

Lehrseminar Selected Topics in Physics
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Plan of the seminars

For each topic the presenter prepares a literature review from two papers.

October 22 – general discussion/ planning the seminar

October 29

Transport of ions across biological membranes: Theory. Electrostatics, continuum models and all-atom models. (Stefan Milenkovic?)

November 5

Chloride ion transporters: overview of new structures and mechanisms. (Christian Skakowski?)

November 12

The hydrophobicity scale: experiments. Emanuel Pfitzner

November 19

Protein secretion across mitochondrial membranes. Silke Kerruth

November 26

Chemo-mechanical coupling: membrane proteins that use ATP Elmar Hubrich

December 3

Chemo-mechanical coupling: QM/MM for ATP cleavage reactions Hendrik Mohrmann

December 10

Allosteric networks in membrane proteins: NMR work Maximilian Schmidt

December 17

Allosteric networks in membrane proteins: graph theory Christopher Mielack

January 7

X-ray crystallography: effect of the temperature on protein structure; radiation damage in proteins with chromophores Moritz Senger

January 14

Water occupancies of protein cavities at cryogenic and room temperature Philipp Karau

January 21

Dynamics of twisted retinals in retinal proteins: experiments Mattia Saita

January 28

Dynamics of twisted retinals in retinal proteins: theory Pit Langner

February 4

Ion selectivity Tom Resler

February 11: Summary