Recursive algorithm of closed forms dynamic equations coefficients calculation for space manipulator

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Bauman Moscow State Technical University, Moscow, 105005, Russia

A new recursive algorithm based on matrix form for Kane equations for calculation of closed form dynamic equations for simple kinematical chain is configured. It has computational efficiency O(n3) and is used for motion simulation for space manipulators with rotation joints. This algorithm allows to consider links flexibility and usage of parallel calculations.

Keywords: *Space manipulator; dynamic equations; recursive algorithm; computational efficiency; elastic deformation.*

Yaskevich N.A. (b. 1985) graduated from Bauman Moscow State Technical University in 2008. Post-graduate of the Special Robotics and Mechatronics Department of Bauman Moscow State Technical University. e-mail: nikita.yaskevich@gmail.com