NEWS FROM THE DEPARTMENTS

University of Alberta: Mr. J. Ross McGregor has been appointed to the staff. He is finishing up his Ph.D. thesis at Cambridge, England, and is now teaching at the University of Birmingham. His field is Mathematical Statistics.

Dr. Robert E. Gaskell, Supervisor of the Mathematical Services Group, Boeing Airplane Company, Seattle, came to the campus on January 5th and 6th as a Visiting Lecturer for the Mathematical Association of America. He addressed the Science Association, the Mathematics and Physics Club (a student organization), the Mathematics Colloquium and a public meeting of engineers and others interested in the industrial applications of mathematics.

Dr. V. Hlavaty, Professor at the Institute of Applied Mathematics, University of Indiana, visited the campus from March 22nd to 25th, en route to U.B.C. He gave a lecture on The Structure of Space to the Science Association and also addressed a joint meeting of the Mathematics and Physics colloquia.

About 140 applications were received from mathematics teachers for bursaries to enable them to attend the Summer Institute for Modern Mathematics to be held at Edmonton, July 6th to August 14th. This Institute is sponsored jointly by the Congress, the University and the Provincial Department of Education. About 50 bursaries have been awarded.

Arrangements are being made to repeat the special mathematics scholarship examination throughout the high schools of Alberta this coming June.

Assumption University of Windsor: The Senate of the University approved the M.Sc. program for Pure and Applied Mathematics. However, for the time being we will not be offering the Master's program in Statistics.

Arrangements have been made to add two members to the staff next year: Dr. Simon Green, who comes from the University of South Carolina, and Dr. Sadanand Verma, who obtained his Ph.D. from Wayne University in Detroit in 1958.

The Department was saddened in January by the death of Dr. George Duwalo, Ph.D. (Tor.) in an automobile accident.

University of British Columbia: In the fall of 1958 the Department of Mathematics of the University of British Columbia offered through the Department of Extension an evening course entitled Developments in Modern Mathematics. The course was designed primarily for high school teachers and its purpose was to acquaint the teachers with some of the basic concepts of modern mathematics and to suggest some ways in which mathematical developments of the last hundred years might be expected to influence the high school curriculum in the near future. A total of twelve two-hour lecture-discussion periods were conducted by Professors Christian, Froese, James, Jennings, Moyls and Murdoch. Topics discussed include logic, sets, probability, vectors and matrices, algebraic and geometric systems, topology, the binary number system and digital computers. About forty-five people, most of whom were high school teachers, enrolled in the course. Its success can partly be judged by the fact that requests have since been received from at least six different groups of teachers that similar courses be offered in six different centres throughout the Province. These courses have already been provided in Penticton, Victoria and Nanaimo and are currently in progress in Trail, Kamloops and Burnaby. Where good travel facilities were available the same pattern of evening lectures has been used as in the Vancouver course. At the more distant centres Saturday morning and afternoon lectures have been held. Teachers have travelled from points up to one hundred and twenty miles away to attend these classes. It seems likely that a similar series of courses will be provided during the 1959-60 session.

The Annual Mathematics Contest, sponsored by the Mathematical Association of America and the Society of Actuaries, has again been conducted in the secondary schools of British Columbia by the Department of Mathematics of the University of British Columbia. In the 1959 contest 645 students from 69 different schools took part. This is an increase of approximately fifty percent over the corresponding figures for last year.

University of Western Ontario: Mr. Arwel Evans has been awarded the degree Ph.D. (Cantab.). The thesis "Integration by Limits over Sets" was written under the direction of Professor A.S. Besicovitch.

Guest lecturers at the Mathematics Seminar for the current academic session have been the following: Dr. W.P. Brown (University of Toronto), Problems in Group Theory; Dr. Hale F. Trotter (Queen's University), A New Proof of the Central Limit Theorem; Dr. R.G. Kuller (Wayne State University), Locally convex topological vector lattices; Dr. A.L. Shields (University of Michigan), Representation of Functions

by Exponential Sums; Dr. P.G. Rooney (University of Toronto), Representation by Transforms.

ABSTRACT OF THESIS

Philip J. LAUFER, The structure of left H^*-algebras, presented at McGill University, May 1958 (Supervisor, J.E.L. Peck).

A left H^*-algebra A is an algebra which is also a Hilbert space and satisfies the following further conditions. 1) For each x in A there is an x^* in A such that for all y and z in A, $(xy,z) = (y,x^*z)$. 2) The mapping $x \to x^*$ is continuous. 3) $xA = 0$ implies that $x = 0$.

The purpose of this thesis is to investigate the structure of the above algebras. Ambrose [Trans. A.M.S. vol. 57, 1945] determined the structure of proper H^*-algebras. The essential difference between a left H^*-algebra and a proper H^*-algebra is that for the latter, the following condition is also used: $(xy,z) = (x,zy^*)$. In addition, a proper H^*-algebra is assumed to be a Banach algebra. For a left H^*-algebra however, this can be proven by using the condition that the mapping $x \to x^*$ is continuous. The structure which is obtained for a left H^*-algebra is as follows: A left H^*-algebra is the direct sum of simple left H^*-algebras and each simple left H^*-algebra is isomorphic (in the algebraic sense) to a full matrix H^*-algebra.

A Kaplansky-Stone-Weierstrass theorem is also obtained. Specifically, let A be a left H^*-algebra and B a closed self-adjoint subalgebra with the following property: for any two distinct regular maximal left ideals in A, B contains an element in one but not in the other. Then B = A. Kaplansky [Trans. A.M.S. vol. 70, 1951] has proved the above theorem for a class of algebras which he calls CCR-algebras.

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