

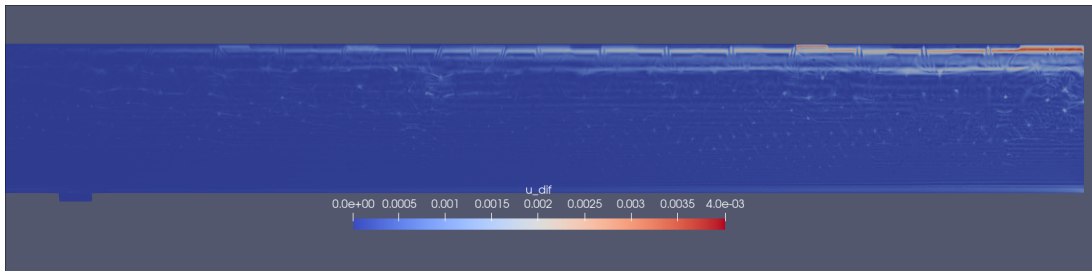
IMPERIAL

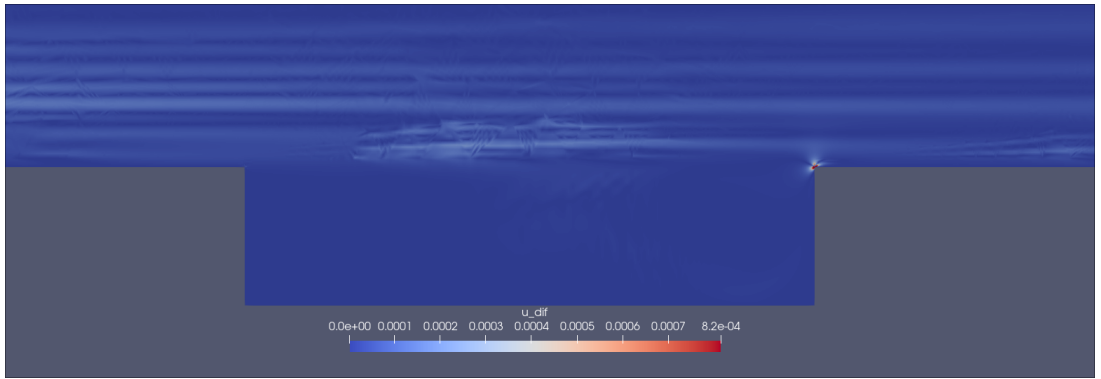
Roughnesses in the domain

Víctor Ballester
March 26, 2025

SVV vs no SVV (in SFD)

- $w = 16.5\delta^*$
- Plotted we show $|u_{\text{SVV}} - u_{\text{noSVV}}|$.





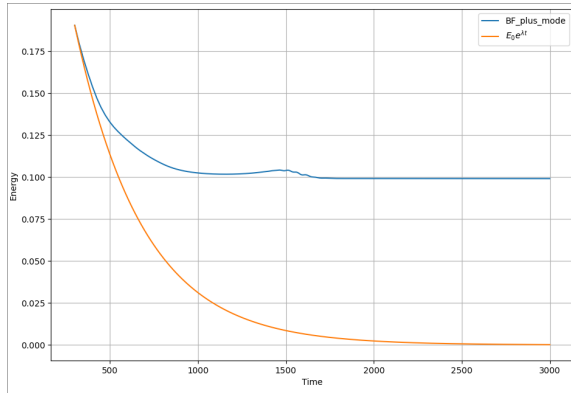
About SFD parameters

- I changed the filter width Δ from 2 to 4, but it is taken so long to converge.

$$\dot{\mathbf{q}} = \mathbf{f}(\mathbf{q}) - \chi(\mathbf{q} - \bar{\mathbf{q}})$$

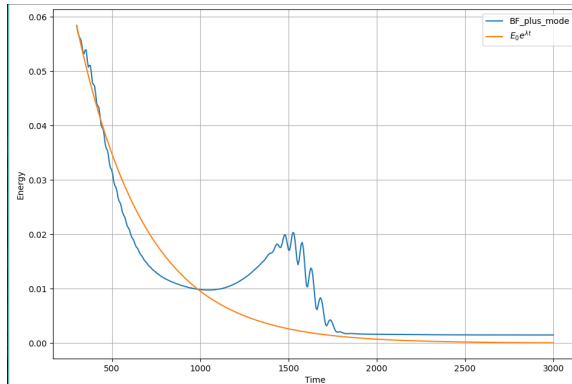
$$\dot{\bar{\mathbf{q}}} = \frac{\mathbf{q} - \bar{\mathbf{q}}}{\Delta}$$

Baseflow + eigenmode



L2 norm of the u-component (nonlinear vs linear theory).

Baseflow + eigenmode



L2 norm of the v-component (nonlinear vs linear theory).