biomimetics

Special Issue Reprint

Bionic Technology—Robotic Exoskeletons and Prostheses: 2nd Edition

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Bionic technology and wearable robotics are transforming the landscape of assistive devices, offering new possibilities for rehabilitation and mobility enhancement. This Reprint brings together pioneering research on robotic exoskeletons and prostheses, showcasing advancements in design, control, and user interaction. With contributions from experts in biomechanics, neuroscience, and engineering, this collection explores innovative solutions that bridge the gap between human intention and robotic assistance. Topics included in this Reprint are as follows: intuitive control mechanisms, multimodal user interactions, and the optimization of assistive devices for real-world applications.

By addressing critical challenges such as weight reduction, power efficiency, and seamless cognitive integration, this Reprint highlights the latest breakthroughs in biomechatronics and rehabilitation robotics. Researchers, engineers, and healthcare professionals will find valuable insights into the development of cutting-edge assistive technologies that enhance mobility and quality of life for individuals with disabilities.

This comprehensive compilation serves as an essential resource for those dedicated to advancing the field of bionic technology and shaping the future of wearable robotics.

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