

Professor Yuri Bahturin (on his 65th birthday)



Yuri Bahturin was born in Moscow on November 22, 1946. He graduated from the Faculty of Mechanics and Mathematics of Moscow State University in 1969. Three years later he defended his Ph.D. Thesis under the supervision of Professor Alfred Shmelkin and started his career as an assistant professor at the Department of Higher Algebra of Moscow State University. In 1979, Yuri Bahturin became an associate professor. In 1985, he defended his Dr. Sci. Thesis and was promoted to be a full professor. In 1999, he accepted his present position at Memorial University of Newfoundland, St. John's, NL, Canada, where he now holds the title of University Research Professor. He also keeps a part-time professorship at Moscow State University.

During his education in Moscow, Yuri Bahturin received an excellent general mathematical and specialized algebraic background, which allowed him to be among pioneers in several branches of algebra.

His first field of research was the theory of varieties of Lie algebras and Lie rings, and he is one of the first authors in this area. For more than forty years Yuri Bahturin, his students, and the students of his students continue to work on polynomial identities of Lie algebras, their enveloping algebras and related objects.

Over the years, Yuri Bahturin was among the founders of many other theories:

- locally finite Lie algebras,
- polynomial identities of Lie superalgebras and their generalizations,
- polynomial identities of simple Lie algebras and superalgebras,
- residual properties of Lie algebras and superalgebras,
- wild automorphisms of relatively free Lie algebras,
- graded polynomial identities of algebras,
- algebras with action and coaction of Hopf algebras,
- polynomial identities of algebras with Hopf algebra action,
- group gradings on simple associative, Lie and Jordan algebras.

He also obtained deep results in the theory of infinite groups, on the numerical invariants of ordinary and graded PI-algebras (including associative, Lie and Jordan algebras), polynomial identities of integral group rings, etc.

Yuri Bahturin enjoys doing and teaching mathematics. He generously shares his ideas, knowledge, and mathematical experience with young colleagues. He has a long list of Ph.D. students — including ourselves — who successfully defended their theses under his guidance and continue their scientific career to this day. Even longer is his list of joint authors, which includes A. A. Baranov, G. Benkart, M. Brešar, V. Drensky, D. Fischman, A. Giambruno, M. Goze, O. H. Kegel, M. Kochetov, V. Linchenko, A. A. Mikhalev, S. Mishchenko, A. Molev, S. Montgomery, S. Natiyev, A. Yu. Olshanskii, D. Pagon, M. M. Parmenter, V. Petrogradsky, A. Regev, D. M. Riley, S. K. Sehgal, K. N. Semenov, I. P. Shestakov, V. Shpilrain, A. M. Slinko, Š. Špenko, H. Strade, M. Tvalavadze, T. Tvalavadze, I. A. Yanson, M. V. Zaicev, A. E. Zalesskii, and D. Zeilberger.

Yuri Bahturin is the author of several books and survey articles, among them the monographs *Lectures on Lie Algebras* (1978), *Identical Relations in Lie Algebras* (Russian original 1985, English translation by the author 1987), *Basic Structures of Modern Algebra* (Russian original 1990, English translation 1993), *Infinite-dimensional Lie Superalgebras* (1992, with A. A. Mikhalev, V. M. Petrogradsky, and M. V. Zaicev). He also translated several books in algebra from English and French to Russian and from Russian to English.

We warmly congratulate Yuri Bahturin on his 65th birthday and wish him good health, happiness in his family life and many years of rich and productive mathematical life.

On behalf of the Guest Editors of this volume,

Vesselin Drensky, Mikhail Kochetov, and Mikhail Zaicev