

Abstract Submitted  
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**Swimming in a Brinkman porous medium at low Reynolds number** HERVE NGANGUIA, ON SHUN PAK, Santa Clara University — Microorganisms encounter heterogeneous viscous environments due to networks of obstacles embedded into viscous fluid media. In this talk we present a theoretical investigation of swimming in such a heterogeneous medium modeled by the Brinkman equation. We calculate analytically the flow field surrounding an idealized microswimmer, its propulsion speed as well as swimming efficiency. The analytical solutions allow us to probe the general characteristics of swimming in a heterogeneous viscous environment in comparison with the case in a purely viscous fluid.

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