## Lehrseminar Selected Topics in Physics Ana-Nicoleta Bondar & Joachim Heberle Plan of the seminars

For each topic the presenter prepares a 40-minutes literature review from two papers.

April 15 – general discussion, schedule of the seminars

April 22

Phase transitions in lipid bilayers - experiments

April 29

Structure and dynamics of lipid bilayers - theory

May 6

Electrophysiology of ion channels - experiments

May 13

Simulations of ion channels under transmembrane voltage

May 20

Metal clusters in proteins - experiments

May 27

Metal clusters in proteins - theory

June 3

Metal clusters in proteins – from quantum to classical mechanics

June 10

Vibrational spectra: basics from experiments

June 17

Normal mode calculations for vibrational spectra

June 24

EPR spectroscopy for protein conformational changes

July 1

Targeted molecular dynamics for protein conformational changes

July 8

Protein dynamics – hot papers from 2014

July 15: Summary, and discussion of grades