

## **Numerical simulation of flows with sharp interfaces by the Volume-Of-Fluid method**

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We discuss recent developments in the Volume-Of-Fluid (VOF) methods, such as the height function method for the approximation of the geometry of the interface, the balanced-force surface tension method, and the methods that conserve mass and momentum at machine accuracy. Applications at high Reynolds number, such as high speed liquid-gas flows, and low Reynolds and low Capillary numbers, are discussed.

Problems of engineering and physical interest, such as jet atomisation or flow in porous media are investigated with these methods as will be shown.