01.11-30.11.2013
Technical University, Berlin, Germany

Completion of the mesoscopic simulations based analysis of defects around colloid particle immersed into nematic liquid crystal.

Discussions with M. Schoen on:
- differences in nematic director distorsion for micro- and nano-sized colloids,
- validity of the “nematic nanodroplet” model for generation of the pseudo-surface anchoring of liquid crystal around it,
- development of “grafted colloid” model with frozen surface mesogens,
- details for evaluation of the coherence length around colloid particle,
- interpretation of twisted boojum defect for specially prepared planar anchoring on colloid surface,
- various setups for Janus colloid immersed into nematic solvent in the framework of “grafted colloid” model.

Took part in the colloquium given by S.Zumer entitled “Optical inducing of defects in achiral and chiral nematic liquid crystals” on 12.11.2013 in the frames of IGRTG programme.

Transfer of knowledge:
- obtained and adapted code for evaluation of coherence length in nematic phase
- issues with thermostatting for “nematic nanodroplet” model at large values of orientation field constant,
- shared experience with soft coarse-grained potentials for modelling of liquid crystalline systems,
- shared algorithms for generating of initial configuration for Janus particle and algorithms for solving equations of motion in coarse-grained molecular dynamics approach.