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Czechoslovak Mathematical Journal, Vol. 42 (1992), No. 1, 187–190

Persistent URL: http://dml.cz/dmlcz/128323

Czechoslovak Mathematical Journal, 42 (117) 1992, 'raha

SEVENTY YEARS OF PROFESSOR MILAN KOLIBIAR

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Professor Milan Kolibiar is a man who has had a tremendous and profound influence on all of Slovak mathematics during the last forty years. There are mathematicians who have added greatly to mathematics through their research activities. Still others have contributed through their teaching. Finally, some mathematicians are devoted workers on behalf of the professional organizations. But there are few among us who fill all three of these roles. One of the appropriate candidates fulfilling these conditions is Professor Milan Kolibiar, an able researcher, an honored teacher, and a man who has made contributions of time and energy to the activities of mathematicians.

Milan Kolibiar was born on February 14, 1922 in Detvianska Huta, district of Zvolen. After attending secondary schools in Zvolen and Kláštor pod Znievom, he enrolled in 1942 at the brand new Faculty of Sciences of the Slovak University (after the war renamed to Comenius University) in Bratislava. Here he graduated in 1946 and was appointed to the same faculty. At Comenius University he rose through the ranks, becoming Professor of Mathematics in 1965. (Kolibiar received his RNDr. in mathematics from Comenius University in 1950 and the degree Doctor of Science (DrSc.) in 1965.) In 1964 he was appointed Head of the newly established Department of Algebra and Number Theory. He remained active in the leadership of that department till his retirement in 1987. Now, he is still teaching special courses and seminars.

M. Kolibiar belongs to the first generation of Slovak mathematicians who graduated from the University of Bratislava. Because of the scarcity of good professors, lack of tradition and connections to research centers, it was very difficult for a young mathematician in Bratislava at that time to start research in mathematics. Kolibiar and his friends (among them J. Jakubík) started an informal seminar by reading the Russian translation of G. Birkhoff's book on lattice theory. They were encouraged to do so by professors O. Borůvka from Masaryk University in Brno and Š. Schwarz from Bratislava.

The research interests of Professor Kolibiar are in partially ordered sets, lattices and universal algebra. He has been particularly interested in border fields between algebra and topology.

In the first period of his research activity Professor Kolibiar attacked some Birkhoff's problems. So he found, together with J. Jakubík, a partial solution of [1, Problem 8] (isomorphism of lattices with isomorphic covering graphs), and was fully successful in solving [1, Problem 32] (permutable congruences on algebras), [1, Problem 66] (characterization of lattices by means of one ternary relation), and finally, he gave an abstract description of those ternary operations which correspond to the median operation on lattices (problem posed by Birkhoff and Kiss).

Kolibiar was particularly interested in identities which characterize modular lattices within the class of algebras with two binary fundamental operations. He found two identities which Birkhoff labelled in his comments (see [2]) as "remarkable".

Distributive lattices, decompositions of algebras, weak homomorphisms, convex sublattices, intrinsic topologies on ordered sets, fixed point theorems for ordered sets were the next topics that were dealt with in Kolibiar's papers. (For a more detailed account see [3].)

From the recent years let me mention one topic that I have found useful: median groups (see [A37], [A39] and [A40]). A median group $G = (G; (\ ,\ ,\ ), +, 0)$ is a group $(G; +, 0)$ with a ternary operation $(\ ,\ ,\ )$ satisfying the identity $u + (a, b, c) + v + (u + a + v, u + b + v, u + c + v)$. The class of median groups is larger than that of lattice-ordered groups. Kolibiar found, in particular, conditions under which a median group can be decomposed into the direct product of simpler median groups, and characterized torsion median groups.

At Comenius Univ ity Professor Kolibiar has served the academic community in many different way As I have mentioned, he was Chairman of the Algebra and Number Theory Depar ent for twenty three years. He was Vice-Dean of the Faculty of Sciences for two periods in the late '50s and in the '60s. In addition, he has served in a lot of ad hoc committees.

Professor Kolibiar is a marvelous teacher who enjoys and loves mathematics. He had at least ten CSc. (=PhD) students and taught them and others with enthusiasm. In 1955, he started a new seminar in order to teach and support gifted students to become serious research mathematicians. The majority of current leading Slovak mathematicians of the middle generation were instructed and significantly influenced in their career by Kolibiar.

