Ladislav Procházka Sixty years of Professor Vlastimil Dlab

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## NEWS AND NOTICES

## SIXTY YEARS OF PROFESSOR VLASTIMIL DLAB

#### LADISLAV PROCHÁZKA, Praha

Vlastimil Dlab, one of the most prominent contemporary Czech mathematiciaus, was born on August 5, 1932 in a small North-Bohemian village of Bzí as the eldest one of four childern of a glass-factory worker. After completing—with distinction—the secondary school in the town of Turnov, he was admitted to the Faculty of Mathematics and Physics at Charles University in Prague. He graduated with distinction in

1956. His interest in algebra and in teaching—he was teaching as Assistant Professor at both Charles University and Czech Technical University already during his studies—led him after a year in the Mathematical Institute of the Czechoslovak Academy of Sciences back to the Charles University. He worked as Assistant Professor, and in 1959 successfully defended his dissertation for the CSc. (Candidate of Science) degree, in which he gave a classification of systems of generators of Abelian groups. (The results of the dissertation formed the basis for papers [3], [4], [5].) In the same year, following an advice by Prof. E. Čech, Dlab used as one of the first of the new generation of Czech mathematicians, an opportunity to spend five



years at Khartoum University to gain international experience. He maintained close contacts with Charles University, especially with his teacher Prof. V. Kořínek and regularly visited Prague. In 1961, he passed habilitation proceedings at Charles University; his dissertation concerned the so called Frattini subgroups of Abelian groups, see [6], [7], [9]. His degrees were not recognized in Khartoum, so in 1962 he received the Ph.D. degree on the basis of [13] there. In 1964, V. Dlab returned to Charles University. He gave the main course of Algebra and organized a seminar for young members of the Faculty. His international reputation was growing, and in 1965 he accepted an invitation from B. H. Neumann to join the Institute for Advanced Studies in Canberra, Australia, for three years. Before leaving for Australia he was invited to submit his dissertation for the DrSc. (Doctor of Science) degree, which he then received during his brief visit to Prague in 1966.

Late in 1968 V. Dlab was to return home to a Professorship at Charles University. However, the news of his personal situation in Czechoslovakia after the Soviet occupation, which reached him while on this way home in London, made him change his mind and accept an offer of Carleton University in Ottawa, Canada, where he has been working until now.

V. Dlab used fully the many possibilities offered by his new affiliation, and his industriousness and erudition made him a world-wide specialist in the theory of rings and the theory of representations of algebras. He was Chairman of the Department of Mathematics in 1971–74 and Chairman of the Research Committee of Canadian Mathematical Society from 1971 to 1977. He worked as visiting professor at Universtité de Paris VI, Brandeis University, Universität Bonn, Tsukuba University, University of Sao Paolo and others, and delivered lectures at many other distinguished mathematical institutions throughout the world. In 1977, he was elected Fellow of the Academy of Sciences of the Royal Society of Canada.

Since the Communist regime in Czechoslovakia made it impossible for him to make his stay abroad legal, he eventually gave up Czechoslovak citizenship to be able to visit his seriously ill father. When coming to Czechoslovakia he always showed a deep interest in the developments of Czechoslovak mathematics, met his colleagues and delivered lectures. After 1989 he resumed Czechoslovak citizenship and his visits to Prague became more frequent; he gave a series of lectures at Charles University and organized an international Prague Algebra Day in November 1991. On June 24, 1992 the Scientific Board of the Faculty of Mathematics and Physics recommended his Professorship at Charles University—24 years after the originally scheduled meeting on December 19, 1968.

Even from the short account given above it is clear that from its very beginning the scientific activity of V. Dlab has concerned many fields of modern algebra. The first period is characterized by a group of papers dealing with structural properties of groups, in particular abelian ones (systems of generators, Frattini groups, *D*-rank). Before his departure for Australia he worked also in the general theory of algebraic dependence ([12], [13], [14], [16]-[20]). In 1965-68 Dlab concentrated on the methods of homological algebra—especially on the study of rings (the desription of structure of a certain important class of Goldie's rings [24], [25]) and later of perfect rings and their characterization by hereditary torsion classes [35], [36]. The recent period of Dlab's research work started with the study of balanced rings ([40], [41], [43]-[47]) and continued by developing the classification of representations of finite dimensional algebras and graphs, in particular hereditary algebras (a series of papers between [49] and [68], especially [53] and [56]). Here Dlab solved a number of classification problems ([57], [59], [60], [63], [79]). Later he applied the results of the theory of representation of hereditary algebras to the theory of  $C^*$ -algebras and solved some problems concerning Jones's index ([77], [82], [83]). The latest papers of Dlab are oriented to the study of quasihereditary algebras, which play crucial role in the theory of representation of Lie algebras and algebraic groups; here Dlab has achieved some important structural results ([70]-[76], [83]). A major part of the papers from this period was written in cooperation with Bielefeld mathematician C. M. Ringel; Dlab has been collaborating with him since his visit to Carleton University during 1970-72.

The research work of V. Dlab is characterized by its extraordinary extent, relevance and variety of topics, and, above all, thoroughness of his approach and depth of his results. From the beginning of his scientific career Dlab has been striving after solving the given problem to its very last detail, to its definitive form. As a mathematician of world renown he has contributed to the progress of modern algebra also by his extensive organizational and pedagogical activities. He founded the tradition of the International conferences on representations of algebras (ICRAs) at Carleton University—the lasst conference, in August 1992, was already the sixth of them and has taken part in organization of many other algebraical events. He has been member of Editorial Boards of several mathematical journals, and since 1988 the Chief Editor of Canadian Journal of Mathematics.

The friends and colleagues of V. Dlab have known him for his unceasing energy, industriousness and personal frankness. On the occasion of the sixtieth anniversary of his birthday, on behalf of the Czech mathematical community we wish him firm health and many personal as well as scientific successes in the future.

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