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Computational implementation of the rigid finite element method in the statics and dynamics analysis of forest cranes

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Highlights

- A general mathematical model of a forest crane for statics and dynamics is proposed.
- The rigid finite element method is used to discretize the flexible links.
- Joint coordinates, transformation matrices and the Lagrange equations are used.
- The model proposed is used to analyze a selected forest crane.
- The flexibility of the link has significant influence on behavior of the crane.

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