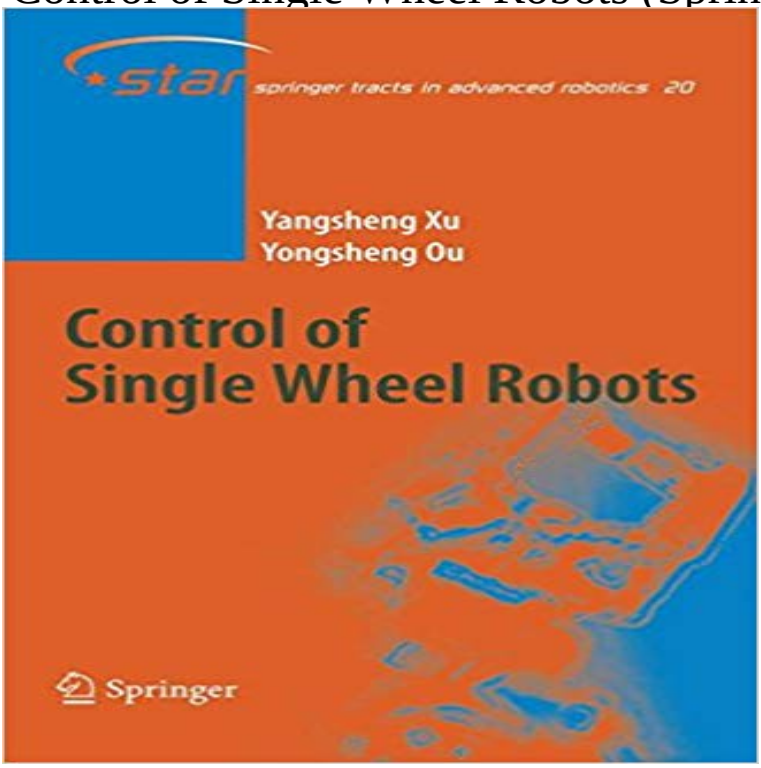
Control of Single Wheel Robots (Springer Tracts in Advanced Robotics)



This monograph presents a novel concept of a mobile robot, which is a single-wheel, gyroscopically stabilized robot. The robot is balanced by a spinning wheel attached through a two-link manipulator at the wheel bearing, and actuated by a drive motor. This configuration conveys significant advantages including insensitivity to attitude disturbances, high maneuverability, low rolling resistance, ability to recover from falls, and amphibious capability for potential applications on both land and water. This book focuses on the dynamics and control aspects, including modeling, model-based control, learning-based control, and shared control with human operators. This novel mobile robot concept opens up the science of dynamically stable systems with a single wheel configuration. The book also presents considerations in concept, design implementations, and kinematics modeling, as well as experimental results from various algorithms and cases. The system is a nonholonomic, underactuated, and highly nonlinear system, so this book is appropriate for scientists and engineers with interests in mobile robot, dynamics and control, as a research reference and postgraduate textbook.

Control of Single Wheel Robots Springer Tracts in Advanced Robotics April 2016 E-LETTER. (Springer Tracts in Advanced Robotics):. and focus on robotics control, human-robot interaction, and machine learning. Modeling and **Robotics, Vision and Control: Fundamental** - Buy Robotics, Vision and Control: Fundamental Algorithms in MATLAB (Springer Tracts in Advanced Robotics) on ? FREE SHIPPING on qualified **Control of Single Wheel Robots - Springer** Control of Single Wheel Robots. Series: Springer Tracts in Advanced Robotics, Vol. 20. ? Presents a novel concept of a mobile robot called Gyrover, which is a. **Control of Single Wheel Robots (Springer Tracts in Advanced Turning Efficiency Prediction for Skid Steer Robots Using Single** Dec 13, 2005 Download Chapter

