LadHyX Seminar – July 13, 10:45 – LadHyX library

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Adaptation of microswimmers in natural and artificial systems

Swimming microorganisms have inspired many ingenious designs of artificial microswimmers for potential biomedical applications, such as microsurgery and targeted drug delivery. These biological microswimmers provide useful models to answer key questions in physics and biology, including evolution and adaptation. The ability of adapting to varying environments is essential for the versatile functions of both natural and artificial microswimmers. In this talk, I will discuss two problems about adaptation of natural and artificial microswimmers. I will discuss how phototactic microswimmers detect and respond to light to perform phototaxis strategies for optimizing their living conditions. I will also discuss how artificial intelligence can enable smart microrobots that self-learn how to swim and navigate at the microscales.