



Münchner Physik- Kolloquium

Winter
2016/17

Broken detailed balance in active biological systems

Prof. Dr. Chase Broedersz, *LMU München*

Monday, 21 November 2016, 17:15 h
Hörsaal 2, Physik-Department der TUM, Garching

Living systems function out of thermodynamic equilibrium. We present a method to identify such nonequilibrium dynamics based on broken detailed balance. Using this, we study active dynamics in beating flagella and non-periodic fluctuations of primary cilia. Finally, we show with a model how tracer filaments can also be used to infer nonequilibrium dynamics in active networks. Specifically, the filament's normal modes exhibit current cycles in phase space, revealing information about activity. This analysis may provide a general tool to quantify nonequilibrium dynamics in cells and tissues.

Student event: Meet the speaker

We invite you to a **student-only** discussion-round with Prof. Dr. Chase Broedersz before his Munich Physics Colloquium talk.

Be curious and feel free to ask any question.

Monday, 21 November 2016, 16:00 h
Seminar room PH 3076 (upper floor), Physik-Department der TUM, Garching

