Preface

Robotics is a highly interdisciplinary research topic, that requires integration of methods for mechanics, control engineering, signal processing, planning, graphics, human-computer interaction, real-time systems, applied mathematics, and software engineering to enable construction of fully operational systems. The diversity of topics needed to design, implement, and deploy such systems implies that it is almost impossible for individual teams to provide the needed critical mass for such endeavors. To facilitate interaction and progress on sensor-based intelligent robotics inter-disciplinary workshops are necessary through which in-depth discussion can be used for cross dissemination between different disciplines.

The Dagstuhl foundation has organized a number of workshops on Modeling and Integration of Sensor Based Intelligent Robot Systems. The Dagstuhl seminars take place over a full week in a beautiful setting in the Saarland in Germany. The setting provides an ideal environment for in-depth presentations and rich interaction between the participants.

This volume contains papers presented during the fourth workshop held October 15–20, 2000. All papers were submitted by workshop attendees, and were reviewed by at least one reviewer. We wish to thank all of the reviewers for their invaluable help in making this a high-quality selection of papers. We gratefully acknowledge the support of the Schloss Dagstuhl Foundation and the staff at Springer-Verlag. Without their support the production of this volume would not have been possible.

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G.D. Hager
H.I. Christensen
H. Bunke
R. Klein