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Direct simulation of rigid particles in a viscoelastic fluid

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## Highlights

- Interactions between viscoelastic fluid and rigid disks or ellipsoids are addressed.
- A method for the direct simulation of viscoelastic suspensions is proposed.
- The numerical method is built upon a fictitious domain approach.
- The fluid-structure issue is solved with a splitting scheme and penalty methods.
- Numerical results are presented for both dilute and dense regimes.

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