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A novel Multi-grid assisted reanalysis for re-meshed finite element models

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Highlights

- (1) The MG method is introduced in reanalysis, and a MG assisted reanalysis method (MGR) is proposed.
- (2) Structural modifications are classified into two categories: completely interpolate-able modifications and incompletely interpolate-able modifications.
- (3) In the case of incompletely interpolate-able modifications, a new strategy is suggested to deal with the added degrees of freedom.
- (4) A modified mesh without any consistency with the initial mesh can be well handled by the MGR method, even it is re-meshed after modification.

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