

**MATHEMATICAL MONOGRAPHS.  
NO. 17. LECTURES ON TEN  
BRITISH MATHEMATICIANS  
OF THE NINETEENTH CENTURY**

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Mathematical Monographs. No. 17. Lectures on Ten British Mathematicians of the Nineteenth Century by Alexander Macfarlane

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**ALEXANDER MACFARLANE**

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FRASCOCK



DR. MORGAN



HAMILTON



BOOLE



CAYLEY



CLIFFORD



SYLVESTER



SMITH



KIRKMAN



TODHUNTER

MATHEMATICAL MONOGRAPHS

EDITED BY

MANSFIELD MERRIMAN AND ROBERT S. WOODWARD

No. 17

LECTURES ON  
TEN BRITISH MATHEMATICIANS  
OF THE NINETEENTH CENTURY

BY

ALEXANDER MACFARLANE,

LATE PRESIDENT OF THE INTERNATIONAL ASSOCIATION FOR PROMOTING  
THE STUDY OF QUATERNIONS

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FIRST THOUSAND

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HELEN S. MACFARLANE

## PREFACE

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DURING the years 1901-1904 Dr. Alexander Macfarlane delivered, at Lehigh University, lectures on twenty-five British mathematicians of the nineteenth century. The manuscripts of twenty of these lectures have been found to be almost ready for the printer, although some marginal notes by the author indicate that he had certain additions in view. The editors have felt free to disregard such notes, and they here present ten lectures on ten pure mathematicians in essentially the same form as delivered. In a future volume it is hoped to issue lectures on ten mathematicians whose main work was in physics and astronomy.

These lectures were given to audiences composed of students, instructors and townspeople, and each occupied less than an hour in delivery. It should hence not be expected that a lecture can fully treat of all the activities of a mathematician, much less give critical analyses of his work and careful estimates of his influence. It is felt by the editors, however, that the lectures will prove interesting and inspiring to a wide circle of readers who have no acquaintance at first hand with the works of the men who are discussed, while they cannot fail to be of special interest to older readers who have such acquaintance.

It should be borne in mind that expressions such as "now," "recently," "ten years ago," etc., belong to the year when a lecture was delivered. On the first page of each lecture will be found the date of its delivery.

For six of the portraits given in the frontispiece the editors are indebted to the kindness of Dr. David Eugene Smith, of Teachers College, Columbia University.



Alexander Macfarlane was born April 21, 1851, at Blairgowrie, Scotland. From 1871 to 1884 he was a student, instructor and examiner in physics at the University of Edinburgh, from 1885 to 1894 professor of physics in the University of Texas, and from 1895 to 1908 lecturer in electrical engineering and mathematical physics in Lehigh University. He was the author of papers on algebra of logic, vector analysis and quaternions, and of Monograph No. 8 of this series. He was twice secretary of the section of physics of the American Association for the Advancement of Science, and twice vice-president of the section of mathematics and astronomy. He was one of the founders of the International Association for Promoting the Study of Quaternions, and its president at the time of his death, which occurred at Chatham, Ontario, August 28, 1913. His personal acquaintance with British mathematicians of the nineteenth century imparts to many of these lectures a personal touch which greatly adds to their general interest.



ALEXANDER MACFARLANE  
From a photograph of 1898

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