Workshop On Parallelism and Implementation Technology for (Constraint) Logic Programming Languages

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Introduction

One of the main areas of research in logic programming is the design and implementation of sequential and parallel (constraint) logic programming systems. This research goes broadly from the design and specification of novel implementation technology to its actual evaluation in real life situations. In the continuation of the series of workshops on *Implementations of Logic Programming Systems*, previously held in Budapest (1993), Ithaca (1994), Portland (1995), and Bonn (1996), the ILPS'97 workshop Parallelism and Implementation Technology for (Constraint) Logic Programming Languages provides a forum for ongoing research on the design and implementation of sequential and parallel logic programming systems.

Papers from both academia and industry were invited. Preference was given to the analysis and description of implemented systems (or currently under implementation) and their associated techniques, problems found in their development or design, and steps taken towards the solution of these problems.
Topics included, but were not limited to:

- standard and non–standard sequential implementation schemes (e.g., generalization/modification of WAM, translation to C, etc.);
- implementation of parallel logic programming systems;
- balance between compile–time effort and run–time machinery;
- techniques for the implementation of different declarative programming paradigms based on, or extending, logic programming (e.g., constraint logic programming, concurrent constraint languages, equational–logic languages);
- performance evaluation of sequential and parallel logic programming systems, both through benchmarking and using real world applications;
- other implementation–related issues, such as memory management, register allocation, use of global optimizations, etc.

The workshop was held in conjunction with the 1997 International Logic Programming Symposium, and took place in Port Jefferson, Long Island, NY, the 16 and 17 of October 1997.

We were very fortunate to have quite a few interesting communications, ranging though widely different subjects and giving a broad coverage on current research in sequential and parallel logic programming. In what regards sequential research in logic programming, the communications focused on constraint evaluation, support of logic programming extensions and abstract machines for performance evaluation. In what regards parallel implementations, the focus of interest was on thread-based systems, granularity control, garbage collection, new implementation techniques to combine and/or parallelism and performance evaluation.

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