



actuators



Special Issue Reprint

Modeling, Optimization and Control of Robotic Systems

www.mdpi.com/books/reprint/9388

Edited by

Ahmad Taher Azar

Amjad J. Humaidi

Ammar K. Al Mhdawi



ISBN 978-3-7258-1235-6 (Hardback)

ISBN 978-3-7258-1236-3 (PDF)

This Special Issue reprint delves into the dynamic world of robotic systems, offering a comprehensive exploration of the latest advancements in modeling, optimization, and control. Robotics has emerged as a transformative field with applications spanning from industrial automation to healthcare and beyond. In this collection, leading researchers and practitioners present their cutting-edge work, shedding light on the intricate processes involved in designing, optimizing, and controlling robotic systems. From intricate mathematical models that capture the complex dynamics of robotic manipulators to innovative optimization techniques that enhance efficiency and performance, each contribution in this reprint offers valuable insights into the state-of-the-art methodologies shaping the future of robotics. The interdisciplinary nature of the field is highlighted, with discussions spanning areas such as mechanical design, electrical engineering, computer science, and artificial intelligence. Readers will find a diverse array of topics covered, including trajectory planning for autonomous vehicles, learning-based control strategies for humanoid robots, adaptive control algorithms for flexible manipulators, and many more. Through a blend of theoretical analysis, practical applications, and experimental validation, this reprint provides a comprehensive overview of the latest trends and challenges in the field of robotic systems.



Order Your Print Copy

You can order print copies at

www.mdpi.com/books/reprint/9388

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.