



## Comprehensive study on modelling and control of flexible manipulators

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Condition: New. Publisher/Verlag: Scholar&#x27;s Press | This book contains applying advanced studies for the dynamic modelling and the control of flexible robotic manipulators recently employed in many fields such as space exploitation, medical intervention, and industrial applications. Modelling strategy is based on finite element method, Hamilton&#x27;s principle and Lagrange&#x27;s equations to derive a dynamic model with some specific characteristics. This model is then used to develop control approaches in open-loop such as input shaping and closed-loop architectures based on PID control and fuzzy control structures such as direct, hybrid, adaptive and supervisory configurations, having the essential object to reach desired positions without end-point vibration. A flexible single-link manipulator is built as an experimental test bed to valid control system. | Format: Paperback | Language/Sprache: english | 124 pp.

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