

# Multirobot Systems

## Table of Contents

<b>Introduction</b> . . . . .	v
<b>Pathfinding in Multi-Robot Systems: Solution and Applications</b> . . . . .	1
<i>E. Freund and H. Hoyer (Proceedings of IEEE International Conference on Robotics and Automation, 1986, pp. 103-111)</i>	
<b>Collision-Free Motion Planning of Two Robots</b> . . . . .	10
<i>B.H. Lee and C.S.G. Lee (IEEE Transaction on Systems, Man, and Cybernetics, 1987, pp. 21-32)</i>	
<b>Detecting and Avoiding Collisions Between Two Robot Arms in a Common Workplace</b> . . . . .	22
<i>R.A. Basta, R. Mehrotra, and M.R. Varanasi (Robot Control Theory and Applications, 1988, pp. 185-192)</i>	
<b>Coordinating the Motions of Robot Arms in a Common Workplace</b> . . . . .	30
<i>J.W. Roach and M.N. Boaz (IEEE Journal of Robotics and Automation, October 1987, pp. 437-444)</i>	
<b>Multirobot Plan Generation in a Continuous Domain: Planning by Use of Plan Graph and Avoiding Collisions Among Robots</b> . . . . .	38
<i>T. Nagata, K. Honda, and Y. Teramoto (IEEE Journal of Robotics and Automation, February 1988, pp. 2-13)</i>	
<b>Traffic Control of Multiple Robot Vehicles</b> . . . . .	50
<i>D.D. Grossman (IEEE Journal of Robotics and Automation, October 1988, pp. 491-497)</i>	
<b>On the Design of Multi-Robot Systems</b> . . . . .	57
<i>E. Freund (Proceedings of IEEE International Conference on Robotics and Automation, 1984, pp. 477-490)</i>	
<b>Design of Dynamic Control of Two Cooperating Robot Arms: Closed Chain Formulation</b> . . . . .	71
<i>T.J. Tarn, A.K. Bajczyk, and X. Yun (Proceedings of IEEE International Conference on Robotics and Automation, 1987, pp. 7-13)</i>	

<b>Mechanics of Coordinative Manipulation by Multiple Robotic Mechanisms . . . . .</b>	<b>78</b>
<i>Y. Nakamura, N. Nagai, and T. Yoshikawa (Proceedings of IEEE International Conference on Robotics and Automation, 1987, pp. 991-998)</i>	
<b>A Symmetric Hybrid Position/Force Control Scheme for the Coordination of Two Robots . . . . .</b>	<b>86</b>
<i>M. Uchiyama and P. Dauchez (Proceedings of IEEE International Conference on Robotics and Automation, 1988, pp. 350-356)</i>	
<b>Optimal Load Distribution for Two Industrial Robots Handling a Single Object . . . . .</b>	<b>93</b>
<i>Y.F. Zheng and J.Y.S. Luh (Proceedings of IEEE International Conference on Robotics and Automation, 1988, pp. 344-349)</i>	
<b>Interprocess Communication for Distributed Robotics . . . . .</b>	<b>99</b>
<i>D. Gauthier et al. (IEEE Journal of Robotics and Automation, December 1987, pp. 493-504)</i>	
<b>Intertask Communications in an Integrated Multirobot System . . . . .</b>	<b>111</b>
<i>K.G. Shin and M.E. Epstein (IEEE Journal of Robotics and Automation, April 1987, pp. 90-100)</i>	
<b>About the Authors . . . . .</b>	<b>123</b>