Professor Kolibiar is one of the founders, organizers and active participants of the (now international) Summer Schools on Partially Ordered Sets and Universal Algebra which have been held in Czechoslovakia since 1962.

He was also active beyond the university; he has served as Editor of both Mathematica Slovaca and Acta Mathematica Univ. Comen., as chairman or member in committees for scientific degrees, as member of boards of National Commission on Mathematical Instruction (ICMI) representing Czechoslovakia, etc.

We can take pride in his activities for the Mathematical Olympiad. His clear understanding of the importance of this competition led him to organize a lot of local circles and seminars where the students were instructed and prepared for MO. He

headed the National Committee of MO in the years 1951–1963. Kolibiar also served very actively in various committees of the Czechoslovak Society of Mathematicians and Physicists (JČSMF) during a period of twenty years.

Many institutions awarded Professor Kolibiar memorial medals and other distinctions for his merits. However, for him the greatest reward is the respect and appreciation he receives from his colleagues, friends and students not only as a teacher and scientist but as a humble, honest and friendly man. To him we wish firm health and favourable conditions in his personal life, both being so important for creative work in mathematics. We look forward to working with Professor Kolibiar for many more years.

References

[1] *G. Birkhoff*: Lattice Theory, 2nd ed. Amer. Math. Soc., Providence, R. I., 1948.

[2] *G. Birkhoff*: Lattice Theory, 3rd ed. Amer. Math. Soc., Providence, R. I., 1967.

[3] *J. Jakubík and T. Katriňák*: The sixtieth anniversary of Professor Milan Kolibiar, Czechoslovak Math. J. *32* no. 107 (1982), 498–503.

Supplement to the list of publications of Professor Milan Kolibiar[1])

[30] Fixed point theorems for ordered sets., Studia Sci. Math. Hungar *17* (1982), 45–50.

[31] Intervals, convex sublattices and subdirect representations of lattices., Univ. Algebra and Applications. Banach Center Publ. PWN, Polish Scie. Publ., Warsaw *9* (1982), 335–339.

[32] Weak homomorphisms of some classes of algebras, Studia Math. Hungar *19* (1984), 413–420.

[33] Isometries of multilattice groups, Czech. Math. J. *33* no. 108 (1983), 602–612 (with *J. Jakubík*).

[34] Compatible orderings on semilattices. Contributions to General Algebra 2., Proc. of the Klagenfurt Conf., June 10–13, 1982, Hölder-Pichler-Tempsky, Vienna, 1983, pp. 215–220.

[35] Graph isomorphisms of semilattices. Contributions to General Algebra 3., Proc. of the Vienna Conf., June 21–24, 1984 Hölder-Pichler-Tempsky, Vienna, 1985, pp. 225–235.

[36] Congruence relations and direct decompositions of ordered sets, Acta Sci. Math. (Szeged) *51* (1987), 129–135.

[37] Median groups, Archivum Math. (Brno) *25* (1989), 73–82.

[38] Congruence relations and direct decompositions of ordered sets II, Contributions to General Algebra 6. Hölder-Pichler-Tempsky, Wien 1988, Verlag B. G. Teubner, Stuttgart, 1988, pp. 167–172.

[39] On a class of median groups. Univ. and Applied Algebra, Proc. of the 5th Univ. Algebra Symp., Turawa, Poland, May 3–7, 1988, World Sci., Singapore, 1989, pp. 190–197.

[40] Direct product decomposition of median groups. General Algebra 1988, Proc. of the Univ. Algebra Symp. Krems/Donau, Austria, 15–20 August, Elsevier Sci. Publ. B. V. (North Holland), 1990, pp. 121–128.

[1]) For the publications [A1–A29] and [B1–B15] see [3], where also further details on Kolibiar's activity can be found.

[41] Direct factors of multilatticegroups, Archivum Math. (Brno) *26* (1990), 121–128.

[16] Ordered sets and lattices, (Coauthor), Univ. Komenského, Bratislava, 1985, English translation appeared in Amer. Math. Soc. Transl. Ser. 2 *141* (1989). (In Russian.)
[17] Ordered sets and lattices II, (Coauthor), Univ. Komenského, Bratislava, 1988, English translation will appear in Amer. Math. Soc. Transl. (In Russian.)