Preface

On the Positional Uncertainty of Multi-Robot Cooperative Localization  p. 3

A Multi-Agent System for Multi-Robot Mapping and Exploration  p. 11

Distributed Heterogeneous Sensing for Outdoor Multi-Robot Localization, Mapping, and Path Planning  p. 21

Mission-Relevant Collaborative Observation and Localization  p. 31

Deployment and Localization for Mobile Robot Teams  p. 41

Multiple Autonomous Robots for UXO Clearance, the Basic UXO Gathering System (BUGS) Project  p. 53

Programming and Controlling the Operations of a Team of Miniature Robots  p. 65

Autonomous Flying Vehicle Research at the University of Southern California  p. 73

Distributed Manipulation of Multiple Objects Using Ropes  p. 83

A Distributed Multi-Robot System for Cooperative Manipulation  p. 93

A Layered Architecture for Coordination of Mobile Robots  p. 103

Stability Analysis of Decentralized Cooperative Controls  p. 113

Snow White and the 700 Dwarves  p. 123

GOATS: Multi-platform Sonar Concept for Coastal Mine Countermeasures  p. 133

Design of the UMN Multi-Robot System  p. 141

Simulating Self-Organization With the Digital Hormone Model  p. 149

Architecting a Simulation and Development Environment for Multi-Robot Teams  p. 161

RobotSoccer: A Multi-Robot Challenge  p. 169

Human-Robot Interactions: Creating Synergistic Cyber Forces  p. 177

Communicating with Teams of Cooperative Robots  p. 185

Robot as Partner: Vehicle Teleoperation with Collaborative Control  p. 195

Adaptive Multi-Robot, Multi-Operator Work Systems  p. 203

User Interaction with Multi-Robot Systems  p. 213

Human-Robot Interactions in Robot-Assisted Urban Search and Rescue  p. 221

Usability Issues for Designing Multi-Robot Missions  p. 223

Perception-Based Navigation for Mobile Robots  p. 225

Author Index  p. 235

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.