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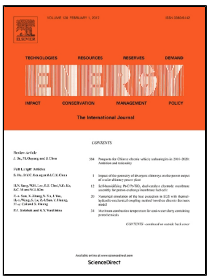

Model predictive control with finite control set for variable-speed wind turbines

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Highlights

- A novel MPC method using finite control set is proposed for controlling WTs.
- We provide a detailed description of implementing the proposed method.
- The control set that minimizes a predefined quadratic cost function is selected.
- Both torque and pitch controllers are developed under the proposed method.
- Control method has been verified under different scenarios by simulation tests.

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