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Life around the scallop theorem

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Locomotion on small scales is dominated by the effects of viscous forces and, as a result, is subject to strong physical and mathematical constraints. Following Purcell's statement of the scallop theorem which delimitates the types of swimmer designs which are not effective on small scales, we review the different ways the constraints of the theorem can be escaped for locomotion purposes.

Subjects: **Biological Physics (physics.bio-ph)**; Soft Condensed Matter (cond-mat.soft); Fluid Dynamics (physics.flu-dyn)

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