

Bul. Ştiinţ. Univ. Baia Mare, Ser. B,
Matematică-Informatică, Vol. XV(1999),
Nr. 1-2, I-VIII

**PROFESSOR ION PĂVĂLOIU
AT HIS 60'S ANNIVERSARY**

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Professor Ion Păvăloiu has reached the age of 60 on November 2, 1999. He was born in the village of Drăguţeşti, in the Gorj county. He accomplished his superior studies at the Faculty of Mathematics of the "Babeş-Bolyai" University from Cluj-Napoca. He took the Ph.D. degree in mathematical sciences in 1971, at the Romanian Academy, with the work *Contributions to the Study of Iterative Methods with High Convergence Orders with Applications to the Solving of Operational Equations*, under the leadership of acad. Tiberiu Popoviciu. He was awarded the prize "Gheorghe Lazăr" of the Romanian Academy in 1970 for a series of papers regarding the solving of the operatorial equations. He has started to work in the research area, within the Institute of Numerical Analysis of the Romanian Academy, beginning with the year 1962, after he graduated the courses of the Faculty of Mathematics. At the same time, he has also been teaching at the university. As a researcher, he has got over all degrees, up to senior research fellow, obtained in 1991.

From 1990 he is the Director of the "Tiberiu Popoviciu" Institute of Numerical Analysis of the Romanian Academy. From 1998 he has been full professor within the Department of Mathematics and Informatics from the Northern University of Baia-Mare.

The main domains of activity of Professor Ion Păvăloiu concern the Numerical Analysis and the Approximation Theory. He published two monographs: *Introduction to the Theory of Approximating the Solutions of Equations*, Ed. DACIA, Cluj-Napoca (1976), *The Solution of the Equations by Interpolation*, Ed. DACIA (1981) and a didactic course, *Special Topics in Mathematical Analysis*, Ed. Cordial Lex (1994).

He has also published 73 articles in prestigious journals from our country and from abroad.

The research directions preferred by prof. Ion Păvăloiu are the following: numerical methods in the linear and non-linear analysis; methods for function

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approximations; the applications of mathematics to other domains, such as: chemistry, medicine, mechanics, technical sciences, etc. The main results obtained by Ion Păvăloiu in these domains have been materialized in the extension of the method of inverse interpolation to vector spaces, and the unified study of the classes of methods generated by the interpolation.

In this respect, he has shown that the majority of methods known can be obtained by inverse interpolation of Lagrange-Hermite type; moreover, prof. Ion Păvăloiu has shown that the inverse interpolation generates classes of methods with arbitrary high orders of convergence. Also, concerning these classes of methods, he has determined the optimal methods, on one hand from the point of view of the convergence order, and on the other hand from the point of view of the efficiency index. For diverse methods from the classes of interpolatory type, he has studied the conditions for convergence, their numerical stability and the evaluation of errors.

In a series of works, he has also dealt with the generalization and the study of the convergence of Aitken-Steffensen type methods. Here, he has observed that the Aitken-Steffensen type methods are obtained from the methods of interpolatory type by the selection of the nodes of interpolation as values of some iterative operators. Also, within this class of methods, he has determined optimal methods regarding the convergence orders or the efficiency index.

He has also obtained conditions in which the Aitken-Steffensen-type methods can lead to bilateral approximations of the solutions of equations.

The results obtained by prof. Ion Păvăloiu are appreciated both in our country and abroad. They have been considered and continued by mathematicians from our country, and from other countries as well.

Prof. Ion Păvăloiu, together with his collaborators from the "Tiberiu Popoviciu" Institute of Numerical Analysis, have succeeded to preserve the tradition of the researchers of the renowned School of Numerical Analysis and Approximation Theory created in Cluj-Napoca almost 50 years ago, by acad. Tiberiu Popoviciu.

Concerning his didactic activity, prof. Ion Păvăloiu has taught courses from the following disciplines: Mathematical Analysis, Linear Algebra, Geometry, Numerical Analysis and Approximation Theory, Differential Equations, Partial Derivative Equations, etc.

As a recognition of the merits and the prestige prof. Ion Păvăloiu enjoys, both in the country and abroad, we mention his appointment as a member

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in the editorial board of the journals: "Southwest Journal of Pure and Applied Mathematics", Cameron University (SUA); "Researches on Numerical Methods of Analysis and Optimization" (Univ. Chişinău); "Mathematica" (Romanian Academy); "Bull. Sci. Univ. Baia Mare" (Univ. Baia Mare).

He is also the editor-in-chief of the journal "Revue d'Analyse Numérique et de Théorie de l'Approximation", issued by the Romanian Academy.

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Received 15.11.1999

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