

AVVISO DI SEMINARIO

*Il Prof. Roberto Di Leonardo
Dipartimento di Fisica
Università di Roma Sapienza*

Martedì 22 Novembre ore :15:00

Nell' Aula seminari del Dipartimento di Scienze e Tecnologie
Chimiche

Terrà un seminario dal titolo:

**Swimming Bacteria in 3D Structured
Environments**

Proponente; Prof. Paradossi

ABSTRACT

E.coli bacteria can swim in an inertialess world by spinning helical flagella a hundred times in a second by means of a rotary nano-motor which is a dream for modern nanotechnology.

Being still far away from synthesizing artificial nano-motors of comparable efficiency, researchers have started wondering about the possibility of harnessing microorganisms in quite the same way we used to do with animals before the invention of engines. But can we conceive a totally autonomous micro-device that is powered by bacteria in a predictable way with no need for external control? Or, in other words, can bacteria spontaneously rectify their random motions and coherently work to perform a predetermined task? In this seminar I will discuss some of the main theoretical and experimental challenges in the field of microswimmers and also give a few examples of how to exploit them in micro engineered devices.