Abstract Submitted
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Chemotaxis: A Multi-Scale Modeling Approach. ARPAN BHOWMIK[1], Rice Univ — We are attempting to build a working simulation of population level self-organization in dictyostelium discoideum cells by combining existing models for chemo-attractant production and detection, along with phenomenological motility models. Our goal is to create a computationally-viable model-framework within which a population of cells can self-generate chemo-attractant waves and self-organize based on the directional cues of those waves. The work is a direct continuation of our previous work published in Physical Biology titled "Excitable waves and direction-sensing in Dictyostelium Discoideum: steps towards a chemotaxis model".

[1]This is a work in progress, no official draft/paper exists yet

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