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Cost reduction of particle simulations by an ellipsoidal particle model

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Highlights (for review)

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- An ellipsoidal particle model was developed to reduce the number of particles and the computational costs of the moving particle semi-implicit (MPS) method
- The model for the MPS method's Laplacian operator was extended for use with ellipsoidal particles.
- The developed method's ability has been confirmed in dam breaking and evolution of an elliptical drop.

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