

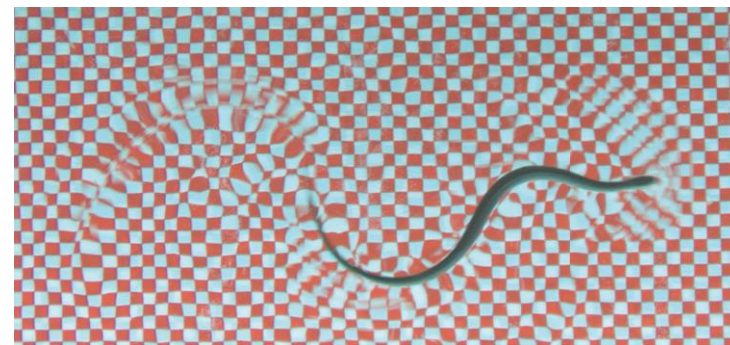
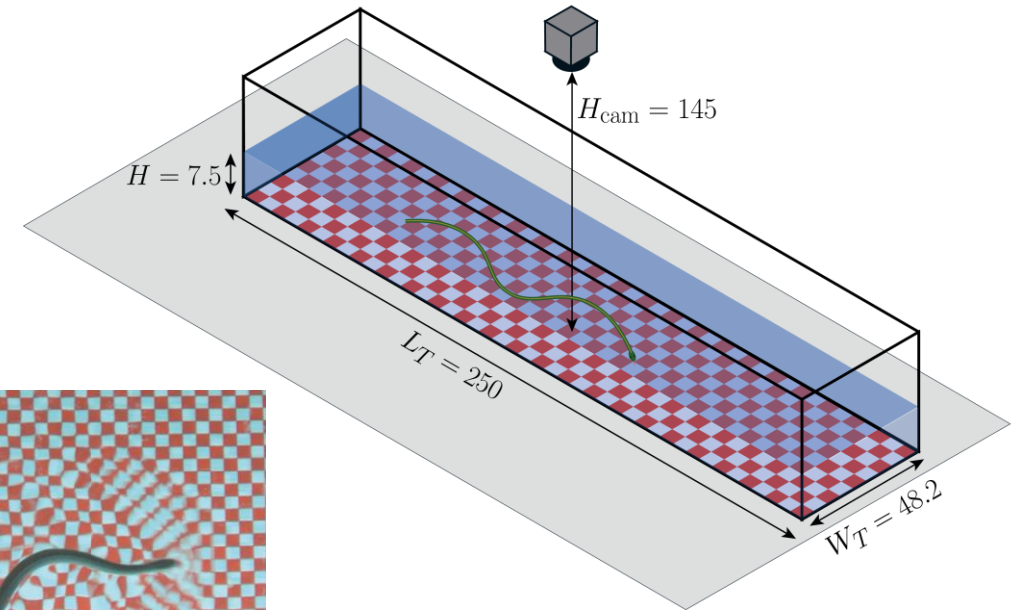
# Unveiling the wake of a surface swimming snake

