



## Nonlinear Control of Wheeled Mobile Robots (Paperback)

By Warren E. Dixon, Darren M. Dawson, Erkan Zergeroglu

Springer London Ltd, United Kingdom, 2001. Paperback.  
 Condition: New. 2001 ed.. Language: English . Brand New Book  
 \*\*\*\*\* Print on Demand \*\*\*\*\*.This book examines the control  
 problem for wheeled mobile robots. Several novel control  
 strategies are developed and the stability of each controller is  
 examined utilizing Lyapunov techniques. The performance of  
 each controller is either illustrated through simulation results or  
 experimental results. The final chapter describes how the control  
 techniques developed for wheeled mobile robots can be applied  
 to solve other problems with similar governing differential  
 equations (e.g., twin rotor helicopters, surface vessels). Several  
 appendices are included to provide the reader with the  
 mathematical background utilized in the control development  
 and stability analysis. Two appendices are also included that  
 provide specific details with regard to the modifications that  
 were done to commercially available mobile robots (e.g., a K2A  
 manufactured by Cybermotion Inc. and a Pioneer II  
 manufactured by Activemedia) to experimentally demonstrate  
 the performance of the torque input controllers.



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