

**On spectral stability or instability of a steady flow past a fixed or rotating obstacle**

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Abstract: We consider a steady flow  $U$  of a viscous incompressible fluid past a body. The body is supposed to be fixed or to rotate with a constant angular velocity. We give a survey of known results on stability or instability of flow  $U$ , based on the spectrum and other subtler properties of an associated linear operator  $L$ . We also include main ideas of proofs and comments on related open problems.