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International Workshop on
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Preface

The 7th International Workshop on Computational Geometry (CG '91) was held at the University of Berne, Switzerland, March 21/22, 1991.

Previous workshops in this series took place at various universities in Germany and Switzerland:

1983	Zürich	J. Nievergelt
1984	Bern	W. Nef
1985	Karlsruhe	A. Schmitt and H. Müller
1988	Würzburg	H. Noltemeier
1989	Freiburg	T. Ottmann
1990	Siegen	K. Hinrichs

These workshops, or rather mixtures between conference and workshop, try to combine the internationality imperative for high-level research with a local, personal atmosphere. In Berne about sixty scientists participated, most of them from Germany and Switzerland, but also some from Austria, the Netherlands and the United States.

Computational geometry is not a precisely defined field. Often, it is understood as a nearly mathematical discipline, dealing mainly with complexity questions concerning geometrical problems and algorithms. But often too, and perhaps increasingly, questions of more practical relevance are central, such as applicability, numerical behavior and performance for all kinds of input size. CG '91 considered most aspects of computational geometry, and the following list is not exhaustive:

- Generalizations and applications of the Voronoi diagram
- Problems with rectangular objects
- Path determination
- Moving objects
- Visibility questions
- Layout problems
- Representation of spatial objects and spatial queries
- Problems in higher dimensions
- Implementation questions
- Relations to artificial intelligence

Of the 25 contributions presented at the workshop, 21 are contained in this volume, most of them with some modifications. The papers by J. Nievergelt et al. and H. Noltemeier are additional. The following colleagues helped us review the contributions: H. Alt, J. Blömer, M. Eichenberger, H. Hagen, K. Hinrichs, G. Jäger, D. Lasser, P. Mani, H. Müller, W. Nef, J. Nievergelt, B. Nilsson, T. Ottmann, A. Schmitt, S. Schuierer and O. Schwarzkopf.

We are indebted to all participants in the workshop, especially to the contributors to this volume, and to all referees.

Several members of the Institut für Informatik und angewandte Mathematik helped organize the workshop and prepare this volume, primarily Igor Metz. The Max & Elsa Beer-Brawand-Fonds of the University of Berne granted financial support. We thank all of them for their help in making CG '91 a success.

H. Noltemeier edited a predecessor of this volume, namely “Computational Geometry and its Applications”, Lecture Notes in Computer Science, Volume 333, which contains the proceedings of the 1988 workshop in Würzburg. Again, the editors thank Springer Verlag – and in particular Alfred Hofmann and Hans Wössner – as well as the series editors of the Lecture Notes in Computer Science for their valuable support.

Bern and Würzburg
September 1991

Hanspeter Bieri
Hartmut Noltemeier

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