

Literatureseminar
Selected Topics in Physics

Ana-Nicoleta Bondar & Joachim Heberle
Sommer semester 2016

The seminar consists of presentations and discussions of recent scientific publications in biophysics. We aim to discuss topics that are of interest to both theoreticians and experimentalists. Students are not required to have first attended other biophysics lectures.

Topics for the seminar

1. Transport at the nano-scale

Physical-chemical properties of lipid membranes: Lipid phases, lipid structure, lipid fluidity, dipole moments.

Transporting ions across membranes with low dielectric environments.

2. Water dynamics

Hydration shell of biomolecules: experiments and theory.

Understanding the role of water in chemical reactions.

3. Methods

Structural determination of protein structure: experiments.

Computational biophysics methods to study water dynamics.

Specific topics and the schedule of the presentations will be discussed during the first seminar.

Date	Topic	Name
19.04.2016	---	---
26.04.2016	CRISPR-CAS	Mattia
03.05.2016	Metals in protein-protein interactions	Moritz
10.05.2016	SMFS	Katerina
17.05.2016	Structural bioinformatics	Konstantina
24.05.2016	Bringing Bioelectricity to Light	Raiza
31.05.2016	Paper writing	--- TBA ---
07.06.2016	--- TBA ---	Cruz, Ruben
14.06.2016	--- TBA ---	Franzi
21.06.2016	--- TBA ---	Federico
28.06.2016	--- TBA ---	<i>Student</i>
05.07.2016	--- TBA ---	Luzek
12.07.2016	---	---
19.07.2016	Career paths of PhD + summary	--- TBA ---