



ESPCI  
Laboratoire PMMH  
10 rue Vauquelin, 75231 Paris Cedex 05



## Séminaire PMMH

*Bureau d'Études, Bâtiment L, 2<sup>ème</sup> étage*

*Vendredi 4 décembre 2015, 11h00-12h00*

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#### **Waves and wakes at different scales**

Simply by looking at a duck swimming in a pond or a cargo ship moving on a calm sea, one can clearly tell that there is something common about their wake. Indeed, they both display a familiar V-shaped pattern which only differ from one another by their dimensions. In 1887, Lord Kelvin was able to provide a theory to explain the ship-wave pattern. His most popular achievement was to prove that the wake created by a disturbance moving at a uniform pace is always delimited by a straight wedge with half-angle  $19.5$  degrees, independent of the velocity of the disturbance. Recently, Kelvin's century old and well accepted theory was challenged, by that drawing the attention of the fluid dynamics community...