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Alexis Drogoul Milind Tambe  
Toshio Fukuda (Eds.)

# Collective Robotics

First International Workshop, CRW'98  
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Series Editors

Jaime G. Carbonell, Carnegie Mellon University, Pittsburgh, PA, USA  
Jörg Siekmann, University of Saarland, Saarbrücken, Germany

Volume Editors

Alexis Drogoul  
University of Paris 6  
4 Place Jussieu, F-75232 Paris Cedex 05, France  
E-mail: Alexis.Drogoul@lip6.fr

Milind Tambe  
University of Southern California  
Marina del Rey, CA 90292, USA  
E-mail: tambe@isi.edu

Toshio Fukuda  
Nagoya University  
Furo-cho, Chikusa-ku, Nagoya, 464-01, Japan  
E-mail: fukuda@mein.nagoya-u.ac.jp

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# Preface

The collective robotics workshop (CRW'98) is an attempt to foster Distributed AI (DAI) and intelligent robotics research by examining a wide range of technologies devoted to Collective Robotics. Special attention has been focused on RoboCup, the widely acclaimed international effort for robotic and simulation soccer. CRW'98 is a key component of "Agents' World", which brings together several workshops and conferences emphasizing agent-based and multi-agent systems in numerous and diverse environments.

The main purpose of CRW'98 is to emphasize the relationships between DAI, ALife, and Collective Robotics. Following a rigorous review process, thirteen papers, focusing on such relationships, were selected for presentation at the workshop. These papers represent a truly international participation at the workshop, as well as diversity in the range of topics covered, as indicated in the call for papers:

- \* multi-agent techniques of cooperation for collective robotics
- \* multi-agent approaches to robots' control
- \* learning techniques for collective robotics
- \* methodologies for designing teams of robots
- \* planning for collective robotics
- \* self-organization, biologically inspired organizations for robotics systems
- \* ALife related researches for collective robotics
- \* multi-agent simulation environments for collective robotics
- \* simulated collective robotics (including simulated soccer playing robots)
- \* applications of collective robotics in industrial, military, and public domains
- \* models of behavior for autonomous robots
- \* cooperation, interaction between humans and robots
- \* micro- and nano-robotics
- \* collective robotics research's contribution to DAI and ALife
- \* robotic soccer as a standard problem for DAI and Robotics
- \* presentation of actual robotic soccer teams

Many people were involved in the organization of CRW'98. We would like to thank all of them, particularly all the members of the program committee, whose time and expertise enabled the selection of this fine sampling of research in collective robotics.

June 1998

Alexis Drogoul  
Milind Tambe  
Toshio Fukuda

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