

*Dear Colleagues:*

In the present issue we publish selected papers presented at the International Conference on Interval and Computer-Algebraic Methods in Science and Engineering (Interval'94). Several other papers will be published in subsequent issues of the journal.

The International Conference Interval'94 was the second in the series of conferences Interval'XX that are devoted to a wide range of problems related to interval computations. The first meeting of the series, International Conference on Interval and Stochastic Methods in Science and Engineering (Interval'92) was held in 1992 in Kaliningrad near Moscow. Both conferences were not limited to the problems of interval mathematics only. In 1992, the results of interdisciplinary research combining numerical analysis and mathematical statistics was also presented, whereas in 1994 much attention was paid to the interrelations between interval computations and computer algebra, and to applications to automatic control. Several papers combined numerical methods and game theory.

The conferences were organized by the Editorial Board of our journal, by the Faculty of Applied Mathematics and Control Processes of St. Petersburg State University, and by the Institute of New Technologies, Moscow—St.Petersburg.

The program committee considers the fact that methods of numerical computations (in particular, interval computations) and methods of symbolic computations have been developed mainly independently from each other to be a pure historical artifact. Recently, the necessity for combining these methods has been realized, which resulted in several papers combining these approaches: Tools for analytic transformations have been implemented in systems of numerical computations, and vice versa, numerical methods have been used in computer algebra systems. In particular, specific problems of interval computations result in specific problems of analytical computations. The process of combining numerical and symbolic computations has begun but has not yet achieved the proper level. One of the main objectives of the Interval'94 conference was to activate research in this direction.

In accordance with the full name of the Conference, it was primarily focused on: theoretical aspects of interval mathematics and symbolic computations, software and hardware tools for implementing interval and computer-algebraic methods, SC languages, analytic transformations in interval algorithms, implementing symbolic numeric interface, control problems under uncertainty, robust control, new approaches in teaching numerical mathematics, problems of terminology and notation, and on various practical applications in science and engineering.

More than a hundred talks and posters were presented at the Conference, including seven plenary talks. The majority of presentations at the Conference were organized into nine sections. Overall, approximately 120 scientists from 18 countries took part in the meeting.

According to the decision of the Program Committee, the proceedings of the Conference are to be published in four periodicals: in our journal, in *Journal of Symbolic Computations*, in the *Game Theory* yearbook, and in the *Journal of Computer and System Sciences International*. Papers have been distributed among these journals according to their areas.

Participants of the Conference were pleased to ascertain that the Interval'XX conferences are becoming traditional and their international prestige is growing. A decision was made to hold the next conference in 1996 in Würzburg, Germany. In the present issue you will find detailed information about the Interval'96 conference.

V. Nesterov,  
Editor-in-Chief