**Ştefan N. Berţi**

ARITMETICA INTERVALELOR

*(Arithmetics of Intervals)*

Editura Academiei R.S.R., Bucharest, 1977. 201 pp, 32 bibliographical references

The research concerning the development of the numerical analysis carried out these last decades has focused the attention on the computation with intervals, which has sprung out of the necessity of solving practical problems linked with the errors coming from the approximation of a number.

The book by Ştefan N. Berţi is divided into four chapters dealing with the extension of the arithmetical operations from the domain of real numbers to the domain of close intervals of real numbers axis.

The first chapter describes the way of representing the close real intervals, the position relationships between the intervals, some generalizations of the concepts of number, addition and subtraction of intervals.

The second chapter deals with the operations defined on binary relationships (addition and multiplication) and gives a method for solving boolean equations.

The third chapter dwells on the operations (on the intervals) which represent extension of the usual arithmetical operations resulting from the solution of equations or systems of equations in which the parameters and the unknowns are intervals (quasioperations).

The last chapter is devoted to the subdistributivity of multiplication as against addition.

The book contains in its final part an appendix in which the author discusses the solution of a system of boolean equations by means of an algorithm based on the method of successive eliminations initiated by Schröder and Birkhoff. This algorithm was programmed in the COBOL language.

The coming out of print of this interesting book will positively stimulate the research activity in a field still in its beginnings and will make possible to resume the author's ideas as to the application of the arithmetics of intervals to the probability theory and the prediction research.

**M. Stoica**