ENTROPY BASED DECISION MAKING APPROACH FOR EVALUATION AND SELECTION OF ROBOTS

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Abstract

The number of robot users in recent times has increased manifold owing to increased complexity of operations, pressure to meet the deadlines, rapid advancement of technology and stringent quality parameters. The robot users are frequently facing the problem of selecting the most suitable robot amongst several candidate robots available for a particular application The problem seems to intensify due to the factors such as increasing investments, many robot suppliers, new features and number of attributes to be considered in selection, Many attributes are such that they conflict each other. The attributes, which need immediate attention, are manipulability, singularity computational complexity of equations governing robots, accuracy and repeatability. The desirable features are computational simplicity of motion of robotic manipulator. The type of joints and their respective orientation and arrangements need to be considered. Several methods of selection of robots have been suggested in the past ten years or so. The paper proposes the use of information theory for selection of robot.

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