Introduction

The Interpolation Function

Given the material position X we want to obtian the velocity of fluid at that point. [1] This process is directly interpreted by

$$\mathbf{u}(\mathbf{X}(r,s,t),t) = \int \mathbf{u}(\mathbf{x},t)\delta(\mathbf{x} - \mathbf{X}(r,s,t))d\mathbf{x} \qquad (1.1)$$

[1] *Note that X usually doesn't lies on the grid point.*