



Professor Mihail Popa – 60th anniversary

On May 15th 2008 the university professor Mihail Popa will be 60 years old. Professor Mihail Popa is Habilitated Doctor in Mathematical and Physical Sciences and Director of the Institute of Mathematics and Informatics of the Academy of Sciences of Moldova. He is a well known scientist for his work on differential equations and for his rich scientific and didactic professional activity he was awarded the Prize of the Presidium of the Academy of Sciences of Moldova and the Constantin Sibirschi Prize.

Mihail Popa was born in the village of Vălcineț, in the district of Călăraș, in the Republic of Moldova. In 1963 he graduated from the elementary school of the village of Temeleuți, the district of Călărași; in 1966 he finished the secondary school nr.1 of the city of Călăraș and in 1971 he graduated from the Faculty of Physics and Mathematics of the State University of Chișinău. In 1978 he was enrolled as a student in the Ph. D. program of the Institute of Mathematics and Computer Sci-

ences of the Academy of Sciences of Moldova (in the specialty 01.01.02 – Differential Equations).

In 1979 professor Popa defended his Ph.D. Thesis in Mathematical and Physical Sciences at Gorki University. His thesis was supervised by the well known academician Constantin Sibirschi. In 1992 he defended his Habilitation Doctor's thesis in Kiev at the Ukrainian Academy of Sciences.

The professional activity of professor Popa took place at the I.M.I of the Academy of Sciences of Moldova and it evolved as follows: upper rank member of the Laboratory (1975 – 1977), lower rank Scientific Collaborator (1977 – 1980), Scientific Secretary of I.M.I. (1980 - 1999), Assistant-Director of I.M.I. (1999 – 2005), Director of I.M.I. (2005 up to now).

The scientific interests of professor Popa involve the use of invariant processes in the qualitative study of differential equations. A new viewpoint was established in the qualitative theory of differential equations based on the method of algebraic invariants founded by the academician C. Sibirschi. This new viewpoint consists in the application of the Lie algebras of operators of representations of the linear groups in the space of coefficients of systems of polynomial differential equations and of the graduate algebras of invariants and comitants to the geometry of these systems. This new viewpoint extended the scientific domain where it was applied, so as to involve methods of group analysis. This brought forth the study of the graduate algebras of invariants of differential equations with the help of generating functions and of Hilbert series. A sequence of generating series and of Hilbert series for diverse graduate algebras of comitants and invariants of differential systems was obtained for which it is possible to evaluate their Krull dimension. A substantial part of the results are about the study of the Lie algebra of operators L_4 for the center-affine group and its representations in the space of coefficients of autonomous systems of polynomial ordinary differential equations (S.O.D.E) of first order. Another category of results is connected to the classification of the dimensions of orbits of polynomial S.O.D.E with respect to the admissible groups. A new direction in the use of Lie algebras and of algebras of invariants is the extension to autonomous multidimensional systems of first order differential equations with polynomial right-hand sides, which have constant coefficients.

Professor Popa is the author of over 80 scientific publications, among them two monographs about applications of algebras to systems of differential equations and

a textbook for Master's Degree students about Lie algebras and about systems of differential equations.

The research of professor Popa drew the attention of many scientific researchers in differential equations and in algebra. His collaboration with specialists of the Université de Limoges (France), University of Minsk (Belarus), University of Pitești (România), The Center of Research in Mathematics of Montreal (Canada), the University of Lund (Sweden), the Institute of Mathematics of the Romanian Academy (București), the State University M.Lomonosov of Moscow indicate the importance of his research.

From February to June 2001 M. Popa was Invited Professor at the Université de Limoges (France), where he gave courses and seminars for students and professors. M. Popa was the director for 6 Ph. D. theses and he presently has two Ph.D. students whose theses are in the final stages. From the year 1996 professor Popa lectured for students in their fourth and fifth year at the State University of Tiraspol (in Chișinău), where he won by competition the position of Full Professor. Under his direction The Seminar on Differential Equations and Algebras was organized at the Tiraspol State University and since 2002 this Seminar for Master and Ph. D. students and professors meets regularly.

Professor Popa is the President of the Scientific Committee of the Institute of Mathematics and Informatics of the Academy of Sciences of Moldova, he is a member of the Committee of Experts of the CNAA, a member of the Editorial Board of the Bulletin of the Academy of Sciences in Mathematics (Moldova) and of ROMAI Journal (Romania).

He was the project director for the organization of the Workshop "Qualitative Study of Differential Equations" (Chișinău, February 14-15, 2003), of the Second Conference of the Mathematical Society of Moldova, (Chișinău, August 17-19, 2004), and of the International Conference "Algebraic Systems and their Applications to Differential Equations and to other mathematical domains" (Chișinău, August 21-23, 2007).

We congratulate professor Popa on the occasion of his 60th anniversary and we wish him good health, prosperity and new successes in his scientific and didactic activity.