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**Enhanced-discretization interface-capturing technique (EDICT) for computation of unsteady flows with interfaces.** (English) [Zbl 0961.76046](#)

Comput. Methods Appl. Mech. Eng. 155, No. 3-4, 235-248 (1998).

From the summary: We present the enhanced-discretization interface-capturing technique (EDICT) for computation of unsteady flow problems with interfaces, such as two-fluid and free-surface flows. In EDICT, we solve, over a non-moving mesh, the Navier-Stokes equations together with an advection equation governing the evolution of an interface function with two distinct values identifying the two fluids. The spatial discretization of these equations is performed by using stabilized finite element formulations which possess good stability and accuracy properties.

**MSC:**

[76M10](#) Finite element methods applied to problems in fluid mechanics

[76D27](#) Other free boundary flows; Hele-Shaw flows

[76D05](#) Navier-Stokes equations for incompressible viscous fluids

[76D50](#) Stratification effects in viscous fluids

[76Y05](#) Quantum hydrodynamics and relativistic hydrodynamics

Cited in **1** Review  
Cited in **55** Documents

**Keywords:**

parallel computation; water-air interface; enhanced-discretization interface-capturing technique; non-moving mesh; Navier-Stokes equations; advection equation; interface function; stabilized finite element formulation

**Full Text:** [DOI](#)

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