

MODELING, APPROXIMATION, AND ANALYSIS OF PARTIAL
DIFFERENTIAL EQUATIONS INVOLVING SINGULAR SOURCE
TERMS (MS - ID 39)

**Advances on fictitious domain approach for
fluid-structure interaction problems**

Daniele Boffi

King Abdullah University of Science and Technology

`daniele.boffi@kaust.edu.sa`

We review a numerical scheme based on a fictitious domain approach for the modeling and approximation of the interaction of fluids and solids. A crucial aspect consists in the choice of the finite element spaces that need to satisfy a suitable compatibility condition. In this talk we discuss the theoretical aspects and we highlight some implementation details.