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47

Methods of Algorithmic Language Implementation

Edited by A. Ershov and C. H. A. Koster

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Preface to the English Edition

On September 10-13, 1975 Novosibirsk, USSR, a Symposium on Methods for the Implementation of Algorithmic Languages was held, attended by 58 Soviet delegates and 11 from outside the Soviet Union, including 5 Western delegates, invited by Prof. A.P. Ershov, who organised the Symposium.

The Russian edition of the proceedings of this Symposium contained 33 papers; 11 have not been offered for inclusion in the present English publication. Among the papers left out are some that are more tutorial in nature: for others, the reason for their exclusion may be in the technical problems in translating the paper into English and typing it in a camera-ready form. Those readers with a sufficient command of the Russian language are therefore referred the the Russian text of the proceedings, which was printed at the Computing Centre of the Siberian Branch of the Academy of Sciences in Novosibirsk.

The English edition of the proceedings allows an assessment of the state of the art in compiler writing in the Eastern countries, and of the main areas of interest (especially by the choice of Western invitees). I will not try to make such an assessment, but will just mention some of the points that struck me:

- Great interest in translator writing systems.
- Relatively large concern for syntax analysis methods (three papers).
- Unique interest in multi-language translators (four papers, including three on aspects of the BETA System, a combined implementation of PASCAL, PL/1, ALGOL 68 and SIMULAR 67: three more papers on the BETA systems appearing only in the Russian edition).
- Relatively little interest in MOHLLs and SILs (one paper in the proceedings on the Jarmo language).
- Interest in very high level languages.
- Relatively large stress of the fundamental and the formal, rather than a pragmatic approach.
- An earnest desire to form part of the international computing community and good awareness of western professional literature. (witness, e.g., references of papers; in the other direction, the information, or maybe the interest, is much smaller).
- A strong tradition in algorithmic languages (preponderance of ALGOL, leading through the ALPHA language to the BETA system. The FORTRAN problem hardly arises).
- An exemplary faithfulness to language standards (full implementation of internationally accepted language, rather than egotistic subsets, ameliorations or home brew).

A list of the contributors at this symposium is given on page VII.

It is hoped that these proceedings will allow insight in the work being done on compilers in the Soviet Union, and a view of the persons doing it, leading to responsible communication and collaboration between eastern and western scientists.

C.H.A. Koster.

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