



Physics Colloquium

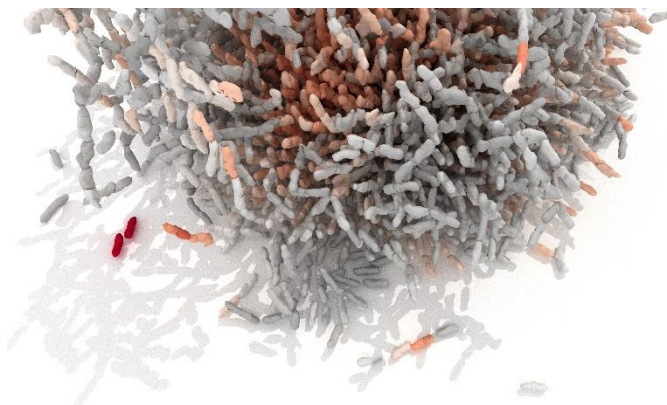
Tuesday, 28 January 2025 at 16:30

Prof. Dr. Knut Drescher

Biozentrum, University of Basel

Spatiotemporal organization of bacterial biofilm formation and functions

In nature, bacteria often live in three-dimensional communities termed biofilms, in which cells are attached to each other through an extracellular matrix. In this presentation, I will first introduce microscopy, image processing, and spatiotemporal transcriptome measurement techniques that enable us to monitor all individual cells in living biofilms. Based on these techniques, I will then show how we can identify the cell-cell interaction processes that determine the architecture development of biofilm microcolonies, across different species. I will then proceed to discuss how individual cells in biofilms coordinate their activities so that the biofilm community develops emergent functions, such as the predation of human immune cells, as well as the protection from viral predators. This talk will therefore shed light on the spatiotemporal development of bacterial communities, and the mechanisms underlying emergent functions of these communities.



Host: Prof. Dr. Frank Cichos

Venue: Universität Leipzig, Faculty of Physics and Earth Sciences
04103 Leipzig, Linnéstraße 5, Small Lecture Hall

Everyone is welcome to a reception with coffee, drinks and cookies in the Aula following the talk.

For an up-to-date semester program, sign-up for the physics colloquium mailing list, and subscription to the digital calendars in CalDAV format, head to the colloquiums web page <https://www.physyes.uni-leipzig.de/fakultaet/veranstaltungen>.

