

Interdisciplinary life of microbes: from single cells to multicellular aggregates

International Workshop 02 - 06 November 2020

Bacteria switch from a nomadic form of life to biofilms when they come in contact with surfaces. Biofilms are complex and robust multicellular communities of bacteria that can be either detrimental, leading to severe infections, or beneficial, such as in plant-microbe associations. Once formed, biofilms are extremely hard to eradicate. Forming virtually on any surface and thus affecting numerous aspects of human life, biofilm research calls for an interdisciplinary effort. This workshop will bring together experts from biology, experimental and theoretical biophysics, and medicine to encourage lively discussions on the multifaceted topic of biofilms.



Courtesy of Liraz Chai

Topics

- Biofilm structure, mechanics, and rheology
- Cell differentiation and multicellularity
- Communication in biofilms: quorum sensing and signaling
- Biofilm extracellular matrix
- Functional amyloids
- Biofilms in medicinal settings
- Antibiotic resistance of biofilms
- Biofilm imaging: seeing through the film
- Biofilm ecology and evolution
- Theoretical modeling and simulations

Invited speakers

N. Balaban (IL)
E. Banin (IL)
A. Be'er (IL)
S. Ben-Yehuda (IL)
N. Biais (US)
Ch. Bogdan (DE)
M. Chapman (US)
H. Chaté (FR)
K. Daniels (US)
M. Delcea (DE)
K. Drescher (DE)
Y. Dufrêne (BE)
G. Duménil (FR)
A. Eldar (IL)
U. Endesfelder (DE)
A. Friedler (IL)
R. Golestanian (DE)
V. Gordon (US)
S. Grill (DE)
M. Hannig (DE)
S. Häußler (DE)
R. Hengge (DE)
N. Henry (FR)
F. Jülicher (DE)

R. Kishony (IL)
S. Klumpp (DE)
R. Kolter (US)
M. Landau (IL)
B. Maier (DE)
M. Meijler (IL)
H. Oschkinat (DE)
V. Pelicic (UK)
B. Sabass (DE)
P. Silberzan (FR)
V. Sourjik (DE)
G. Wong (US)

Scientific coordinators

Liraz Chai
Jerusalem (IL)
Elizabeth Shank
Worcester, MA (US)
Vasily Zaburdaev
Erlangen (DE)

Organisation

Claudia Domaschke
MPI-PKS Dresden

Applications received before 15th August 2020 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international workshop is 140 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses.

For further information please contact:

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