

3D surface scattering of a puller microalgae

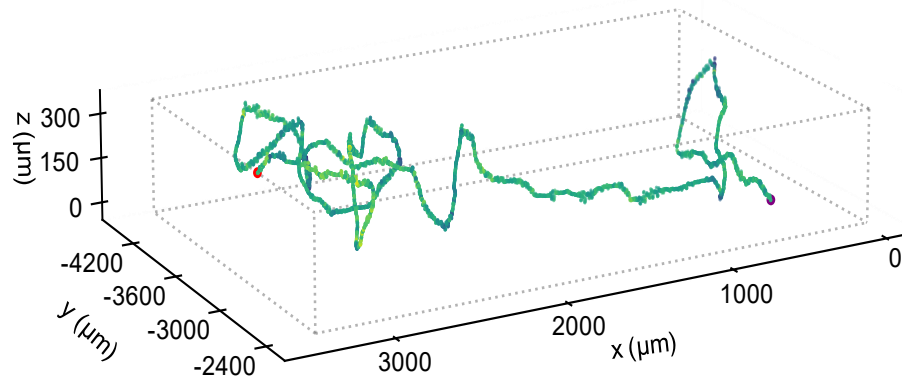
J. Moscatelli, H. Krebs, T. Darnige, E. Clément, F. Elias

Chlamydomonas reinhardtii

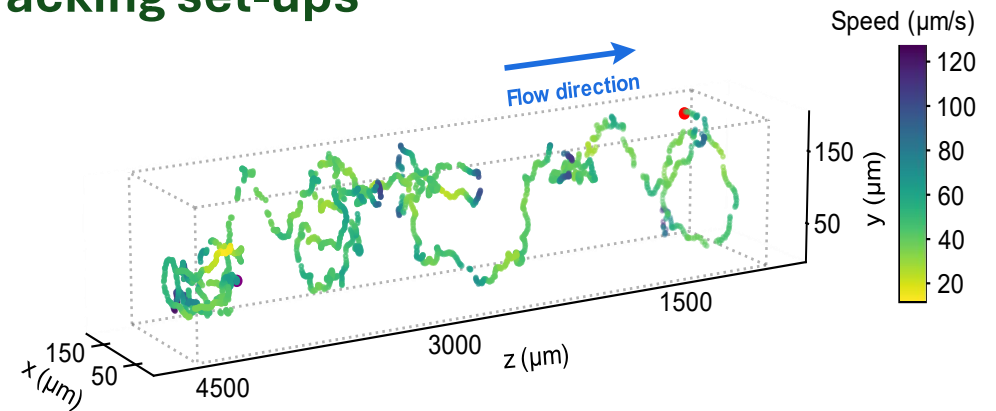
- eukaryote
- biflagellated
- $v \sim 100 \mu\text{m} / \text{s}$
- $d \sim 10 \mu\text{m}$
- puller-type

Micro-swimmers confined between walls ?

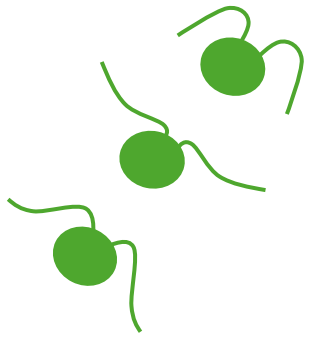
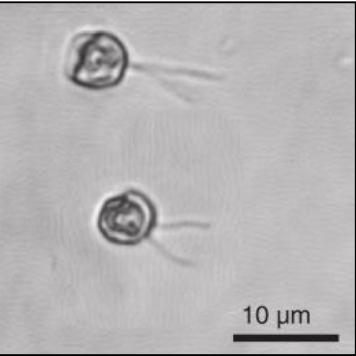
Two 3D tracking set-ups



