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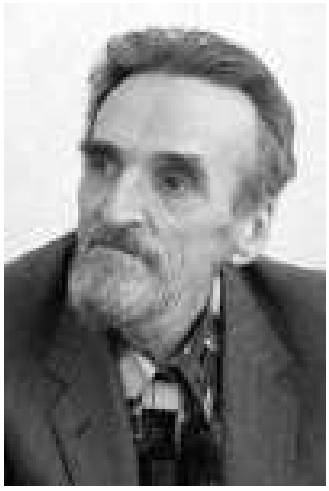
Academician Iurie Reabuhin – 70th anniversary



Iurii Mihailovici Reabuhin was born on February 8, 1939 in Moscow, Russia. Graduate of high school N 4 (Chisinau, 1956), and of faculty of physics and mathematics, Moldova State University (Chisinau, 1961), post-graduate student, Institute of Mathematics with Computer Center of Moldova Academy of Sciences (1965).

PhD (1965), Habilitat doctor (1971), University professor (1978), Corresponding Member (1989) and Academician (1993) of Moldova Academy of Sciences.

Distinctions: Laureate of Moldova State Prize in domain of science and technics (1972), Honoured Public Education Worker (1984), Honoured Science Worker (1988).

Research activity: Institute of Mathematics and Informatics, Moldova Academy of Sciences – laboratory assistant (1961–1963), research worker, senior research worker (1963–1970), head of the department Algebra and Mathematical Logic (1970–1993), principal research worker (since 1993).

Professor Iurii Reabuhin wrote his first scientific article in geometry under the supervision of the well known geometrician Alexandr Zamorzaev. In 1961 he met a great specialist in Algebra Vladimir Andrunakievici, and they formed a tandem which is now famous all over the algebraic world. They say, in the person of Iurii Reabuhin mathematics lost a good geometrician but gained a great algebraist.

The scientific interests of professor Reabuhin turned up in the theory of rings, algebras and modules. One circle of works deals with the theory of radicals of rings and algebras. He was one of the first to prove that the radical, generated by a hereditary property, is hereditary. Studying lower radicals, professor Reabuhin was the first to indicate an unbreakable Kurosh chain, and together with academician Andrunakievici showed that the break of this chain in the case of non-associative algebras is a rare event.

Professor Reabuhin showed that it is possible to come to subnilpotent and special radicals from category considerations. He constructed an example of a subnilpotent radical which is not special and later showed that there is a whole "heap", by an expression of the famous algebraist K. Zhevlakov, of such radicals.

Another circle of scientific works of professor Reabuhin is connected with algebras without nilpotent elements. He and Andrunakievici proved that every associative ring without nilpotent elements is decomposed as a subdirect product of rings without zero divisors. Prof. Reabuhin had solved completely the problem of description of non-necessary associative algebras (over an arbitrary associative commutative ring with identity) which are decomposed as a subdirect product of algebras without zero divisors, and generalized some theorems of Gerchikov and Weierstrass. He also showed that it is possible to develop the theory of radicals even in "bad" categories.

These and a lot of other results are exposed in the monograph of V. Andrunakievici and I. Reabuhin "Radicals of algebras and structure theory".

One more circle of works of Reabuhin is devoted to the search of generalizations of classical Noether-Laseeker additive ideal theory to the non-commutative case. In a large series of works professors Reabuhin and Andrunakievici defined axiomatically the notion of primarity and studied different properties of primary ideals and their intersections: "existence" (every ideal has of a primary decomposition, that is every ideal is an intersection of a finite number of primary ideals), "intersection" (intersection of a finite number of primary ideals with the same radical is a primary ideal), "uniqueness" (two primary decompositions have the same set of radicals). It turns out that under some very natural conditions the only one "good" primarity is "tertiarity", studied by Lesiur and Croisot.

If the restrictions are slightly modified one gains the "primality" of Fuchs, which, however, does not coincide with classical "primarity" even in commutative case. The developed theory is valid not only for rings, but also for groups, semigroups, modules and systems with quotients, the last being introduced by Reabuhin and Andrunakievici.

We must confess that some ideas of pioneer in traditional researches of algebraists of the Republic of Moldova belong to academician Iurii Reabuhin. These ideas not only extended traditional themes of investigations, but also generated new directions of researches of Chişinau algebraic scool. Here are just some aspects which enrich algebraic investigations with new results and methods in the theory of rings and algebras non-necessary associative: general constructions of locally nilpotent algebras, locally finite dimensional algebras, description of some varieties of algebras, analysis of marked varieties of associative algebras, cardinality of minimal varieties. Some results and applications lead to solution of some special problems of ring theory. Here we may remak, for example, that Baer and Levitzky are different, the cardinality of minimal variety is immense (continuum) and some applications can be extended to the non-associative case. The methods, described and applied by academician Iurii Reabuhin leave you thunderstruck not only by originality, but also by their contents. They contain vast possibilities of new extensions and applications, open new directions which were successfully capitalized by his disciples.

Beside academician Iurii Reabuhin you always feel a special devotion to algebraic school, to its prestige at national and international level. These nontraditional direc-

tions together with obtained results had fortified the image of our algebraic school and had amplified investigations in rings and algebras with different conditions of finiteness.

Now, when Academician Iurii Reabuhin is 70 years old, we are proud of his achievements and wish good health, prosperity and successes in his scientific and didactic activity.

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