

ITS @ The Graduate Center

Initiative for the Theoretical Sciences

Information flow in bacterial communities

Unicellular organisms do not lead solitary lives. They sense one another, both passively and through active signaling; they share nutrients, both competing and cooperating; and they exchange genetic material. The last decade has seen renewed appreciation for these communal behaviors, which have captured the attention of the physics community as accessible examples of problems ranging from signaling and metabolic control to ecology and evolution.

Lectures will be held in the Skylight Room (9100)
The Graduate Center, 365 Fifth Ave, in Manhattan.

Friday 21 February 2020

10:00 AM Coffee and bagels

10:30 AM **Quorum-sensing communication: from viruses to bacteria to eukaryotes**
Bonnie Bassler, Princeton University

12:00 PM Lunch

1:30 PM **Toy models for evolution in many environments and high dimensions**
Mikhail Tikhonov, Washington University in St Louis

3:00 PM Coffee

3:30 PM **Quantitative laws in bacterial genome evolution**
Erik van Nimwegen, University of Basel

Discussion will continue over light refreshments in Room 5209.

Sponsored by the Initiative for the Theoretical Sciences, and by the CUNY doctoral programs in Physics and Biology. Supported in part by the Center for the Physics of Biological Function, a joint effort of The Graduate Center and Princeton University.

For more information please visit <https://itsatcuny.org> and <https://biophysics.princeton.edu>.