Programme of the Bad Honnef Physics School

“Physics of Bacteria”

Bad Honnef, August 4th - 9th, 2019

Day 1, Sunday, August 4th, 2019: Arrival and Opening Keynote Lecture
Arrival and Check-in until 17:00
17:00 – 18:00 Icebreaker
18:00 – 19:30 Dinner
20:00 – 21:30 Opening Keynote Lecture “Physics of Life” (Erwin Frey, LMU München)

Day 2, Monday, August 5th, 2019
08:50 – 09:00 Introduction to today’s programme
09:00 – 10:30 Lecture “Introduction to Bacteriology I” (Ralf Heermann, Universität Mainz)
10:30 – 11:00 Coffee break
11:00 – 12:30 Lecture “Physics of bacterial colonies and biofilms” (Berenike Maier, Univ. zu Köln)
12:30 – 14:00 Lunch
14:00 – 15:30 Lecture “Dynamics of Bacterial Biofilms” (Knut Drescher, MPI Marburg)
15:30 – 16:00 Coffee break
16:00 – 17:30 Flash talks (participants presenting a poster)
17:30 – 18:30 Poster session
18:30 – 20:00 Dinner
from 20:00 Poster session (continued)

Day 3, Tuesday, August 6th, 2019
08:50 – 09:00 Introduction to today’s programme
09:00 – 10:30 Lecture “Introduction to Bacteriology II” (Ralf Heermann, Universität Mainz)
10:30 – 11:00 Coffee break
11:00 – 12:30 Lecture “Single-cell growth and gene expression” (Ariel Amir, Harvard University)
12:30 – 14:00 Lunch
14:00 – 15:30 Lecture “Bacterial growth rates and tradeoffs”
   (Markus Basan, Harvard Medical School)
15:30 – 16:00 Coffee break
16:00 – 17:30 Lecture “Growth transitions & starvation” (Ulrich Gerland, TU München)
17:30 – 18:30 Informal discussions
18:30 – 20:00 Dinner
from 20:00 Discussions at the Posters
Day 4, Wednesday, August 7th, 2019
08:50 – 09:00 Introduction to today’s programme
09:00 – 10:30 Lecture “Self-organisation and pattern formation in cellular systems”
    (Erwin Frey, LMU München)
10:30 – 11:00 Coffee break
11:00 – 12:30 Lecture “Gene expression” (Stephan Klumpp, Universität Göttingen)
12:30 – 13:30 Lunch
13:45 – 17:00 Hike to Drachenfels
17:00 – 18:30 Lecture “Microfabrication and Microbiology” (Lars Renner, Leibniz Inst. Dresden)
18:30 – 20:00 Dinner

Day 5, Thursday, August 8th, 2019
08:50 – 09:00 Introduction to today’s programme
09:00 – 09:45 Lecture “Antibiotics” (Rosalind Allen, University of Edinburgh)
09:45 – 10:30 Coffee break
10:30 – 12:00 Lecture “Antibiotic stress and resistance” (Tobias Bollenbach, Univ. zu Köln)
12:00 – 13:30 Lunch
13:30 – 15:00 Lecture “Mechanics and growth of the cell envelope”
    (Sven van Teeffelen, Pasteur Institute, Paris)
15:30 – 16:00 Coffee break
16:00 – 17:30 Lecture “Bacterial endospores” (Ilka Bischofs, MPI Marburg)
17:30 – 18:30 Informal discussions
18:30 – 20:00 Dinner

Day 6, Friday, August 9th, 2019
08:50 – 09:00 Introduction to today’s programme
09:00 – 10:30 Lecture “Null models of bacterial evolution”
    (Oskar Hallatschek, University of California at Berkeley)
10:30 – 11:00 Coffee break
11:00 – 11:45 Lecture “Evolution of antibiotic resistance”
    (Rosalind Allen, University of Edinburgh)
11:45 – 12:30 Final discussion
12:30 – 14:00 Lunch & Departure