

MATHEMATICAL MODEL OF COMPLEX SPATIAL DEFORMATION OF ROTOR BLADES DURING HELICOPTER ARBITRARY MOTION

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The paper presents the type of equations determining the dynamics of rotor blade complex spatial deformation subject to helicopter arbitrary motion. The equations are deduced without assuming that elastic displacements are small, and are based on dividing the motion into transportation motion and relative motion. As a result, the equations derived are quite compact and easily programmable in the object-oriented environment.

Mathematical modelling, helicopter, rotor, flexible blade dynamics.

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