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Preface

Purpose – The study of multiagent systems began in the field of distributed artificial intelligence (DAI) about 20 years ago. Today these systems are not simply a research topic, but are also beginning to become an important subject of academic teaching and industrial and commercial application. While there are several high-quality collections of articles on multiagent systems and DAI in print, most of these are proceedings of conferences and workshops. What is urgently needed is a book that offers a comprehensive and up-to-date introduction and is suitable as a textbook for the field. The purpose of this volume is to fulfill this need.

Features – The book offers a number of features that make it especially useful to readers:

- *Scope.* It is designed as an introductory text and a textbook that covers the whole range of multiagent systems. The book reflects the state of the art in this field, and treats basic themes (Part I) as well as several closely related themes (Part II) in detail.
- *Theory.* It gives a clear and careful presentation of the key concepts, methods, and algorithms that form the core of the field. Many illustrations and examples are provided.
- *Practice.* The emphasis is not only on theory, but also on practice. In particular, the book includes a number of thought-provoking exercises of varying degrees of difficulty at the end of each chapter that allow the reader to gain practical experience.
- *Glossary.* It contains an extensive glossary that provides the reader with compact explanations of relevant terminology used in the field.
- *Expertise.* Its chapters have been written by leading and outstanding authorities. This guarantees that the book is built on a very broad and diverse basis of knowledge and experience.

It is worth saying a little more about the last-mentioned feature. It is clear that a book prepared by just a few authors, as textbooks usually are, is likely to be more coherent than a book in which many authors are involved. But as the reader will see, the contributors to *Multiagent Systems* have invested considerable effort in ensuring the coherence of this book (and, in so doing, they practiced some of the basic issues—cooperation and negotiation—described in their chapters).