

Modeling and Analysis of Six-Legged Robots

By Dilip Kumar Pratihar

LAP Lambert Academic Publishing. Paperback. Condition: New. 204 pages. Dimensions: 8.7in. x 5.9in. x 0.5in. Over the last four decades, the legged robots had been widely investigated due to their better mobility and terrain adaptability characteristics, while moving on natural terrains. Kinematics, dynamics, stability and energy consumption analysis of different types of gaits are the key elements of study in the field of multi-legged robots locomotion. In the present book, a systematic analytical model has been developed to study the kinematics and dynamics along with energy efficiency and stability of a realistic six-legged robot, negotiating straight-forward, crab and turning motions. Moreover, soft computing-based models, namely back-propagation algorithm-tuned multiple adaptive neuro-fuzzy inference systems; genetic algorithm-tuned multiple adaptive neuro-fuzzy inference systems; genetic algorithm-tuned coactive neuro-fuzzy inference systems and genetic algorithm-tuned back-propagation neural networks, have been developed to predict specific energy consumption and normalized energy stability margin in straight, crab and turning motions of the said robot. This book could be useful to researchers and technologists working in the field of mobile robots. This item ships from multiple locations. Your book may arrive from Roseburg,OR, La Vergne,TN. Paperback.





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