

MODELING TWO-FLUID INTERFACES FOR 3D FLOW PROBLEMS

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Abstract. A numerical model developed within the context of a finite element fixed mesh method is used to simulate two-fluid interface flow problems. The interface front position between two incompressible fluids is updated with a Lagrangian scheme that has been long recognized to provide a sharp representation of the interface. However, the main drawback of these approaches is the progressive distortion in the distribution of the markers used to identify the material front. In this work, we present a 3D alternative remeshing algorithm to avoid such inconvenience.