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Reduced order modeling for nonlinear structural analysis using Gaussian process regression

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Highlights

- A non-intrusive reduced basis method for parametrized nonlinear structural problems.
- A regression-based approach is employed to calculate the reduced-order solutions.
- The Gaussian process regression model is utilized.
- An active data selection algorithm is introduced for optimizing the training samples.
- A fast and reliable scheme for multi-query and real-time nonlinear structural analysis.

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