V. Stin, G. Polly, A. Mérigaud, X. Bonnet, A. Herrel and R. Godoy-Diana

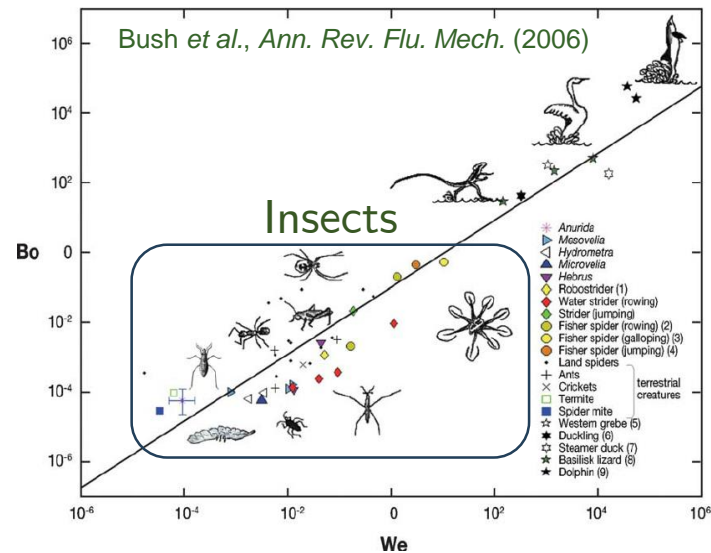


## Synthetic Schlieren imaging experimental setup

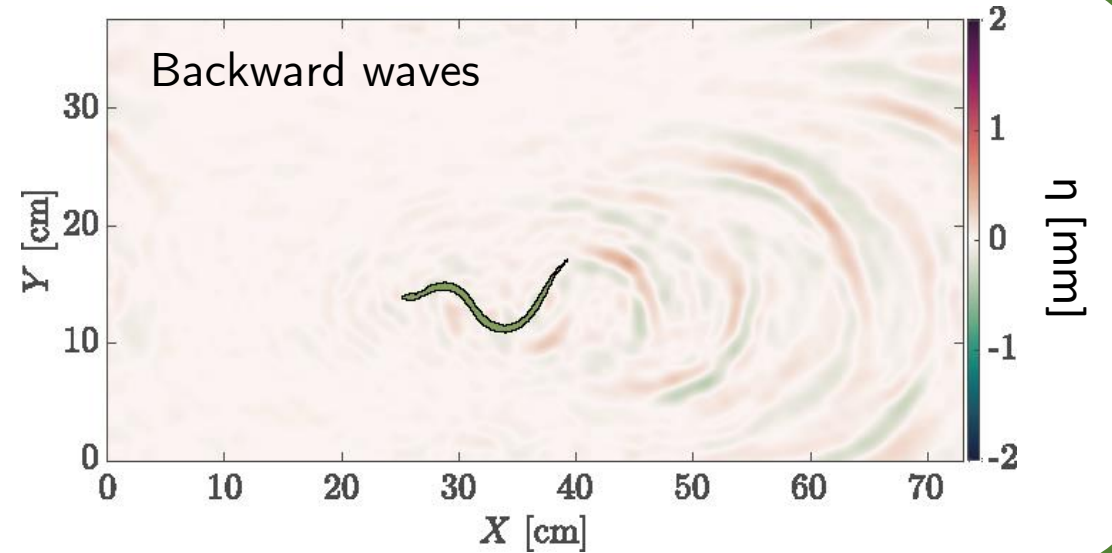
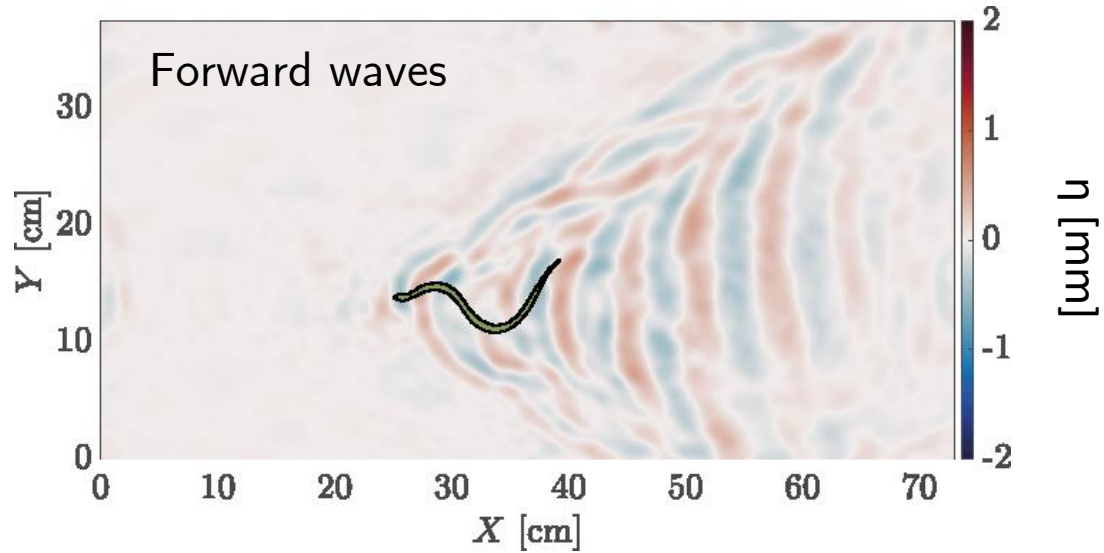
Polly (2023), Wildeman (2018)



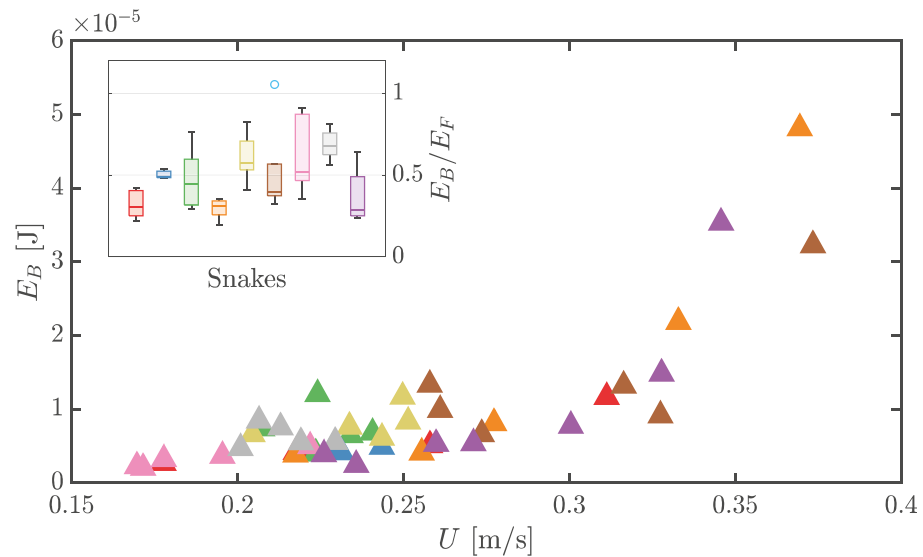
Surface elevation is measured on 9 juvenile water snakes.



## Wave properties:



## Energy in the wake:



A **significant** percentage of the waves travel in a direction opposite to the swimming direction.

A contribution to the propulsive force of the animal from the **backward waves** is thus expected.