

Abstract Submitted  
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**Actin dynamics in cells on nanotopographical surfaces in competition with chemotaxis and electrotaxis** SEBASTIAN SCHMIDT, Department of Physics, University of Maryland, College Park — Directed cell migration can be guided by different types of gradients, for example chemotaxis. We use surfaces with nanotopographical ridges to examine a type of guidance called esotaxis on migration in the well-studied amoeba *Dictyostelium Discoideum*. In this work we compare chemotaxis with esotaxis on ridges as well as the influence of electrotaxis on the formation of the actin cytoskeleton on these nanotopographies. These esotactic surfaces have more guidance cues for cells than planar 2D cultures and can disrupt other guidance types like chemotaxis.

Sebastian Schmidt  
Department of Physics, University of Maryland, College Park

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