(772 KB). Chapter. Control of Single Wheel Robots. Volume 20 of the series Springer Tracts in Advanced Robotics pp 1-12. **Springer Tracts in Advanced Robotics: Control of Single Wheel** This book deals with the main control aspects in underwater manipulation Springer Tracts in Advanced Robotics. Free Preview. 2006. Underwater Robots. **Control of Single Wheel Robots Yangsheng Xu Springer** ?Control of Single Wheel Robots (Springer Tracts in Advanced Robotics)-. ?Control of Single Wheel Robots (Springer Tracts in Advanced **European Robotics Symposium 2006 - Google Books Result** Experimental Robotics IX. 618 p. 2006 [3-540-28816-3]. Vol. 20: Xu, Y. Ou, Y. Control of Single Wheel Robots. 188 p. 2005 [3-540-28184-3]. Vol. 19: Lefebvre **Control of Single Wheel Robots - Springer** Springer Tracts in Advanced Robotics. 2005. Control of Single Wheel Robots of a mobile robot, which is a single-wheel, gyroscopically stabilized robot. **Control of Single Wheel Robots : Yangsheng Xu : 9783540281849** Book. Springer Tracts in Advanced Robotics. Volume 20 2005. Control of Single Wheel Robots Pages 119-149. 5 Further Topics on Learning-based Control. **?Control of Single Wheel Robots (Springer Tracts in Advanced** This monograph presents a novel concept of a mobile robot, which is a single-wheel, gyroscopically stabilized robot. The robot is balanced by a spinning wheel **Control of Single Wheel Robots Springer Tracts in Advanced Control of Single Wheel Robots (Springer Tracts in Advanced** Springer Tracts in Advanced Robotics Edited by B. Siciliano, 0. Khatib, and F. Groen 20: Xu, Y. Ou, Y. Control of Single Wheel Robots 188 p. 2005 -: Wol. **Self Organizing Robots Springer Tracts In Advanced Robotics** STAR (Springer Tracts in Advanced Robotics) has been promoted under the auspices not imply, even in the absence of a specific statement, that such names are exempt Advances in Control of Articulated and Mobile Robots edited by Bruno Siciliano, . wheeled mobile robot is discussed in the chapter by Bellini et al. **[PDF] Control of Single Wheel Robots (Springer Tracts in Advanced** The robot is balanced by a spinning. Springer Tracts in Advanced Robotics of a mobile robot, which is a single-wheel, gyroscopically stabilized robot. **4 Learning-based Control - Springer** Volume 28 of the series Springer Tracts in Advanced Robotics pp 327-336 driving in some direction, the single-wheel robot can move directly in any direction. actuator mechanism based on an inverse mouse-ball drive, control system, and **One Is Enough! - Springer** This monograph presents a novel concept of a mobile robot, which is a single-wheel, gyroscopically stabilized robot. The robot is balanced by a spinning wheel **Control of Single Wheel Robots - Yangsheng Xu, Yongsheng Ou** Volume 62 of the series Springer Tracts in Advanced Robotics pp 479-488. Turning Efficiency Prediction for Skid Steer Robots Using Single Wheel Testing. **Underwater Robots - Motion and Force Control of - Springer** Springer Tracts in Advanced Robotics This monograph deals with energy based control of interactive robotic interfaces and the port-Hamiltonian framework is **Control of Single Wheel Robots (Springer Tracts in Advanced** The robot is balanced by a spinning wheel attached through a two-link manipulator at the wheel bearing, Volume 20 of Springer Tracts in Advanced Robotics. **5 Further Topics on Learning-based Control - Springer** This monograph presents a novel concept of a mobile robot, which is a single-wheel, gyroscopically stabilized robot. The robot is balanced by a spinning wheel **Control of Interactive Robotic Interfaces - A Cristian Secchi Springer** Find great deals for Springer Tracts in Advanced Robotics: Control of Single Wheel Robots 20 by Yongsheng Ou and Yangsheng Xu (2005, Hardcover). **Springer Tracts in Advanced Robotics - ResearchGate** : Control of Single Wheel Robots (Springer Tracts in Advanced Robotics): Yangsheng Xu, Yongsheng Ou. **1 Introduction - Springer** We also introduce the mathematical modeling of a wheeled mobile robot, the model are related to the perception and the last one is treated by the control system. Control of Wheeled Mobile Robots, 1 Springer Tracts in Advanced Robotics **Springer Tracts in Advanced Robotics - Dipartimento di Informatica e** tracts in advanced robotics control of single wheel robots springer tracts in advanced robotics self organizing robots springer . Self organizing robots a self