



Kolloquium der Sächsischen Forschergruppe FOR 877 und Physikalisches Sonderkolloquium

Donnerstag, den 28.06.2012, um 17:15 Uhr

Ort: Reichenhainer Str. 90; Neues Hörsaalgebäude, Raum: 2/N012

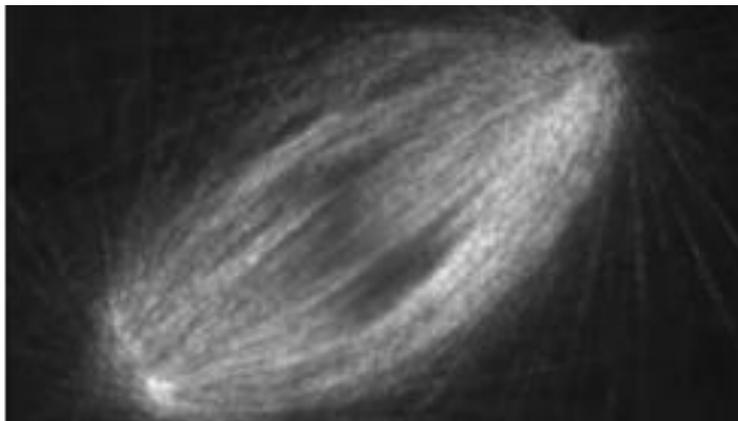


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Birth, Death, and Flight: A Theory of Malthusian Flocks

I study “Malthusian Flocks”: moving aggregates of self-propelled entities (e.g., organisms, cytoskeletal actin, microtubules in mitotic spindles) that reproduce and die. Long-ranged order (i.e., the existence of a non-zero average velocity) is possible in these systems, even in spatial dimension $d=2$. Their spatiotemporal scaling structure can be determined exactly in $d=2$; furthermore, they lack both the longitudinal sound waves and the giant number fluctuations found in immortal flocks. Number fluctuations are very persistent, and propagate along the direction of flock motion, but at a different speed.



A “Malthusian” flock: the Mitotic spindle

Alle Zuhörer sind ab 17:00 Uhr zum Kaffee vor dem Hörsaal eingeladen.