

Abstract Submitted  
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**Nonlinear damping of sloshing motion caused by a piece-wise linear contact line model** FRANCOIS GALLAIRE, ALESSANDRO BONGARZONE, LFMI-IGM-Ecole Polytechnique Federale de Lausanne — We consider the sloshing motion in an idealized, two-dimensional, container. We show that the presence of a broken-line piece-wise linear contact line model relating the contact line velocity to the contact angle can be accounted for by a projection method on the eigenmode basis pertaining to each linear piece. We demonstrate that each slope discontinuity results in a loss of total energy and eventually contributes to the progressive nonlinear damping of the sloshing motion.

Francois Gallaire  
Ecole Polytechnique Federale de Lausanne

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