Duncan M'Laren Young Sommerville, M.A., D.Sc.

PROFESSOR SOMMERVILLE, the son of the Rev. Dr James Sommerville, was born in 1879 in Rajputana and died on January 31, 1934, in New Zealand. After receiving an early education at Perth Academy he entered the University of St Andrews, where his mathematical and scientific ability soon became apparent. In 1899 he obtained a Ramsay and in the following year a Bruce Scholarship: in 1905 he was appointed Lecturer in the Mathematics Department at St Andrews, a post which he filled until in 1915 he became Professor of Pure and Applied Mathematics in Victoria College, Wellington, New Zealand. His scholarly and unobtrusive demeanour as a young lecturer won the admiration of his colleagues and pupils in St Andrews, where his teaching left a permanent mark. While he was essentially a geometer he had considerable interests in other sciences; and it is noteworthy that the classes which he chose to attend in his fourth year of study were in Anatomy and Chemistry. Crystallography in particular appealed to him; and doubtless these subjects influenced his geometrical concepts and led Sommerville to ponder over space-filling figures, and gave an early impetus to thoughts in a field which he made peculiarly his own. Beneath his outward shyness considerable talents lay concealed: his intellectual grasp of geometry was balanced by a deftness in making models, and on the æsthetic side by an undoubted talent with the brush. In the course of years he produced a pleasing collection of water-colour sketches of New Zealand scenery.

His mathematical work falls naturally into two parts: that of the teacher and that of the investigator. His textbooks, which have appeared at regular intervals, are a valuable link between the old and the new era in the teaching of geometry at college. They are the *Elements of Non-Euclidean Geometry* (1914), *Analytical Conics* (1924), *Introduction to the Geometry of* n *Dimensions* (1929), and the recent *Three-Dimensional Geometry*, the appearance of which he did not live to see. All are characterised by a variety of algebraic treatment and a wealth of illustrations and examples, but nowhere does technical manipulation outrun the geometry. The first of these, a provocative little book, appeared at a time when metrical systems alternative to that of Euclid were known only to the few. It is not surprising that such a teacher carried through-

out his life the esteem and appreciation of his students. One of his most distinguished pupils, A. C. Aitken, writes of the critical time in his own student days when the University of Otago was temporarily without a Professor of Mathematics, and how willingly Sommerville filled the gap by weekly correspondence. The written solutions and comments went far beyond what was necessary for mere elucidation.

Beginning in 1905, Sommerville wrote over thirty original papers and notes which have been published in well-known journals at home and abroad. The first, entitled "Networks of the Plane in Absolute Geometry" (*Proc. Roy. Soc. Edin.*, vol. xxv, 1905) is typical of the sequel. The main theme is that of combinatory geometry, exemplified by a systematic investigation of "The Division of Space by Congruent Triangles and Tetrahedra" (1923) in the same journal, and extended to n dimensions (*Rend. Circ. Mat. Palermo*, vol. xlviii, 1924, pp. 9–22). Out of this grew the work upon the relations connecting the angle sums and volume of a polytope in space of n dimensions (*Proc. Roy. Soc.*, 1927).

Sommerville was ever ready to apply his special gifts to unusual examples, as in his analysis of preferential voting and a highly original analysis of the musical scale. His was a life of unsparing activity, and the fruits of his work will abide. There has passed from Scotland one who had already become her leading geometer of the present century.

He was elected a Fellow of the Society in 1911.

H. W. T.