

Abstract Submitted
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Extracting distinct behaviors from laboratory insect swarms

JAMES PUCKETT, NICHOLAS OUELLETTE, Yale University — Throughout nature, self-organized collective motion in animal groups produces rich and complex behaviors. Many modeling approaches have been proposed from continuum to discrete agent based models which are capable of emulating the behavior observed in flocks and swarms. Most models assume uniformity in the way individuals interact and discard differences between individuals and changes of behavior with time. While in many cases individual differences may average out in large groups of animals, this is not likely the case for small groups. By measuring trajectories and kinematics of individual Chironomids in laboratory mating swarms, we assess the dynamics of individual behavior and discuss the impact of our results on current models.

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