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NONLINEAR DYNAMICS: EQUATIONS APPROXIMATION OF THE HELICOPTER ROTOR WITH ERROR ESTIMATE

The paper presents modeling of the main rotor motion. It is shown that the initial approximation proved to be elusive for its implementation in analytical methods. We compared simulation results with the approximations. These findings show that error of the obtained approximations has a second order of smallness with respect to the simulated quantities.

Keywords: helicopter, main rotor, blade, flapping motion, approximation.

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