

Flutter and friction

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The first experimental evidence that Coulomb friction can induce flutter and divergence instability was given by Bigoni and Noselli [1], working on a special version of the Ziegler pendulum [2]. Experiments have fully confirmed the theoretical expectations and the instabilities have been proven to be robust to several perturbations in the experimental set-up [3].

Bigoni and Noselli were unable to induce flutter more complicated systems than the Ziegler pendulum, such as for instance the Beck's column [4]. The Bigoni and Noselli's apparatus has therefore been completely redesigned in order to provide a more flexible testing apparatus. This new design has allowed us to experimentally investigate the behavior of the Beck column. Results on this and related problems will be presented in detail.

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References

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