, ser. 2, vol. 3 (1896), p. 49.

"To extend the time of a lecture to two hours, and to multiply this time by three or by six, would be practicable within the limits of one week. An expert lecturer could present, in six two-hour lectures, a moderately extensive chapter in some one branch of mathematics. With some new matter, much that is old could be mingled, including for example digests of recent or too much neglected publications. There would be time for some elementary details as well as for more profound discussions. In short, lectures could be made profitable to all who have a general knowledge of the higher mathematics."

As a forerunner of the Colloquia here outlined may be mentioned the Evanston Colloquium of 1893, which followed the Congress of Mathematics held in connection with the World's Fair in Chicago, Professor Klein, of Göttingen, being the sole speaker. But whereas that Colloquium covered, in a descriptive manner, a variety of topics, — it comprised twelve lectures, — the Colloquia of the Society have been characterized by close contact with the actual analytical development of the topic treated.

The following Colloquia have been held:

I. The Buffalo Colloquium, 1896.

(*a*) Professor Maxime Bôcher, of Harvard University: "Linear Differential Equations, and Their Applications."

This Colloquium has not been published, but several papers appeared at about the time of the Colloquium, in which the author dealt with topics treated in the lectures.*

(*b*) Professor James Pierpont, of Yale University: "Galois's Theory of Equations."

This Colloquium was published in the *Annals of Mathematics*, ser. 2, vols. 1 and 2 (1900).

* Two of these papers were: "Regular Points of Linear Differential Equations of the Second Order"; Harvard University, 1896; "Notes on Some Points in the Theory of Linear Differential Equations," *Annals of Math.*, vol. 12, 1898.