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Coupled-flutter of two slender flags MOUGEL JÉRÔME, MICHELIN SÉBASTIEN, LadHyX, Ecole Polytechnique, DOARÉ OLIVIER, UME, ENSTA — A flag in axial flow is subject to flutter instability that leads to large-amplitude flapping of the structure. When two flags are placed parallel to each other, they interact hydrodynamically leading to coupled dynamics of the system. The understanding of the possible dynamical regimes is crucial in the recent context of energy harvesting using piezoelectric fags. In this study, we consider coupled-flutter of two slender flags. Based on an extension of the famous model by Lighthill commonly called Large Amplitude Elongated Body Theory to the two-flags case, both linear and large-amplitude dynamics of such a coupled system will be presented.

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