Between two slides



In a capillary



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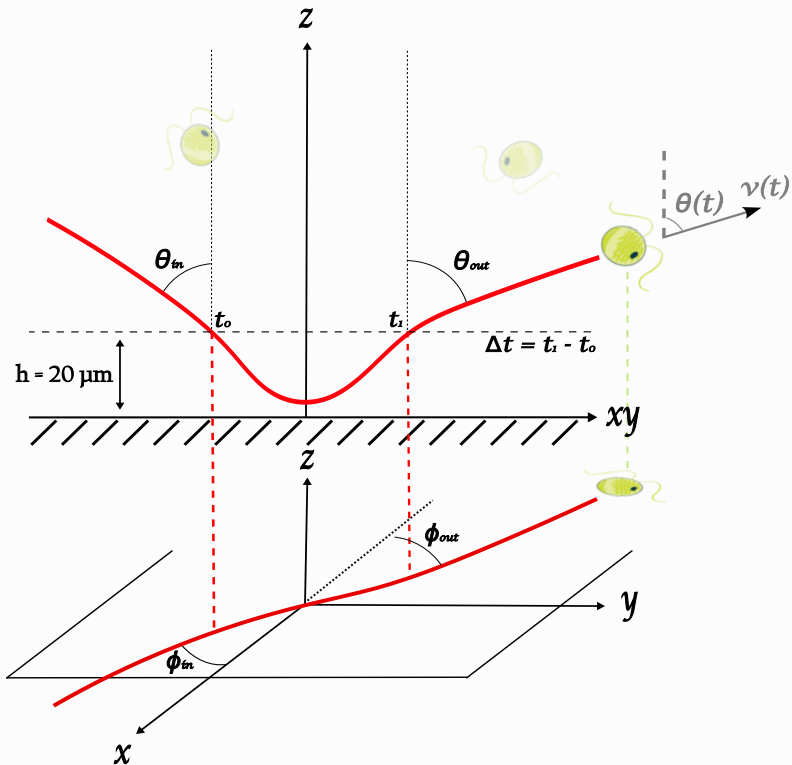
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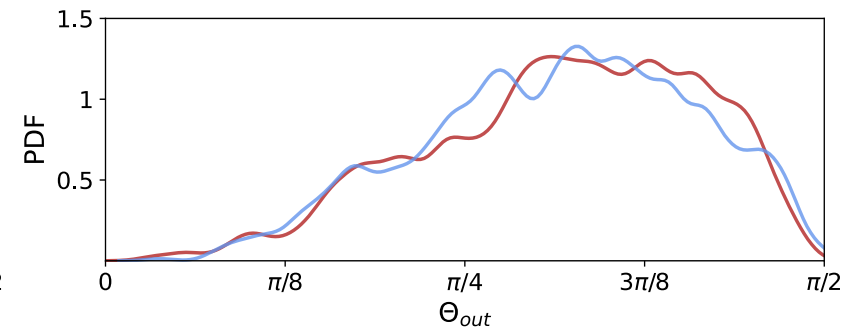
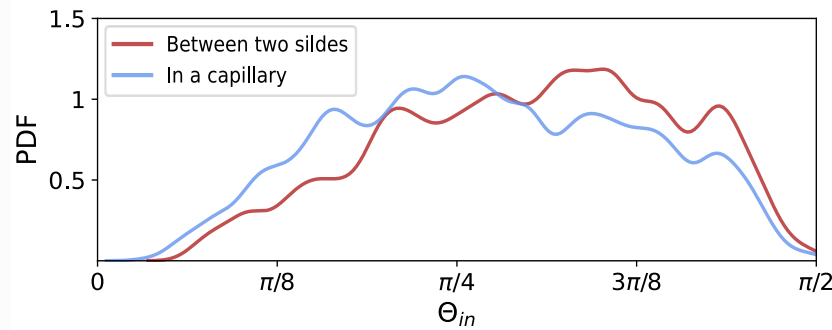
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Interactions with walls



How does a micro-swimmer bounce ?



- Not specular ($\theta_{in} \neq \theta_{out}$)
- Preferred angle for θ_{out}



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