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# Multi-physics analysis of electromagnetic forming process using an edge-based smoothed finite element method

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## Highlights

- A edge-based smoothed finite element method for electromagnetic forming analysis is proposed.
- The Smoothed Galerkin Weak forms are presented in both electromagnetic and mechanical field.
- Transient eddy current and nonlinear dynamic analysis are implemented by present ES-FEM.
- The present method is feasible in solving electromagnetic forming problems.

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