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A localized relaxation scheme for the computation of steady flows
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The computation of steady flow solutions in unstable settings is often the first step in studying the instability features. For this purpose, we present a method inspired by the Selective Frequency Damping of Akervik *et al.* (2006). A low-pass temporal filter is applied at a small number of locations in the flow, and these values are used to relax the nonlinear system. If the relaxation points are properly selected, such a scheme may stabilize the dynamics. In this case, the steady flow can be computed using a regular time marching procedure with almost the same computational cost and memory requirements as a regular simulation. The relation between the optimal location of the relaxation points and the wavemaker region will be discussed.

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