Control of manipulators with degrees of freedom over six

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An experience in development of the algorithms to control a moving object with redundant degrees of freedom by an example of control system for a robotic arm is proposed. A problem of coordinated motion control of several multiframes robotic arms by a human operator is considered. The concerned problem takes important place in designing medical robotic arms for minimally invasive surgery i.e. surgical manipulations with minimal patient injury.

Keywords: distributed control system, robust systems, robotic arm, inverse cinematic task for speed, coordinated motion, redundancy resolution.

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