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Cell-centered Lagrangian schemes

The computation of compressible flows for plasma physics in any dimension requires reliable, robust and accurate schemes. We shall describe some recent progresses that have been made in the case of cell-centered schemes.

These methods are by construction compatible with ALE (Arbitrary Lagrange Euler) techniques. It makes them a good alternative for the computation of multi-materials problems which are part of many industrial flows. Most of these results have been obtained with colleagues at the CEA.