

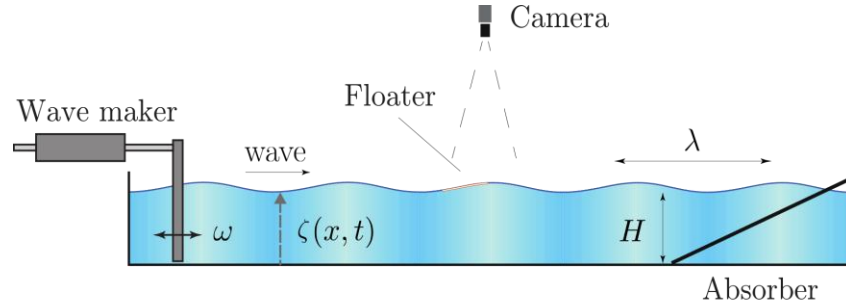
Preferential orientation of floaters in waves : hydroelastic and capillary effects

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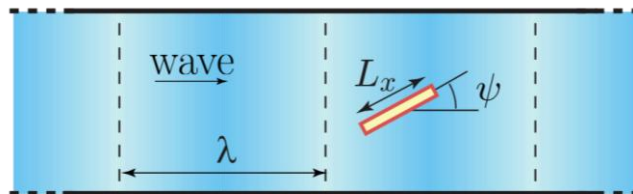
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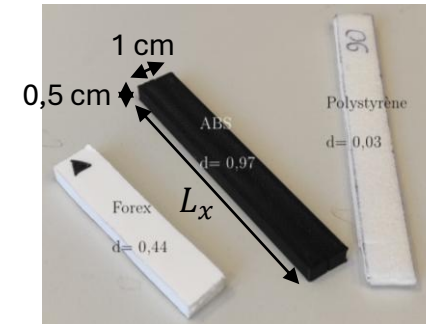
(a) Sideview



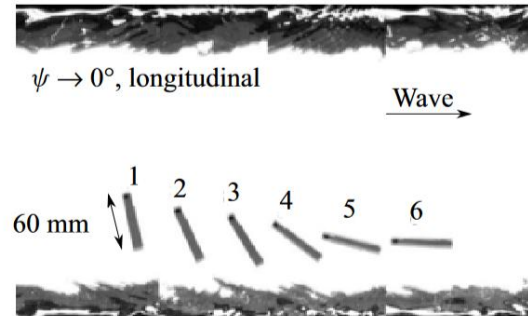
(b) Topview



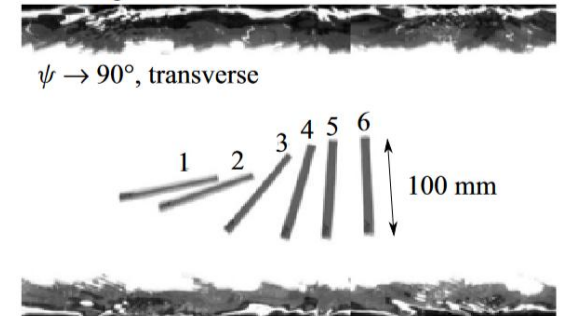
(c) Rigid Floaters



Short floater



Long floater



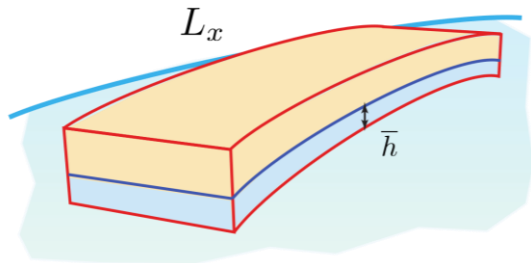
Chronophotographies

Small rigid floaters show two preferential orientations in propagating water waves

Preferential orientation of floaters in waves : hydroelastic and capillary effects

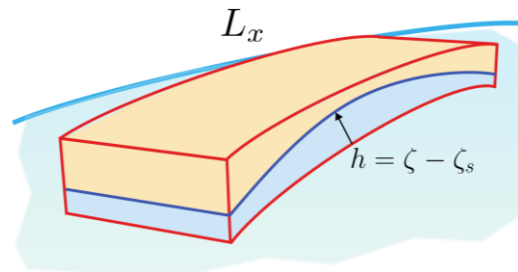
How does a deformable floater orient ?

Flexible floater



Infinitely flexible :
adapts to the interface
shape

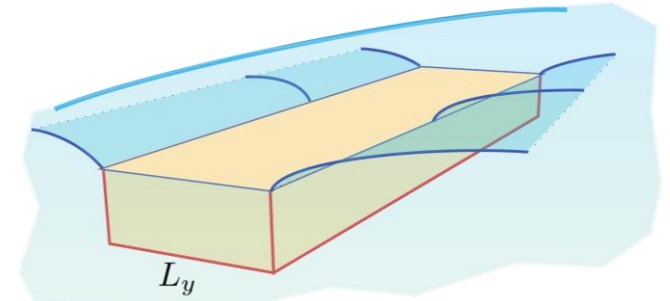
Elastic floater



Finite bending rigidity



How do capillary effects modify
the preferential orientation ?



Interaction

Wave curvature \leftrightarrow meniscii

\rightarrow capillary forces and torques

