# Advances In Robot Kinematics



This book presents the most recent research advances in the theory, design, control and application of robotic systems, which are intended for a variety of purposes such as manipulation, manufacturing, automation, surgery, locomotion and biomechanics. The issues addressed are fundamentally kinematic in nature, including synthesis, calibration, redundancy, force control, dexterity, inverse and forward kinematics, kinematic singularities, as well as over-constrained systems. Methods used include line geometry, quaternion algebra, screw algebra, and linear algebra. These methods are applied to both parallel and serial multi-degree-of-freedom systems. The book includes about 50 reviewed (by two independent reviewers) papers of researchers specialising in robot kinematics. The contributors are the most recognised scientists in this area. The chapters are as follows: Methods in Kinematics, Properties of Mechanisms, Humanoids and Biomedical Applications, Workspace and Isotropy, Analysis of Mechanisms, Design of Mechanisms, Motion Synthesis and Mobility. EAN/ISBN : 9781402086007 Publisher(s): Springer Netherlands Format: ePub/PDF Author(s): Lenarcic, Jadran - Wenger, Philippe

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