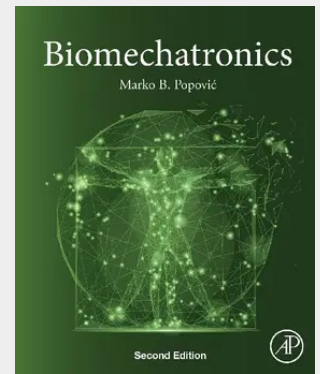


Biomechatronics

Biomechatronics is rapidly becoming one of the most influential and innovative research directions defining the 21st century. The second edition Biomechatronics provides a complete and up-to-date account of this advanced subject at the university textbook level. This new edition introduces two new chapters – Animals Biomechatronics and Plants Biomechatronics – highlighting the importance of the rapidly growing world population and associated challenges with food production. Each chapter is co-authored by top experts led by Professor Marko B. Popovic, researcher and educator at the forefront of advancements in this fascinating field. Starting with an introduction to the historical background of Biomechatronics, this book covers recent breakthroughs in artificial organs and tissues, prosthetic limbs, neural interfaces, orthotic systems, wearable systems for physical augmentation, physical therapy and rehabilitation, robotic surgery, natural and synthetic actuators, sensors, and control systems. A number of practice prompts and solutions are provided at the end of the book. The second edition of Biomechatronics is a result of dedicated work of a team of more than 30 contributors from all across the globe including top researchers and educators in the United States (Popovic, Lamkin-Kennard, Herr, Sinyukov, Troy, Goodworth, Johnson, Kaipa, Onal, Bowers, Djuric, Fischer, Ji, Jovanovic, Luo, Padir, Tetreault), Japan (Tashiro, Iraminda, Ohta, Terasawa), Sweden (Boyratz), Turkey (Arslan, Karabulut, Ortes), Germany (Beckerle and Wiliwacher), New Zealand (Liarokapis), Switzerland (Dobrev), and Serbia (Lazarevic).

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