

# **A Fully Implicit Computational Strategy for Fluid-Solid Interaction**

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The computer simulation of fluid-structure interaction is becoming increasingly important for both research and industrial purposes. Today, applications are no longer restricted to mechanical and civil engineering, but involve biomedical and chemical engineering as well as technology for alternative energy. Computational fluid-structure interaction FSI requires the availability of reliable fluid and solid subsolvers and of computers which are sufficiently powerful to combine the two. Thus, in the late 90ies, solution algorithms for FSI emerged as an active area of research, which they have remained ever since. The objective of this presentation is to provide a brief overview of methodologies and to relate details of the computational strategy adopted by the author. This strategy is based on a partitioned Newton-Raphson procedure and employs consistent linearisation. A number of numerical examples will be presented.