Contents

extends ./subSubTemplate.jade

block subSubTitle h1

0.1 Curl

The curl of a vector field is defined as:

$curl\mathbf{F} = \nabla \times \mathbf{F}$

Where: $\nabla = (\sum_{i=1}^{n} e_i \frac{\delta}{\delta x_i})$

And: $\mathbf{x} \times \mathbf{y} = |||\mathbf{x}||||\mathbf{y}|| \sin(\theta)\mathbf{n}$

The curl of a vector field is another vector field.

The curl measures the rotation about a given point. For example if a vector field is the gradient of a height map, the curl is 0 at all points, however for a rotating body of water the curl reflects the rotation at a given point.

0.1.1 Divergence of the curl

If we have a vector field $\mathbf{F}$, the divergence of its curl is 0:

$\nabla.(\nabla \times \mathbf{F}) = 0$